
Chapter 4

Research Methodology
4 Research Methodology

4.1 Introduction

In this chapter, I describe the methodology used to answer my research questions. The ontological features of the object of research in this study are characterised in section 4.1.1.

My methodological framework is presented in Table 4-1, showing the approach, methods and tools used to explore concepts at different stages in this research. My research approach is described in sections 4.2 and 4.3, which includes discussion of methodological issues related to data gathering and analysis, and encompasses problems and limitations. Study Design is explained in Chapter 5, followed by a description of the methods used to gather and analyse data in Chapter 6.

My enquiry is based on analysing concepts, methodology and experiences of fellow training professionals, largely drawn from the public and private spaces within a community of practice and explored in terms of its system of activity. Mixed methods were adopted as being appropriate to explore my object of research for pragmatic rather than philosophical reasons.

For example, in the first phase of the research, the technique of observation, borrowed from ethnographic methodology was used to provide insights about collective understandings of practice: its workings within a specialist forum, together with associated theoretical principles and assumptions. Meetings of the Trainers Forum provided the setting for observing activity as events that “...proceed to a large extent behind the backs or above the heads of the actors” (Engeström, 1987 (4): 48). Documentary evidence, related to training and published in the Institute's magazine, was similarly analysed for common understandings of practice.

In the second stage, a survey questionnaire established the demographic characteristics of trainers, assessing whether respondents had factors in common to their situation.

In the final phase, such factors (including epistemologies, choice of instructional methods, shared vocabulary and common understandings) were explored by means of further observation and via a series of in-depth interviews. In this way biographies, which were built
through interviewing community members at different levels of participation informally and formally over time, served to further illustrate what was happening within the community of trainers as a whole, in terms of looking collectively at how we do things and why, rather than highlighting individual perspectives.

Eclectic use of mixed methods apparently typifies the general research approach as interpretative educational case study (Bassey 1999; Cohen & Manion (1994); and Verma & Mallick (1999)). Yet, case study implies that the study boundaries are well-defined, which therefore delimits context as a container of situationally created experiences with distinct boundaries. In this study, context is visualised as an expansive series of inter-related and inter-linked systems of activity, which by virtue of their dynamic nature means that boundaries are fluid. In addition, multiple data sources are used, some of which may be located “outside” the specifically observed study setting (TF meetings), but which nevertheless constitute related artefacts of the Trainers’ Forum, both as a community of practice (CoP) and as an Activity System.

As explained in Chapter 2, the nature and diversity of work practices are recognised as socially complex activities, which may be governed or structured by social or cultural factors that in turn moderate institutionalised organisational behaviour. Consequently, due to its structural complexity, the nature of practice is subject to wide interpretation. Thus, the process involved in de-constructing the object of research over time depends on the recognition and appreciation of the multi-dimensional layers of social reality constituting the object. As Vella (op.cit.: 16) states, "...as subjects, we evoke the world we perceive".

Accordingly, researchers are advised that the principles underlying the design and form of a research enquiry should reflect the nature of the specific enquiry (Murray and Lawrence, op.cit.:9; Pring, 2000:6). Similarly, verification and validation methods should be in line with the conceptual and methodological approaches selected. Put another way, as Pring (op.cit.:6) states:
"The nature of the subject matter determines what kind of research is valid or relevant. Or, at least, the nature of that which is to be researched will determine the relevance of different sorts of research and their findings."

He further elaborates that the decision about which methods to use, or which approach to take, is best made pragmatically and not philosophically. Furthermore, Giddens’ (op.cit.) structuration theory provides the means to circumvent what Pring (op.cit.:43) refers to as the false dualism of educational research where methodology is determined on an epistemological basis rather than on a pragmatic decision to use methods appropriate for the particular object of educational research.

As Pring argues, there is a significant philosophical tradition that already deals with such fundamental philosophical concepts as

"...the meaning of what is stated... the truth of what is claimed... the verification of conclusions reached... the conceptualisation of a problem and its solution... the objectivity of enquiry, and ...the knowability of reality."  Pring (ibid.: 6)

Awareness may help to avoid developing potential “blindspots” or biases that may affect data analysis and interpretation arising within particular methodological frameworks. Bourdieu refers to this awareness as the process of critical reflexivity where the interpretative analytical process entails “making the familiar unfamiliar”, and as far as possible identifying and challenging cultural or other forms of systematic assumptions (Bourdieu, 1990).

Giddens concept of facticity (op.cit.:331) further relegates epistemological and ontological debate concerning methodology to an irrelevance. To be meaningful, social interactions necessarily invoke the institutional order appropriate to situated action, thereby rendering actions intelligible and coherent. Nevertheless, the capability to interpret contextual meaning of social interactions, so that actions and communication are understood depends on the extent of ontological appreciation and level of epistemological sophistication. The example Giddens gives is one of a courtroom enactment between a judge and defending and prosecuting lawyers, where the actors’ interaction is imbued with their common knowledge and assumptive understanding of the institutional order governing their common practice of law. In this circumstance, the practice of law is established both over time and in terms of
place (courtroom) such that it has recognisable structural properties or structured features even to non-practitioners.

However, by contrast with the practice of Law, the structural properties of clinical research training, as coherent institutionalised features, need further elaboration in keeping with the continuing evolution of clinical research as a discipline and the evolving face of the field of practice mirroring constant scientific, technological and regulatory change. In particular, at present these features may appear opaque to practitioners and non-practitioners alike.

Therefore, elaboration of the structural properties of clinical research training began by considering the ontological features of the object of study, which are discussed in the next section.

4.1.1 Object of research: ontological features

Five layers of social reality were clarified. Each of these layers constitutes an object of study, which further defines the nature of training practice in the UK field of clinical research:

1. The regulatory environment encompassing and governing clinical research practice
2. Clinical research industry constituting the field of practice
3. Practice settings or sites of practice
4. Professional community of clinical researchers – the Institute of Clinical Research or ICR
5. Clinical research Trainers’ Forum (TF) in the ICR.

Therefore, given the complexity of social reality, which these ontological features reveal, the empirical study is focussed on the concept of practice as the object of study within the Forum. This focus assumes that if trainers' everyday habits reflect their operational capabilities or agency, then their community of practice provides a microcosmic view applicable to the macrocosm, both at the organisational and field level of practice. Therefore, structural elements of practice, the nature and role of which constitute the objective regularities of practice, are examined within the community through posing the following questions: What
form does practice take and how is it defined (concepts)? How is it expressed (methodology) and does it manifest (experience)?

Correspondingly, analysing the effects of regulatory developments on training practices means exploring the elements of practice modelled within the Trainers’ Forum as social activities (cognitive and co-operative tasks) and social processes of learning. Study design should then illuminate the local and wider contextual factors mediating or shaping practice in situ within this community in terms of concepts, methodology and experience. In effect, deconstructing the structural elements of practice, in terms of its rules and resources, reveals the conceptual instruments that Engeström (op.cit.) explains are partly constructed within the central activity, and partly imported into it as cultural artefacts.

Moreover, the main aim of this study is to explore the processes of learning and inquiry within this community – expressed implicitly within its mission statement - that enable or hinder its progress towards understanding and agreement of best practice (Appendix A). If learning is considered as a social process, then the objective is to explore how the community accomplishes learning as an activity, and to examine what cognitive and co-operative tasks are involved.

As a member of this community, my initial research approach began with observing the way we do things around here in order to understand what and how we’re doing things around here and why. In turn, observations of Forum activity formed the basis for questions put to community members, both informally at meetings, and formally through pre-arranged interviews and questionnaires. Effectively, the way we do things around here captures the cultural expression of activity in terms of the shared values and beliefs about a concept of practice evident in patterns of thought (declarative concepts), behaviour (procedural models), and artefacts (social discourses) that symbolize and give contextual meaning to the activity (Deal, 1985: 605).

In conclusion, the methodology chosen in this study was determined by a research approach that offered the means not only to negotiate the complexities of the five inter-related ‘layers’
of social reality, but that provided a sufficiently comprehensive way to analyse the copious amounts of data likely to be gathered. Accordingly, the approach and associated issues in the study are discussed in successive sections.

4.2 Research approach

The various tools and techniques used in this endeavour are shared across various methodologies with their respective traditions. However, the eclectic use of methods in this study is indicative of an approach concerned with exploring the object of research by whatever means are feasible. For example, as an ethnographic tool, observation provides a means to explore practice and its structural elements - the nature and role of which constitute its objective regularities. Although this study relied heavily on the technique of observation, it did not define my approach as ethnographic. Rather it should be seen as a valuable component within the tool-kit and framework of an approach that is developmental in the sense of a theoretical approach, and part of the “methodology for applying activity theory, specifically the theory of expansive learning, in the world of work, technology, and organizations” (Engeström, op.cit.). As Engeström explains (1999b: 9) in this approach,

“... research aims at developmental re-mediation of work activities. In other words, research makes visible and pushes forward the contradictions of the activity under scrutiny, challenging the actors to appropriate and use new conceptual tools to analyze and redesign their own practice”.

As an approach, development work research (DWR) or expansive development research (EDR) (Engeström, ibid.; 1996b) mainly points to a focus on work activity as the context of application. By contrast, the focus of this research study is on the activity of professional development, which is nevertheless viewed as a sub-sector of work activity in keeping with the idea that professional development is a dynamic process and not a series of static events (Phillips and Friedman, 2001). The research focus is therefore within the refined context of a professional community of practice in order to understand the expansive learning opportunities that are afforded through professional development.
Applying a developmental research approach to this context is therefore appropriate since the TF provides a unique opportunity to examine common approaches taken by individual trainers to the activity of training in their respective workplaces. Thus, the TF is a specific setting that resides outside the workplace, inside a professional institution, where professional practice is modelled both intentionally and unintentionally. In reflecting institutional goals of professional development “to share best practice, raise standards and develop the professional” the TF necessarily impacts workplace practice.

The object of activity within the TF activity system (to share best practice and discussion common issues) may differ from the object of activity in the workplace (delivering training – as one component of training practice referred to as the training cycle; see Figure 8-3). Nevertheless, common approaches to, and problems concerning, the practice of training at the TF are manifested in the embodied activity of sharing practice and discussing common problems.

Thus, observing individual actions of TF members provides insight into the operation of the TF in terms of the conditions giving rise to collective routinised actions, as well as individual goals and collective motives driving activity in the TF. In other words, because agents’ model their practice intentionally or unintentionally within this professional forum, a developmental research methodology provides a context-specific means to examine and perturb basic routinised operations in an effort to constructively pose the questions: (a) why do we do things the way we do and (b) is there a better way?

The challenge of this approach, as a “theoretical investigation moving on the level of categories”, lies in determining “how to select the data; how to process the data into categories; and, how to bring the categories developed into fruitful contact with practice” (Engeström, 1999b:22). These three fundamental methodological questions will be answered in this chapter progressively.
4.2.1 Approach: distinguishing between ethnography or developmental work research

Traditionally, ethnographic studies within particular cultural contexts capture details of interactions observed, context of interactions, and observers’ reactions over an extended period (Hammersley & Atkins, 1995). In addition, traditional ethnography is descriptive (Sierhuis, 1996) both of actions observed and of their context, without which the meaning of actions cannot be interpreted. Accordingly, by providing "thick description" an ethnographer fuses analysis with description (Geertz, 1973; Wolcott, 1987: 47). Thus, the aim of ethnographers is “to discover how people in the study area classify or label each other, how they find meaning in activities they care about in life and how they engage in processes in which they individually and collectively define (antecedents and consequences of) their situations” (Gold, 1997:391). As a methodology, ethnography is defined by immersion within the research setting and prolonged engagement in the daily lives of those being observed.

According to Massey (1998), ethnographic research demonstrates seven elements:-

1. Study of a culture, including a work community etc.
2. Multiple methods, diverse forms of data
3. Engagement
4. Research as instrument
5. Multiple perspectives
6. Cycle of hypothesis and theory building
7. Intent and outcome

In contrast, when participant observation involves extensive contact but is deemed less comprehensive, this data collection method is considered an ethnographic tool rather than an approach (Grigg et al 2004; Charmaz and Olsen, 1997).

An expansive developmental research (EDR) approach shares many of these seven elements, but whereas they may define an ethnographic approach, they merely constitute features of an
EDR approach, since EDR is defined as an approach by its potential for expansive learning using activity theory. Modelling the activity system of interest within its network of related activities systems develops an understanding of context as well as cultural factors that impact on activity and its modalities. By this means, we can view and participate in the unfolding microcosm of the TF as “a social testbench and a spearhead of the coming culturally more advanced form of the activity system” (Engeström, 1987, (5):11). The links between the microcosm and the macrocosm of inter-related activity systems are also viewed while unravelling their inter-dependent relationships manifesting as contradictions, disturbances or ‘problems’.

In addition, in EDR or DWR, participant on-site observations form one of many ways in which the researcher may

“…get a grasp of the need state and primary contradiction beneath the surface of the problems, doubts and uncertainties experienced among the participants of the activity.” (Engeström, ibid.: 5, exp learning).

Yet, whether observational data is gathered as part of an ethnographic study or as participant observation in a DWR study, it may be conducted by a variety of means, each of which has practical and ethical implications. Therefore, regardless of whether ethnography is regarded as a tool or as an approach, it presents a range of methodological difficulties, some of which were encountered in the initial and exploratory stages of this study, and which are discussed in Section 4-3.

The concerns that abound are summarised in the following questions:-

1. How does the role of the researcher affect observations (e.g. researcher as complete observer/participant either covertly or openly)?

2. How will the researcher’s role affect access to the research setting? (Is the researcher an insider / outsider?)

3. Will observations interfere with ‘normal’ activities either for the researcher or those being observed, reminiscent of the Hawthorne effect (Mayo, 1933)?
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4. How will the rights of those being observed be protected (permissions, confidentiality, anonymity)?

5. How will the researcher’s privileges be preserved (to observe, interpret and publish without interference)?

Most of the practical and ethical difficulties encountered in observational research revolve around the researcher’s role and relationship to the research participants (points 1, 4 and 5); the research setting (points 1 and 2); and the research object (points 1 and 3).

In my role as an observer, I was challenged to locate my research approach within a particular ethnographic style or tradition. In particular, the complexity of the object of research, and at times my ambivalent relationship to it made this overwhelmingly difficult. For example, I considered myself as an insider to my community. On the one hand, membership provided me with privileged access to a diverse group of people from a variety of backgrounds and workplace settings with a shared interest in training. On the other, despite my claim to be a participant like any other within my community, my research identity distinguished me from other community members.

My insider status meant I had an emic- rather than an etic-perspective (insider vs. outsider) on the attitudes, beliefs, behaviours and practices (TESOL Guidelines on Critical Ethnography, 1996-2007) of my fellow trainers’ concept, methodology and experience of their social and cultural world, since this was also my world. Moreover this emic perspective appeared to contrast with the etic-perspective assumed in traditional (Mulhall, 2003) and critical ethnography styles (Carspecken, 1996).

Yet, as a reflexive practitioner, I was acutely aware of the need for sensitivity concerning expressions of social issues or power relations, not only as other TF participants perceived them but, as I saw them. However, my intent was to develop a perspective on the emancipatory or restrictive potential of culture perpetuated internally within the CoP, as well as externally, and to understand how expression of culture within particular discourses has
implications for learning processes and their products i.e. knowledge (Spradley, 1979; 1980). Consequently, through formulating hypotheses concerning “what is going on around here”, I hoped to develop a critical understanding of the discourse, in terms of the social practices implicated in the experiential reality of everyday life and the exercise of power in and around the CoP (Wainwright, op.cit.).

Therefore, it might be considered that situating my research within a social context in order to consider how knowledge is shaped by the values of human agents and communities, implicated in power relations and favorable for democratizing relationships and institutions (TESOL op.cit.) differentiates my approach from one of traditional ethnography to one of critical ethnography. Furthermore, as Wainwright (op.cit) states:

“…For the critical ethnographer, validity depends upon getting beneath the surface appearances of everyday life to reveal the extent to which they are constituted by ideology or discourse.”

So, given that the focus of my research touches on learning process, which “…becomes situated in the social interaction among the members of the community” (Grossman, 1991; Putnam and Borko, 2000), considering my approach as critically ethnographic might seem appropriate (Carspecken, op.cit.). Moreover, if we are to understand what goes on around here within a CoP, then we need “…not only to describe the rules, structures and participants in a community, but the processes by which they interact” (Barab et al,2002: 533).

My insider status did not preclude me from asking questions to understand what was happening around here, nor did it interfere with my capability to conduct the research. On the contrary, my research ideas were nurtured, developed and crystallised because I was part of a developing community of practice. For example, almost from the start of the TF being established, I observed a contradiction in discourse and within its artefacts. Namely, training was expounded as being learner-centred, but in practice, a pedagogic model of knowledge transmission appeared to dominate discussions about training. This contradiction subsequently offered a challenge to be resolved. However, according to Wolcott (op.cit.: 47):

“…In and of themselves, ethnographic studies do not point the way to how things can or ought to be improved”.

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Therefore, although my approach may be considered critically ethnographic, identifying contradiction at the preliminary stage of the research is the point of departure at which the study can be characterised as developmental rather than ethnographic. That is, I intended to explore the conditions creating the contradiction between what we say and what we do in this community of practice by observing, over a period of time, the processes at work (objective regularities of practice) and their structuration (rules and resources). I also hoped to highlight these conditions, in order to focus our efforts on at least recognising what needs changing in order to resolve the contradiction.

Finally, the use of ethnographic methods does not, in this instance, define this study as ethnographic. Nonetheless, such use serves to explore the phenomenological nature of the object of research in-depth where in effect, like grounded theory, data collection continues as long as new insights are being generated that characterise community life (Barab et al, op.cit.:496). In conclusion, an expansive developmental research approach was adopted, which allowed me as a core member of my community, to identify opportunities for expansive cycles of learning stimulated by questioning accepted practices, and to gradually expand these opportunities into a collective endeavour to transform practice within the TF.

4.2.2 Stance – participant-researcher or interlocutor?

As a participant and a researcher in the Trainers’ Forum, my role involved me in seeking opportunities for expansive learning. However, I did not act directly as a ‘collaborative change agent’, but as an interlocutor enabling two-forms of dialogue:-

1. With Forum leaders and members about the nature of pedagogy, and

2. Between leaders and members about the virtue of jointly deliberating pedagogic reasoning, subsequently developing dialectic practice.

Questioning practice meant highlighting and exploring possibilities for expansive learning in shared practice by seeking evidence of change opportunities through tracing developmental phases of the object of activity (e.g. via successive shifts in the sharing of practice through a transmissive pedagogy to an enquiry pedagogy and back again). An Activity Theory
methodology meant uncovering opportunities to develop practice, and understandings of it, in order to raise its standards. Inherent solutions within the system of activity were traced and analysed through observing and talking with its participants. Crucially, activity was systematically viewed from different participants’ perspectives in order to grasp or visualise contradictions within the system, indicative of expansive learning needs (Engeström, op.cit.). Findings were shared progressively with participants thereby routinely validating perspectives during the course of the enquiry (participant validation).

Enquiry proceeded through examining general aspects of shared practice in order to uncover particular reasons for conflict. In this respect, it differs from action research, which stems from seeking to improve a particular aspect of individual practice that, once shared, has potential benefits for all, moving from a study of the particular to the general (McNiff, Lomax and Whitehead, 2003:14). As change agents, action researchers need to define their social agenda beforehand, in order to demonstrate the effects of their individual agency, following a change in their practice, seeking evidence of its consequences.

By contrast, a developmental researcher has no agenda other than enquiry, based on appreciating, then exploring, social tensions arising from particular group actions that can only be understood in relation to their frequently implicit goals, but which nevertheless manifest through contradiction between systemic elements in the shared activity. As an interlocutor, I sought and shared evidence not of the effects of my agency, but of potential learning opportunities that could initiate systemic transformations of practice. Although I reported my findings about the effects of particular conceptual and procedural models on activity in the system, the transformation of shared practice depended on the joint agency of the community to develop, adopt and apply new models through strategic tasks in the act of sharing practice (Engeström, op.cit. (5):12).

Consequently, the type of evidence sought in this research signifies a point of departure in defining the role of the change agent either as a developmental researcher or as an action researcher. For example, I sought evidence of opportunities for systemic change in practice
rather than evidence of the effects of individual changes in practice. In this instance, the strategy for collecting data was determined by patterns of activity observed within the Forum, which signified contradiction initially between what we say and what we do. These contradictions were indicative of tensions within and between elements in the activity system and its neighbours. Therefore, the process of developing core categories began by theoretically and empirically analysing observational data collected in the research to gradually develop and refine a conceptual-theoretical framework that later served as an analytical tool. In this way, what’s happening around here in the Forum was explored from an interlocutory position within a developmental research approach.

4.2.3 Methodological considerations in a Cultural-Historical-Activity-Theory (CHAT) research approach

On the one hand, using critically ethnographic methods meant adopting interpretative analytical techniques within a process of critical reflexivity, such as that advocated by Bourdieu (1990). Bourdieu’s intention was to “make the familiar unfamiliar” in order to yield insights about practice, mainly in order for practitioners (as well as researchers) to learn. His intention within such a process was to identify contradictions and thereby challenge systematic assumptions in how and why we do things the way we do.

Bourdieu positions reflexivity as a methodological tool in the examination of the object of study, referring to it as double objectification. That is, when the object of study concerns social situations, reflexivity enables the researcher, as an outsider to the experience of the social reality under scrutiny, to acknowledge that his or her interpretations of that reality may not necessarily be the same as an insider’s subjective experience of that reality.

Therefore, such double objectification means that a reflexive researcher appreciates that their observations and interpretations of another’s social reality depend on their appreciation of their own experiential biases that may distort their capability to make sense of another’s social reality. Jenkins (1992:50) describes the method as follows: “First, there is the work done in the act of observation and the objectification or distortion of social reality which it is likely to produce. Second, there is an awareness of that distortion and of the observer as a
competent social actor in his/her own right.” Through appreciating the distortion and the role of the researcher in creating that distortion, the limitations in examining the nature of the object of study are acknowledged along with the recognition that subjective experience of another’s reality can only be approximated.

Yet, in this case, I am not “…an outsider to the experience of the social reality under scrutiny”. I am a participant in that social reality. Moreover, in this situation, my experiential biases are my strength, in that they help me to conceptualise, and therefore objectify, both what’s going on around here and how we’re doing things around here and why. That is, my experiential and theoretical background is in Learning and Teaching through: being involved in training since 1988; and, taking a PGCE\(^{21}\) in 1999; followed by gaining a Masters degree in Learning and Teaching, in 2001)\(^{22}\). This background enables me to appreciate collective understanding of practice in terms of our shared concepts, methodology, and experiences within a community devoted to our practice, where otherwise I might struggle to make sense of it all in terms of the significance of systemic contradictions.

On the other hand, characterising this research study as developmental in nature, points towards the adoption of a theoretical and methodological framework that encompasses concerns for methodological rigour. Critical reflexivity, reliability and validity are addressed within its developmental principles. Namely, Engeström (2001) summarizes Cultural-Historical-Activity-Theory with the help of five principles, described as follows:-

1. Unit of analysis: a collective, artefact-mediated and object-oriented activity system, seen in its network relations to other activity systems

2. Multi-voicedness: an activity system is always a community of multiple points of view, traditions and interest, where participants’ roles are constructed around the division of labour

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\(^{21}\) PGCE: Postgraduate Certificate in Education
\(^{22}\) I am also a professionally qualified scientist having taken my Fellowship examinations in Immunology (1983, Institute of Biomedical Sciences).
3. Historicity: activity systems are shaped and transformed over time. Their problems and potentials can only be understood in the context of their own history.

4. Contradiction: historically accumulating structural tensions within and between activity systems that constitute sources of change and development.

5. Potential for expansive transformation: activity systems move through relatively long cycles of qualitative transformations as individual participants begin to question and deviate from its established norms. “A full cycle of expansive transformation may be understood as a collective journey through the zone of proximal development of the activity.”

These five CHAT principles address methodological rigour in ways that do not conflict with the concerns of critical ethnographers, action researchers or reflexive practitioners on the basis of their relationship to the research setting and research participants. Moreover, the traditional divide between theory and practice is bridged by CHAT. Core conceptual categories are brought into “fruitful contact with practice” as analytical tools in their subsequent adoption within a conceptual-analytical framework (Engeström, 1999b:22). In addition, by this means, core categories may be empirically tested through their application within an evaluative tool, which is subsequently validated.

However, Nardi raised four main methodological considerations based on applying these five CHAT principles to a developmental research project (adapted from Nardi, 1996: 235-246):

1. Allowing for research time frames long enough to understand subjects’ objects, since changes over time in objects and their relationships must be studied.

2. Paying attention to broad patterns of activity rather than narrow episodic ones that fail to reveal the overall direction and import of an activity.

3. Using varied sets of data collection techniques including interviews, observations, video, and historical materials, without undue reliance on any one method.
4. Committing to understanding things from the subjects’ viewpoint – adopting a learner-centric enquiry process.

Thus, in its application as a DWR or EDR methodology, 3rd generation activity theory offers many challenges, not least of which are the consequences of these methodological considerations. In this study, the main challenge was organising and making sense of the mass of data gathered about training practices in this community over a period of five years, including internal and external artefacts (articles, surveys, evaluations and job advertisements). Reporting this varied and extensive data was an even greater challenge.

However, according to Engeström (1987: 13) this is a common difficulty faced by expansive researchers, since “…reporting and assessing the outcomes of expansive research is not easy”. His recommendation for following and recording the “voyage through the zone of proximal development”23 is by

“…employing a set of multiple methods, ranging from phenomenological and anthropological observation and historical analysis to rigorous cognitive analysis of performances, conceptions and discourse processes.”

Moreover, he provides a ‘simple rule’ for reporting, which is to “reproduce the actual course of the expansive transition, following its basic temporal structure. This does not exclude seemingly atemporal excursions and digressions into conceptual, descriptive, statistic, experimental and comparative terrains.

Despite the flexibility offered in this rule, its all-encompassing nature does not simplify the task of reporting. But, again this reflects the challenge of organising a vast quantity of data. Moreover, by virtue of the ethnographic techniques employed, preliminary analysis of the concept of practice could be offered by way of thick description in order to describe what was happening around here, in terms of: the common approaches (pedagogies); standards

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23 In his study of child development, Vygotsky (1978: 87) defined the zone of proximal development as “…the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers.
(internal goods of practice); and language style or idiom (epistemological frames of discourse or EFsD).

The challenge lay in deciding how to structure the presentation of this data, in terms of deconstructing its constituent complex activity, and specifically, how to frame it within the unit of analysis, which in this instance is the TF.

4.2.4 Developing methodological rigour in a CHAT research approach

4.2.4.1 Analytical strategy

With hindsight, the starting point of my research concerned “gaining a preliminary phenomenological insight into the nature of its discourse and problems as experienced by those involved in the activity” (Engeström, ibid.(5): 5). At this stage, my aim was to highlight primary contradictions “…beneath the surface problems, doubts and uncertainties experienced among the participants of the activity” (Engeström, ibid.: 5). Once I accomplished this as the first step in my EDR study, I was then able to delineate the Trainers’ Forum as the activity system under investigation. In effect, this meant specifying the limits and locus of the activity being investigated in terms of the people involved and their location.

Having developed insight into the context of the activity or practice being examined, the next step or phase in EDR involved rigorous analyses of the activity system, namely: -

1. Object-historical analysis of successive developmental phases of the activity system in terms of the qualitative transformations of the object (clinical research training practice)

2. Theory-historical analysis of concepts and models used/professed in the activity system (partly constructed within the activity and partly imported into it)

3. Actual-empirical-analysis of the activity, actions and operations

Accordingly, in this study, CHAT (Engeström, 1987, 1999a, 1999b) encompassed a theoretical framework, and a methodology that guided the development of my analytical
framework concerning the concept of practice within an emergent professional community of trainers.

Using this theoretical framework, I sought to pull together a number of seemingly diverse strands of philosophical or sociological debate about the nature of practice. These strands were pulled towards an account of human practices in terms of actual social interaction. In particular, this focus on the relevant associated activity is reminiscent of the practical turn away from a metaphysical explanation of human behaviour, which attempts to describe observed effects in terms of ill defined inherent properties or mechanisms (Bohman 2008; Jost and Hardin, 1996; Turner 2008). In this respect, any proposed theory of practice is not focused specifically on theory as “…a formal system of hypotheses that generate explanations and predictions”. Instead, it encompasses the declarative, procedural or empirical models or concepts of practice observed within a system of activity (Turner, ibid.:4), especially since the “situated nature of activity systems indicates that they are rooted in historically developed and conditioned practices” (Meyers, op.cit: 8). Therefore, the tools, concepts and principles that over time mediate activity within the Forum, also reveal its systemic history.

4.2.4.2 Triangulation

As outlined in this chapter, this study was designed to answer the question: what’s happening around here? Accordingly, observations of Forum activity were used to ask questions of community members, both informally at meetings, and formally through pre-arranged interviews and questionnaires. On this basis, multi-source data was gathered by different methods. Findings were then corroborated across data sets, and interpretations checked for consistency. Therefore, as a consequence of the research design, methodological triangulation may be considered in this study in two ways:-

- First, data was gathered from the same sources (CoP members) using different methods (observation, survey and interviews).
Second, data was gathered from different sources (CoP members; artefacts from TF meetings; field artefacts: job ads, publications) using the same method (observation). In addition, categorising trainers according to their level of participation in their CoP, allowed analyses of data gathered from different perspectives (core, active, peripheral members) using different methods (observation and interviews). In effect, analysing these perspectives on the basis of differentiated participation in the Forum acknowledged the multi-voiced constituency of this activity system, according to Engeström’s (2001) second principle of CHAT.

Moreover, because of this constituency, the object of activity is “constantly in transition and under construction, and “it manifests itself in different forms for different participants and at different moments of the activity” (Hasu and Engeström, 2000: 4). That is, individual subjects in the community construct the object of activity in myriad ways. How it is shaped reflects their own histories and depends on their relative position in the system of activity (i.e. according to the division of labour). Such shaping is also contingent on the mediating tools available to them (Engeström 1999; op.cit.).

Moreover, interviews serve to deepen and enrich the raw data gathered through observation about the object of study, rather than merely check its coherence or accuracy with CoP participants, since inconsistencies provide an opportunity for further exploration.

Nevertheless, methodological triangulation assumes convergence between "independent measures of the same objective", leading to a *convergence of truth* in the findings (Campbell and Fiske, 1959), which provides more confidence in the credibility of findings, or in the construct validity. That is, when I set out to assess what I defined as “the concept of practice” have I sufficiently demonstrated that this is actually what I am assessing? Moreover, were my methods and instruments suitable for this purpose? In essence, construct validity can be claimed when our observed patterns in data - *how things work around here* are consistent with our theoretical patterns - *how we think the world works* (Trochim, 2006) i.e. in relation to our activity in our CoP and/or our field of practice.

Trochim (ibid.) suggests five criteria to judge research designs: -

PART 2 METHODOLOGIES
1. **Theory-grounded.** Good research design finds its roots in theories, that is, it has the power to test the existing theories as specific theoretical expectations are incorporated in the design.

2. **Situational.** Good research design reflects the setting of the investigation. The design comes up with strategies to cope with situational threats to validity such as "intergroup rivalry, competition".

3. **Feasible.** Good research design takes reality into account. The design anticipates potential problems in implementation, measurement and if necessary, includes additional groups or measurements.

4. **Redundant.** Good research designs duplicate some essential design features.

5. **Efficient.** Good research designs also refrain themselves from overdesign.

Therefore, in the following sections, concerning issues associated with data gathering methods, I will consider how my methodological approach is consistent with the nature of the research, where the aim is to explain the role of social context (i.e. ideology or discourse) on the objective regularities of practice (surface appearances of everyday life) within a community of trainers. Moreover, the issues of reliability and validity are also considered in this research study, which is developmental in nature, in the following terms:-

- Have I asked the right questions, to find answers within my study?
- Have I designed appropriate instruments that each consistently get to the heart of what is happening inside my CoP (e.g. questionnaires, interview schedules and interpretative analytical frameworks)?
- Have I defined my concepts clearly, so that my analytical frameworks are transparent?
- Have my data been gathered in ways that are appropriate for the nature of the research study?
Will my data be analysed in a rigorous manner that will allow my propositions or hypotheses and conclusions to be judged as trustworthy and credible?

4.3 Data gathering methodological issues

4.3.1 Stage 1 Research: Initial methodological issues

In the initial stages of my research, I attended Forum meetings initially to access my community of practice. On the one hand, such access presented a useful networking opportunity. On the other, it provided an opportunity to learn about current thinking in training circles, through interacting initially at three levels: (1) informally via conversations with fellow attendees; and (2) formally via sessions run by “speakers”, “presenters” or “session leaders” and (3) formally via leading or presenting a session or sessions. Finally, a fourth level of interaction emerged, following an invitation to join the Steering Group that organised and managed Forum activities.

Therefore, my aims in attending Fora were four-fold, namely:

- To informally “sound out” topics of common interest or concern within this public space, in order to formulate my research ideas with fellow trainers.
- To establish initial contacts with the intention of identifying prospective interviewees.
- To gather information / data about current perspectives on training issues.
- To explore common understandings of training practices.

Moreover, I considered this as laying foundations and preparing groundwork for my research study, although the focus was still nebulous during this initial phase.

I attended meetings in hopes of sharing experiences with fellow attendees, and perhaps gaining ideas for research. In effect, I hoped to learn through observing and reflecting on the topics under discussion. In particular, I was in a phase within my own practice that involved reflecting on shared elements of practice as well as dissimilarities due to differences in individual practice settings. In addition, I volunteered to lead a session at the fifth Forum on a
topic of intense interest (*What constitutes training records for the purpose of GCP inspections?*) in order to debate how, as trainers, we might consider our standards of practice from a theoretical perspective as well as the usual empirical one. By contrast, all other sessions of this Forum concerned colleagues’ feedback from their experience of inspections and inspectors expectations of training standards. The proposition I put forward to the Forum was how we might determine our standards internally for ourselves, rather than accept an externally imposed quantitative model (i.e. for twice yearly GCP training based on inspectors’ recommendations). This proposition was also contextualised in my session by explaining that it was part of a research exercise for my doctoral research.

Thus, in all of my interactions at each Forum either as a Forum participant, or on this occasion as a session leader, I declared my role as a researcher to those with whom I interacted, either informally during breaks, or to the wider audience during sessions. I did this openly because of my expressed aim to gather information. The decision to “go public” with my researcher identity, when I first attended the Trainer’s Forum, was a conscious effort to start sharing ideas about CPD and training issues, and to announce myself to potential research interviewees. It also began the process of forming relationships.

However, I did not articulate my role at the first few meetings I attended. Principally, this was because I neither defined nor categorised my role as an observer, nor delineated my activity as observation. At this initial stage of research, my focus was on formulating the object of research and not on the methods used to explore it. Nevertheless, observations of fellow trainers’ practice and related issues were recorded in field notes. Further, I categorised them initially as field notes because, as well as capturing “snippets” of expressed views and reactions, they contained my reflections on issues discussed at the TF, including instances of contradiction.

In particular, I found that although I had common experience of some of the perceptions held about training among my community of practice, others struck me as odd because they were contrary to my understanding of training process, which intrigued me. Specifically, I
wondered if negative perceptions I observed - about the limited value of evaluation - reflected a particular form of ‘organisational’ or ‘functional’ thinking, which I did not share, especially given my status as an independent trainer. I noted these incongruent instances of what I saw and heard, mainly because I was shocked by the apparently consensus view that evaluating training is a waste of time, and by the lack of challenge to this view. Rather, in contrast to my expectation of challenge, this negative view was reaffirmed by several speakers, all of whom conveyed their agreement by quoting from Tom Peters, the entrepreneurial management coach “…hire for attitude. Train for skill” (original source: Carbonara, 1996).

Since the process of constructing the object of study is time-bound, my focus developed with progressive clarification, as levels of complexity were appreciated over time such that the multidimensional nature of the object was further refined. In essence, within my field notes, I was following an analytic strategy that involved picking up on paradoxical or incongruent aspects that appeared to ‘stand out’ for some reason, like the example given previously. These statements or ‘incidents’ that puzzled or intrigued me were captured initially with quotations, utterances or snippets of conversation, that conveyed the essence of the paradox or incongruity, as I perceived it at the time. These quotations then served as an aide-memoir such that further detail could be further recalled as paradoxical aspects were correspondingly unravelled. As I discovered, this technique offers a way of “mapping the woods” or navigating the research topic such that focus is rapidly refined (Macnaghten and Myers, 2004) as the object of research is conceptualised. In effect, I was collecting “snippets” that I would later conceptualise into categories, and build into my conceptual coding matrix as representations of the objective regularities of practice. By this means data was simultaneously selected and sorted into categories.

Subsequently, over time with continued attendance at various meetings, I appreciated that I was observing the dynamics not only of a community of practice in action but elements of practice being modelled within this dimension, which in turn revealed epistemological beliefs fundamental to the concept of training as a practice. This realisation is consistent with
Wenger et al’s (ibid:38) conceptualisation that... *Through its practice – its concepts, symbols, and analytic methods - the community operates as a living curriculum.* Moreover, as Wenger *et al* (ibid.:9) state, with regard to expertise resident within a community of practice: the knowledge of experts is an accumulation of experience - a kind of “residue” of their actions, thinking, and conversations - that remains a dynamic part of their ongoing experience.

It might be argued also, that a community of practice is a type of cultural context, and therefore, public spaces within it are the means by which the community can be observed in action. Therefore, as a consequence, I appreciated that my observations, conceptualisations and resultant insights formed the nub of my research, and thus constituted both raw and analytic data, respectively. At this point, I wondered how I should consider the issue of permissions concerning my observations in a public space, albeit within my professional community of practice. In the first instance, whom might I approach for permission to observe? Was permission actually needed to conduct observation, given that I was already privileged to be a paid-up member of this community within the professional confines of the Institute of Clinical Research? Who should I consult? The answers to these questions are discussed in the next section.

### 4.3.1.1 Access and Permissions

The researcher’s insider / outsider status, in relation to the research setting, determines practicalities of access. For example, in this instance, as an insider, there was no need to formally negotiate access to this public space. Attendance is open on a 'first come first served basis' to all members of the Forum, who can book their place, in response to a general e-mail notification alerting all ICR members to the date of the next meeting. Meetings are organised by trainers for trainers, and are positioned as an opportunity to meet and discuss issues of current interest. However, within the Institute of Clinical Research, the TF is constituted as a Steering Group or committee rather a Special Interest Group (SIG), as the latter tend to work closely on special projects with the ICR.
Even if access to my community of practice is not an issue, did this obviate the need to seek permission to conduct my research? Does the omission of this step mean the observational mode was covert, which by implication raises an ethical concern regarding a possible intent to deceive? This depends on the purpose and intent of my research (Mulhall, 2003).

As a member of this community, it was always my intention to build relationships: as a source of research ideas; a source of participants and eventually, a source of data. Besides, my original plan from the outset was to conduct interviews with members of the community about CPD, helped by whatever insights emerged from being part of the Trainers Forum. Moreover, my reflections were constituted by my observations, which were conducted without the intent to deceive - the main ethical concern regarding the covert status of a researcher. As such, my observations did not interfere with the normal activities of the Fora, where members had a choice, like me, to interact within the community and to participate either within this public space or privately.

Yet, if all members are equally entitled to make their own observations within this public setting, on what basis might the researcher be distinguished? In the initial phase of my research, I was open about my researcher status, but I did not articulate the act of observation at this stage since my focus was on understanding the object rather than the methods used to explore it.

However, by the exploratory phase of my research, my engagement, although episodic, which reflected the nature of the research setting, intensified both in terms of my participation and subsequent observations. As the research developed, as a means to tentatively validate my initial insights and observations about the object of research (our shared practice), I shared these with fellow community members, both within private spaces and within steering group meetings. Therefore, immersion within the research setting was indicated by relationships that formed over time with other Forum members.

The process of consultation with the membership about observing “what happens around here” was unobtrusive and gradual, like the process of observing itself. From the start I shared
my intent to conduct research with the membership, by sounding out my fellow trainers about
the ways in which they might help me. Over time, fellow Forum participants expressed
interest and support in my developing articulations. Their willingness to help with the
research endeavour was demonstrated by those who later became interviewees. Moreover, my
observational data and insights were constituents driving both the questionnaire and the
interview schedules. Therefore, by this means of methodological / participant validation, I
was testing my hypotheses, derived from my observations.

In addition, by about the third meeting of the TF, I discussed with the ICR Forum co-
ordinator the possibility of distributing a questionnaire to the membership, when the time
came. The co-ordinator advised that distributing the research questionnaire in person at the
Fora was probably the best option since the ICR would claim copyright on my data if an
electronic questionnaire was posted via the ICR website.

Therefore, I made no secret of my researcher status. Although I initially articulated my
research ideas with fellow TF members in the context of the TF being about CPD, over time
the object of study changed as I developed an understanding of the various layers of social
reality. Moreover, my developmental approach to the object of research became evident
when I volunteered an activity-based session. This was designed around the question of how
we can demonstrate to regulatory inspectors that our training is effective through our training
records. Once I recognised the role of my observational data in exploring this object, I
decided to seek permission to observe formally. However, as I soon discovered, the process of
seeking permission from a dynamically heterogeneous community raises its own particular set
of issues.

From a practical point of view, seeking permission from individual attendees of each TF
meeting, both to observe and to ‘go public’ with insights via potential publication, was
logistically challenging and difficult. Different members attended different meetings over the
course of my observations. In effect, this would have meant producing an average of 60 to 80
consent forms for each meeting, assuming a 100% response rate.
As another alternative, within this particular setting, permission might have been negotiated via a 'gatekeeper', whom Wenger et al (ibid.) define as the individual who maintains information flow or who determines access and drives activity within the community. However, this assumes the gatekeeper has the power to grant or obtain such permission democratically on behalf of the membership. Yet, during initial observations, there was little evidence of inclusive or democratic processes in play in the workings of the TF. How participants became Steering Group members was unclear: were they elected or self-appointed? Nevertheless, before the start of one particular TF, I approached the ‘acting’ gatekeeper for advice about how best to circulate my questionnaire and consent form to all participants. The consent form included the request for permission to use data gathered for the purposes of research.

The first issue raised by the gatekeeper concerned the need to avoid conflicting or interfering with the normal ‘business’ of the TF in circulating these documents. For example, on the occasion I planned to distribute them, a core member was also distributing a GCP quiz, which meant that I risked overloading attendees with ‘paperwork’. As such, the concern was that the response rate to both items might be reduced, which in turn could disrupt activities planned for the meeting.

The next issue concerned copyright of session presenters’ material, even though presentations were often posted on the ICR website without presenters’ express permission, as happened in my own case, although I had no objections. I explained to the gatekeeper and the presenters that I was not interested in specifics but in general issues that arose from discussions. A few of the presenters then completed both questionnaire and consent form. Rather than express an objection to my research some presenters and attendees expressed interest when I engaged them in conversation. A few more attendees also duly completed and forwarded the

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24 TF held December 2006
questionnaire and consent form. Finally, others remained remote, or disinterested in becoming actively involved in the research. Despite my open pleas for their collective help in completing my questionnaire, the majority (22 out of 28 attendees) preferred to remain uninvolved.

Further discussions established reluctance due to confusion over the purpose of the consent form, or disinterest. However, further unanticipated difficulties in seeking permissions from attendees of specific Fora were then revealed. For example, of the six who completed the questionnaire distributed during the TF, only four returned the consent form. By requesting permission to use “data gathered”, I failed to differentiate whether this concerned data from observations or from the distributed questionnaire. So, were non-responders refusing permission for me to use data gathered from my observations or simply not inclined to respond to the questionnaire?

Rather than speculate on why this happened i.e. why the response rate to both my questionnaire and consent form was not as I had hoped, I established through informal discussions with attendees and presenters, at this and subsequent forums that most felt the questionnaire did not apply to them. Hence, few considered the consent form relevant. The issue of the questionnaire's relevance revealed that some attendees were involved indirectly with training i.e. as e-learning software programmers, or as administrative members of other professional bodies networking and trawling to enlist “suitable” trainers to help in their organisations. Others had only recently assumed responsibility for training in their role on a part-time basis and felt their lack of experience excluded them as suitable respondents.

When I pointed out that the consent form also concerned permission to observe, none had an issue with being observed for the purposes of research. Some then elected to complete the questionnaire but not the consent form, because as they explained to me, completing the questionnaire signified their assent to use the data it provided. I subsequently received these completed questionnaires in the post.
Although access was not an issue in this research setting, I had inadvertently and unintentionally created an ambiguity, by using one combined consent form to seek permissions for use of observational and questionnaire data. In seeking individual consents, I had created an ethical dilemma. How could I use observational data gathered at this particular Forum to take account of whether non-responders were disinterested passive bystanders or because they objected to being observed?

The issue of obtaining consent from survey respondents is equally problematic (Singer, 1978; 2004). For example, informed consent statements may affect perceived risk of breaches of confidentiality such that potential respondents are discouraged from participation. Or, they may be willing to participate in a survey but perceive risk when asked to document their consent with a signature because “they believe that the consent form compromises their anonymity and protects the research organisation rather than respondents.” (Singer, 2004:2).

Therefore, whereas in clinical research, participants must be made aware of the risks as well as the benefits to their health and wellbeing before participating in studies involving experimental treatments, in social or educational research consequential harm is perhaps more nebulous, although no less significant. The key difference is perhaps that risk concerns mainly breaches of confidentiality and their consequences, such as damage to participants’ reputations or consequential material losses.

Paradoxically, too much emphasis on assuring confidentiality, if the risk of breach is minimal, creates suspicion and concern leading to less participation (Berman et al, 1977; Reamer, 1979; Frey, 1986; Singer, Hippler & Schwarz, 1992; Singer, Von Thurn & Miller, 1995). In the context of social or educational research, if the risks to respondents concerning breaches of trust, confidentiality or privacy are minimal, the need for consent may be obviated, since consent is implicit in the act of completing the survey (SRA, 2003). Hence, if questionnaires are returned anonymously and cannot be traced back to the respondent by any means, then respondents’ confidentiality is also seen to be preserved. According to the guidelines of the
Social Research Association (SRA), preserving confidentiality is a core responsibility in the
cconduct of research, particularly since

“...The principle of informed consent is, in essence, an expression of belief in the need for
truthful and respectful exchanges between social researchers and human subjects. It is clearly
not a precondition of all social enquiry. Equally it remains an important and highly valued
professional norm. The acceptability of social research depends increasingly not only on
technical considerations but also on the willingness of social researchers to accord respect to
their subjects and to treat them with consideration.” (SRA, ibid: 29).

So, if obtaining consent to observe from individual TF members was an issue but access was
not, could I still justify using observational data? Moreover, did this difficulty suggest a
difference between negotiating permission to access a community for observation and seeking
consent from individuals to observe? In some instances a distinction may be made between
negotiating permission for access and seeking consent (Vinson and Singer, 2004). Hence, in
the circumstances of a community of practice, with an assumed shared passion (about
training), but possibly diverse interests (in different aspects of training), achieving a
consensus for consent proved unrealistic.

As an insider to this CoP, I was uniquely placed to conduct this research. Moreover, as a
clinical researcher of twenty years standing, I was acutely aware of my responsibilities to
protect the rights of research participants to anonymity without compromise. As an
educational researcher I also worked to the revised British Educational Research Association
(BERA) guidelines (2004). But, in this research setting and given the unfolding nature of the
research endeavour I could not see a way to actively engage the commitment of all who
attended each of the eleven Forum meetings I observed. I could only address issues of
confidentiality or permissions on an individual basis.

Nevertheless, as explained previously, my intention (to explain the how, what and why of our
discussions about topical training issues as a CoP) was not to be deliberately covert.

Moreover, my role as researcher was neither secret nor hidden during my participation at
Training Fora. However, in the early stages, my research aims within the TF were less than
clear. A lack of transparency in my methods overlapped with lack of clarity in my research
aims, reflecting the cloudiness inherent in the initial stages of research before methodology is articulated.

Yet, even if access to a professional public space, representative of a CoP, is relatively easy to an insider as in this instance, such accessibility does not automatically imply amenability either to the act of observation or to such observations being publicly documented even if the intention is to improve the CPD endeavour for all concerned.

However, in this case, accounts of activities or topics covered or discussed during meetings were openly published in the general magazine of the Institute, which implied that Forum meetings were not considered a protected space within the Institute. In addition, some guest presenters, speakers or session leaders included non-institute members. Again, this implied openness to outsiders, particularly in terms of their ‘expert’ input, who were then free to relate their experiences of the Forum elsewhere, such as in their own field of practice. The ultimate indicator of this openness to scrutiny was the uploading of a session run by one of the core members to the internet via the publicly accessible You-Tube video website. The link to the videoed sessions was also published by the Head of the ICR membership services, on the ICR website shortly after uploading.

Finally, I was invited into the core membership of the TF after attending only a few meetings, both on the basis of publicly mentioning my research and due to my level of participation. Such admittance suggested acceptance of my researcher status. A few core members were aware of this status from my first attendance of the Forum, because I had discussed it with them in general terms. Moreover, during a steering group meeting, no objections were raised to my declared intention to use feedback, collected by this core group from attendees, for the purposes of my research.

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25 Initially, my research was explained as exploring the nature of CPD and its implications for practice within the TF.

26 SGM held after Trainers Forum_10/H: 20th September 2007 “Participation: Making Learning the Priority”
Consequently, my decision to use observational data gathered in this naturalistic setting was based on a number of factors, which hopefully resolved ethical issues concerning confidentiality or informed consent:-

- I had no access or amenability issues as an participant-researcher to my CoP
- My intention was not to deceive the CoP but to explore it and contribute to it
- As an participant-researcher, I did not attend the TF under false pretences i.e. solely for the purposes of research; I was also there to network with colleagues as well as contribute to discussions
- My observations were crucial to developing understanding of the object of research as well as to the development of further research tools
- The research findings hopefully will further my contributions as a participant in the CoP
- As an insider, I will remain an active participant in this community after my research endeavour is complete.

4.3.2 Stage 2 Research: Exploratory methodological issues

4.3.2.1 Questionnaire

The purpose of the questionnaire survey (Appendix B) was to establish demographics concerning practitioners and their practice settings.

Initially, its purpose was explained to potential respondents in a Research Information Sheet (RIS-1: Appendix C) in its wider context of the effects of regulations on training practices including evaluation. When this RIS and Informed Consent form (ICF-1, Appendix D) was circulated at the TF in December 2006, I envisaged my main objective as examining relationships between practitioners’ characteristics, practice settings (organisational characteristics, support frameworks and constraining factors) and their training practices. I...
also defined my aim as being about identifying the differences trainers make as practitioners to training process, compared to subject matter experts.

Through this explanation, I appreciated the wider context of the research aims, from which alternative propositions would begin to emerge and shape my object of research. Therefore, although my understanding of the object changed, the questionnaire still fulfilled its purpose in gathering information to further elaborate collective understandings of practice. Common understandings of the concepts of reactivity/pro-activity were explored, since these terms were repeatedly used within Forum meetings but without further explanation.

A number of problematic issues related to implementing the questionnaire have already been discussed in the previous section. However, another reason for the vast majority of TF members failing to complete it might have been the large number (thirty-eight) of potentially intrusive question items in the questionnaire. For example, in the same Forum, the response to the GCP quiz, with ten questions, was almost 90%.

With hindsight, the explanation for the purpose of the research was simplified in a subsequent version of the RIS i.e. when the questionnaire was circulated by e-mail in February 2007 (circulated e-mail re RIS-2, Appendix E) and later distributed again at other Forum meetings (Appendix E: RIS-3 May 2007; and RIS 4 March & June 2008). The working title of the research was also modified in the consent form circulated in March & June 2008 consistent with the object of research becoming clearer over time (ICF-2, Appendix F).

After I expressed my disappointment with the response rate following distribution of the questionnaire at the December 2006 meeting (despite it being a response rate of just slightly over 20% of attendees), an administrative liaison of the Institute offered to distribute the questionnaire via e-mail. This generated most of the further responses, bringing the total number of respondents to approximately 25% of the estimated total membership of the Forum.

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27 Circulation at subsequent TF meetings generated five more responses.
(i.e. 31/120 based on an e-mail listing circulated in the summer of 2005). Again, as with the response rate at the meeting when the questionnaire was first distributed, perceived irrelevance and disinterest were still possible reasons for this rate of return.

In terms of questionnaire design, unless there is a deliberate endeavour to balance positive and negative statements throughout a questionnaire at the construction stage, difficulties can arise with response sets, or bias (Verma and Mallick (op.cit.:202). According to Bailey, Bemrose, Goddard, Impy, Josyln & Mackness (1995), the main difficulty is with respondents’ tendency to agree rather than disagree, so called ‘yeah saying’, although, ‘neay saying’ is apparently also possible but less common. However, such conformity possibly presupposes political sensitivity in the question items related to the subject matter being explored. Hence, the challenge in questionnaire design remains that of asking direct questions that are clear and non-leading. In this instance, question items were neither positive nor negative, but open.

As one respondent pointed out, with questionnaire item numbers 4 and 5 regarding methods and strategies — deciding whether to conduct training via the classroom or e-learning is about strategy; and deciding whether to design the training actively using role plays, exercises or passively using lectures is about methods. These item definitions were unintentionally reversed in the questionnaire.

Also in the first draft of the questionnaire, item number 25 asked whether respondents were graduates rather than science graduates. This item was revised in the second draft together with items 26 and 27, which were amended to request further details of respondents’ postgraduate and/or training qualifications. Fortunately, this data was volunteered by the majority and missing for only two of the six respondents who completed the 1st draft questionnaires circulated at the December 2006 Forum.
4.3.3 Stage 3 Research: Confirmatory methodological issues: Interview schedule

By the third and final stage of the research, the point had been reached where extensive participant observation and informal interviews had raised issues requiring further examination through formal interviews. However, I had a dilemma over whether to conduct these as open-ended (i.e. unstructured) or semi-structured interviews. Open-ended interviews risked failing to get beneath the surface of participants' accounts of what was happening at the forum due to potential digressions causing the conversation to go "off topic". On the other hand, too focussed adherence to a semi-structured interview schedule could risk missing subtle cues regarding emergent issues raised by interviewees. Thus, the challenge in a semi-structured interview is to find balance between taking and exploring a worldview of the TF and the issues within it, as well attempting to appreciate the TF from participants' perspective. Therefore, the main drawback of this type of interview is that the interviewer fails to register any inconsistencies, discrepancies or incongruities during the interview itself (McAteer, 1999).

Although an open-ended interview might avoid the distracting effect of an interview schedule, it could be argued that even greater interpersonal skills are required to probe and to listen, since both skills affect the interview process (Paterson, 1997). For example, if the interview is ‘a conversation between two people working together’, then the social interaction is part of the process, particularly when rapport can facilitate discussion about the research topic, and especially in the sense that rapport is "…a basic sense of trust [which] allows the free flow of information" (Spradley (1979).

Even so, irrespective of the type of interview, it might be argued that "realness, genuineness and congruency" are the most basic of three essential ‘attitudinal’ qualities for facilitating the interview process (Rogers, 1983). These qualities may be put into practice provided that the interview schedule is designed with care, thus avoiding phrasing questions in a way that leads interviewees or informants in their responses, a process Lee (1993) referred to as ‘transference’ and ‘counter-transference’.
As a midway position between an open (unstructured conversation with the study participant) and a structured interview (which allows for little deviation from the schedule), the semi-structured interview strikes a balance between:

“allowing the variety of responses from one interviewee to another and reasonable consistency in the interviewer’s approach” Verma and Mallick (1999:124).

Such consistency incorporates an element of rigour into the methodology. Therefore, my interview schedule was built around prior analysis of discourse and issues raised through observation. By definition, this composition ruled out an open-ended approach in that interviews were directed at finding out more about interviewees’ understanding of the TF, its purposes, and its leadership.

The original schedule piloted with two informants, consisted of four main sections and totalled almost 60 question items: Employer details & background; concept of practice: activities & standards; TF organisation & processes: how the TF works: common & dominant interests; CoP participation & relationships.

This schedule was simplified and condensed into two main parts comprising two sets of twenty consolidated items, and conducted as two separate interviews. In the first interview schedule, the focus was on the TF participant’s background: employment history, qualifications, training experience; and his/her concept of practice (Appendices G and H). Interviews took anywhere between half an hour to an hour depending on the interviewee.

In the second interview schedule, members’ relationship to the TF and their understanding of how it was organised and how it worked was explored. This interview also lasted between thirty minutes and an hour depending on the interviewee.

Neither schedule was followed in stringent order of the items, reflecting the fluid, flexible and conversational manner in which both interviews were conducted. Hence, if the interviewee raised an aspect, which coincided with a scheduled item, but not necessarily in the scheduled order, it was explored in the order in which it occurred during the interview.
4.4 Data analysis methodological issues

4.4.1 Quantitative data analysis issues: Generalisability

Data analysis methods reflect the nature of the data gathered (GAO/PEMD, May 1992).

A questionnaire-survey was used in this study. However, the data or values gathered were based on categorical or qualitative variables, mainly of the nominal type, with no inherent numerical properties. Although such variables may be quantitated, using Likert scales, nominal data have the least scope for meaningful statistical analysis (GAO/PEMD, ibid.). That is, unlike ordinal variables, values assigned to nominal variables cannot be compared or ranked in any meaningful numerical order. An example of a nominal category from my questionnaire is operational tendencies or organisational characteristics or trainer characteristics.

Accordingly, descriptive and not inferential statistics were used to summarise, describe and explore data, where appropriate.

Consequently, no attempt was made to infer statistical generalisations on the basis of findings concerning causal relationships in this study, since the object of research was not defined and explored in experimental terms, in which such quantitative methodology best applies. Rather, a qualitative methodology was applied. Therefore, because propositions were theoretically derived and empirically tested within a specific context, whether what happens around here can be generalised in conceptual terms to other settings and their objects depends on finding similarities in patterns between their features, conditions and circumstances.

4.4.2 Qualitative data analysis issues: Study limitations

The limitations of this research generally depend on the ontological complexity of the object of research, my researcher’s capability to delimit its context and the methodology used to examine it. In this study, a conceptual-analytical framework was developed progressively and adopted in order to define, then to illuminate the features of the object of research, which clarified the focus.
Perhaps the main limitation of my research approach in the role of ‘participant-observer’ is that because of full immersion in and closeness to the research object occasionally I may not be able to "see the wood for the trees". Nevertheless, rather than considering lack of distance in terms of a loss of objectivity, this predicament, of an occasional mental block in the analytical process, is resolved through systematic perseverance, as well as a critically reflexive approach. Furthermore, processing raw data from fieldwork through open coding, then conceptualising it as categories is a laborious technique (Strauss and Corbin, 1990) that develops, if not demands, a level of familiarity, with the object of study in all its dimensions. By this means, through recognising concordances, discordances or discrepancies, the familiar can also be rendered unfamiliar.

In addition, such concepts grounded in the data are rigorously tested through constant comparison, with theoretical sampling of data gathered by different techniques from a variety of sources. So, for example, in my study, the initial raw data (which started with field notes where ‘live’ snippets of conversation or utterances were collected during meetings) were progressively conceptualised into categories. These categories were then refined through progressive comparison eventually with data gathered and coded from transcribed digital recordings of entire meetings. By this means, concepts were firmly bedded or grounded in data that were captured in varied ways, from varied sources, reinforcing the methodological validity of the research design and the theoretical consistency of propositions that emerge through that design.

Mind mapping software was used to closely manage the coding process due to the volume of the data corpus, highlighting that being overwhelmed by data is a potential limitation of an EDR approach. Mind mapping provided the means to visually organise concepts and to visualize relationships between categories and sub-categories. What emerged from the coding process were the core categories of concept, methodology and experience of practice. These categories were then framed using an AS model to examine what happens around here.
shown in Table 4-2. Meanwhile the TF was delineated as an activity system shown in Figure 4-1.

In effect, using EDR, the TF was approached as a nested activity system, where the link between the concept of practice (expressed within contrasting pedagogies and their associated idioms) in the Trainers' Forum and the larger socio-cultural context was explored in order to further understand “why we do what we do”. The research design and methods used to explore the Trainers’ Forum are described in Chapters 5 and 6 respectively.
Figure 4-1: Modelling the TF as a nested Activity System with five ontological layers

**Key**
- AS 1: The regulatory environment
- AS 2: The field of practice
- AS 3: The workplace
- AS 4: Institute of Clinical Research (ICR)
- AS 5: Clinical research Trainers Forum (TF) in the ICR
Table 4-1: Methodological framework showing the approach, methods and tools used to explore concepts in different phases of research.

<table>
<thead>
<tr>
<th>#</th>
<th>Phase of Research</th>
<th>Exploratory Concepts</th>
<th>Research Approach</th>
<th>Methods for gathering evidence</th>
<th>Tools for gathering evidence</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Initial</td>
<td>Formulation of research ideas: Community of Practice (CoP): Community Domain Practice</td>
<td>Developmental using CHAT: Object-historical stage of analysis</td>
<td>Participant observation</td>
<td>Field notes; filed notes/reflective diary</td>
<td>Discourse at Training Fora (TF) &amp; artefacts: ICR magazine (CRf) &amp; website: articles re TF sessions; TF presentations/handouts; general training articles; job advertisements; Discourse extracts incl. quotations from participant observations</td>
</tr>
<tr>
<td>2</td>
<td>Exploratory</td>
<td>Concept of Practice &amp; its Objective Regularities (ORoP): Structure of practice (Rules &amp; resources)</td>
<td>Developmental using CHAT: Theory-historical stage of analysis</td>
<td>Participant observation</td>
<td>Questionnaire survey</td>
<td>Questionnaire: Discourse within TF sessions &amp; artefacts including: Collated Forum participant feedback concerning specific sessions and Forum sessions generally; Written discourse produced by CoP members from TF meetings, published in the Research Questionnaire responses TF survey responses</td>
</tr>
<tr>
<td>3</td>
<td>Confirmatory</td>
<td>CoP as an Activity System with complex activity: Cognitive &amp; Co-operative tasks</td>
<td>Developmental using CHAT: Actual-empirical stage of analysis</td>
<td>Participant observation</td>
<td>Field notes; filed notes/reflective diary; TF session transcripts</td>
<td>Interview transcripts from trainers at different levels of participation in the TF: Core members Active members Peripheral members Discourse at TF &amp; artefacts</td>
</tr>
</tbody>
</table>
### Table 4-2: Modelling core categories as Activity System (AS) elements

<table>
<thead>
<tr>
<th>Core categories from qualitative analysis</th>
<th>Modelling core categories as AS elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concept(s) of practice</td>
<td>Central activity</td>
</tr>
<tr>
<td></td>
<td>Sharing best practices &amp; discussing ideas about topical training issues</td>
</tr>
<tr>
<td></td>
<td>Trainers with practice issues</td>
</tr>
<tr>
<td>Methodology of practice</td>
<td>Tools used to mediate activity</td>
</tr>
<tr>
<td></td>
<td>T &amp; L approach/methods; EFsD</td>
</tr>
<tr>
<td>Experience of practice</td>
<td>Outcome of the activity</td>
</tr>
<tr>
<td></td>
<td>Transfer of information/co-construction of knowledge</td>
</tr>
</tbody>
</table>