Using Action-Oriented Or Participatory Research Methods For Research On Networked Learning

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ABSTRACT

This paper explores action-oriented or participatory research in the field of networked learning. A small study was conducted into ways of supporting distributed communities of practitioners in their ongoing professional development, through the creation and use of stored multimedia artifacts within networked learning environments A user-centred, exploratory and participatory research approach was adopted. The paper suggests why such an approach was deemed appropriate for this kind of study: allowing the researcher to build theoretical constructs grounded in qualitative data gathered from real practitioners; but also informed by the researcher's own personal experiences and self-reflective observations.

Keywords
Action-oriented or participatory research; networked learning; multimedia-based communication

INTRODUCTION

This paper explores the stance of an action-oriented or participatory research approach, in relation to the field of networked learning. It focuses upon research into the creation and use of stored multimedia artifacts within networked learning environments, as an innovative way to support communities of practitioners in their ongoing professional development (Steeples, 2003).

The action-oriented or participatory approach was adopted because it supports a close coupling between my everyday practices as a learning technology professional involved in teaching and supporting learning about, learning technology *and* my practices as an educational researcher. This close linking between teaching and research practices, enables me to make sense of research ideas generated directly through my own practices and my experiences within the teaching and learning context. Conversely, the practical experience of teaching and the support of learning using technology in a professional development context has been directly relevant to the research activities.

I would further argue that my closeness to, and active engagement in, the concerns and preoccupations of learning technology practitioners, has enabled me to adopt this highly user-centred, participatory or action-oriented research approach (eg Sohng, 1995; McConnell, 2002; McNiff, 2002; Salmon, 2002; Levy, 2003), and to build theoretical constructs that are grounded in qualitative data from real practitioners (Glaser & Strauss, 1968), but that are also informed by my own experiences and self-reflective observations (Marshall, 1999).

In the next section I outline this approach to research in more detail and then comment on why I feel it is relevant and appropriate as a research method for networked learning. I then give an account of a small research study undertaken using this approach and highlight why an action research approach was particularly pertinent for this specific research investigation.

WHY ACTION-ORIENTED OR PARTICIPATORY RESEARCH?

Action research is a form of self-reflective enquiry undertaken by participants in social situations and validated in practice (Kemmis, 1988). Action research might be defined as *'the study of a social situation with a view to improving the quality of action within it'*. It aims to supply useful ways to help people act more intelligently and skillfully. It provides close linking between the research process and its context, and it is predicated upon the idea of research having a practical purpose in view and of it leading to change (McNiff, 2002).

In action research, the research process is seen as a spiral activity going through repeated cycles and changing each time. It is therefore seen as a continual and integral process of linking research and practice. It is an

approach or methodology which enables researchers and their participants to learn from each other through a cycle of planning, action, observation and reflection.

Indeed, Kemmis (1985) recast action research as a form of reflection, or

> 'self-reflective enquiry undertaken by participants in social situations in order to improve the rationality and justice of their own social or educational practices, as well as their understanding of these practices and situations in which these practices are carried out.'

(Henry and Kemmis, 1985: 1)

Action research sits within an interpretative tradition, in which the existence of practitioners as real life participants in the research is acknowledged. It is designed to be responsive to real practitioner needs and concerns (eg Salmon, 2002). The descriptions and explanations people produce for their work and practices constitute their own living educational theories (McNiff, 2002). However, action research is not limited to the collection of qualitative data but can make use of a variety of complementary methods in order to produce a rich picture or 'thick description' (Geertz, 1973) of the events or circumstances under study from the perspective of those who directly experience them.

Action research cannot prove that an action is effective even within stated parameters of applicability. The most it can do is report evidence for effectiveness against stated criteria while the action was taken in one or more situations. So validity lies with the beholder who can find similarities with their own situation. To make assertions more convincing it is common to employ triangulation, ie reporting observations from several people with different perspectives on the same situation. Agreement between different observers can raise confidence in the observations made (Mason, 2002).

I would also define my approach to research as being heavily influenced by participatory research methods. Participatory research challenges practices that separate the researcher from the researched and promotes the forging of a partnership between researchers and the people under study (Freire, 1970). Both researchers and participants are actors in the investigative process, influencing the flow, interpreting the content, and sharing options for action. As Sohng (1995) comments, participatory research is a collaborative and empowering process because it (a) brings isolated people together around common needs and problems; (b) validates their experiences as the foundation for understanding and critical reflection; (c) presents the knowledge and experiences of the researchers as additional resources upon which to critically reflect; and (d) contextualises what might have previously felt like personal, individual problems or weaknesses.

The primary strength of an action-oriented or participatory approach to research is therefore not about description but about trying things out. It is a research approach that sees its function as one of giving us different ways of relating to natural and social environments. Researchers need to be aware of how members of a group perceive and speak about their lives. This means they must find out everything that can be found out about the community being researched. In the ideal situation the researcher already lives in the community and partakes in its affairs.

As Sohng (ibid) claims, a key methodological feature that distinguishes participatory research from other social research is dialogue. 'Through dialogue, people come together and participate in all crucial aspects of investigation, educational and collective action'. Through talking and doing things together, people make connections and from connections shared meaning can evolve. The role of the researcher in this process is not only to learn from the participants but also to facilitate learning.

I have also found resonance between this approach to research and that of Judi Marshall (1999) who describes her approach as 'living life as inquiry' to explain how she applies notions of inquiry as method to many areas of her professional and personal activities and how research ideas are generated and tested in all aspects of her life. She describes how she works with and extends ideas in both theoretical and practical frames, relating them back to her own practice. She also comments upon how she values consultation with others to enhance the quality of her thinking and the effectiveness of her actions.

Why action or participatory research for my study of networked learning?
There is a state of constant flux being experienced in the world of information and communication technologies (ICTs) and ICT's influences on educational practice, of which networked learning is one part. As such, networked learning is an area where we need to conduct research in responsive and dynamic ways. Salmon (2002) refers to Metz who asserts that an action research perspective is most useful for conducting research into this field. Salmon further comments that action research is an approach to carrying out an inquiry that is closely linked to practice in teaching and learning, involving the researcher as an active participant. It is furthermore an approach that enables the voices of many participants to come through, particularly valued for a field where

research has been, until quite recently, quite sketchy and largely limited to studies focused on eg quantitative analysis and to gathering views on the role of technology.

From a personal perspective, I have found action research to have resonance with a close coupling between my teaching and my research activities. My teaching is primarily with postgraduate learners who are wishing to acquire or extend their knowledge and skills in the area of learning technology. I need to understand their needs, concerns and preoccupations as well as aspects of their practice and contexts in order to align, in effective ways, my teaching and support of their learning activity. This continually evolving understanding of a professional community is invaluable for identifying the kinds of issues and challenges faced in practice and for effective research design. So understanding and close connection to practice is used as a means to inform the research eg in terms of need and context, etc.

There is a natural corollary to practice informing the research process, and that is that research can directly feed into practice eg in being directly applied and evaluated in real or near-authentic contexts with practising professionals. Participants can be easily and directly engaged in the research: they can inform the design and the process of the research; and they can influence and shape the research in ways of direct relevance to authentic practice.

My approach has therefore involved the active collaboration of the research participants as shapers of the research process. This has required that the research process be operated as an exploration with participants and has enabled me to gain a better understanding of user needs from the user perceptions elicited. In consequence, I have not participated in controlled experimental testing or searching for evidence in support or otherwise of some predetermined hypotheses. Instead, I have been concentrating on the ways that participants are aware of and experience their world. I have used self-reports and participants' descriptions of their experiences, beliefs and behaviours as legitimate sources of data.

I believe this active involvement of participants in the research process is vital, given the nature of the phenomena under investigation. I think it is vital too to involve participants because of the unavoidable influence of my own beliefs, background and experience. I am aware of my influence and how my presence, as researcher, influences how and what participants say. I recognise in my interpretation of what they say, that I am continually making judgments as to what is significant.

I believe my role as an informed participant in the research process is acceptable because of my links to the profession and my direct engagement in practice too. The research is naturally shaped by my close involvement in the learning technology professional community: by my close observation of it; and by my continually developing understanding of the needs and contexts of professional learning in distributed communities.

DESCRIPTION OF THE STUDIES

The studies undertaken using an action-oriented approach were part-funded by a small scale Economic and Social Research Council (ESRC) project in which I was able to explore the creation of visual (multimedia) representations of professional practices with a range of learning technology practitioners. My focus was on the creation and use of stored multimedia artifacts within networked learning environments, in the context of continuing professional development.

The studies were designed to look at ways to enrich and improve the manner in which professionals share and critique aspects of their working practices in multimedia forms and to look at the benefits or otherwise of such enrichment in the context of professional learning. In particular I was intrigued to explore whether multimedia representations could help unlock and make tangible the working knowledge tacitly bound to professional practices in real world practitioner contexts and thus to help practitioners gain insights into and reflect upon their own behaviour and learning processes.

The studies consisted in two main parts. In the first part of the studies, a group of learning technology professionals were brought together to work in small teams creating representations, in short video clips, of aspects of their professional practices. It was believed that using video would encourage the practitioners to show and to do, rather than merely to describe real-world practices or to give abstracted and tidied up accounts of their practices. The teams each reviewed the clips they had made and selected particularly useful ones to present to the plenary group of learning technology professionals. Review and discussion of the clips highlighted eg useful capture techniques as well as successful, and less successful, ways of presenting the practitioner(s) in the representation. Focus group discussions using the video clips, also identified how the participants might wish to augment the video clips by adding voice annotations eg to give background or contextual information to the clip or to elaborate upon the thinking, beliefs and understanding tacitly underpinning but not visible in performance of the practice.

In the second part of the studies, the participants were asked to create annotations to their representations of practices in video clips. These clips were selected by myself as representative of interesting aspects of practice and the participants were asked to use the annotation to reflect upon their performance in the selected clips and the kinds of thinking they were doing as the clip was made. The design of these second studies was informed by the first studies, especially in creating the video clips in line with suggestions offered in the first study by participants. Following the creation of the annotations, the participants were asked to reflect upon the activity and their perceptions of both the representation in the clip and the annotation to it. Review sessions were actively undertaken with focus groups of learning technologists.

KEY ASPECTS OF THE STUDIES LEADING TO WAYS OF DOING THE RESEARCH

As stated earlier, this study into using multimedia in networked learning was seen to naturally lend itself to adoption of an action-oriented or participatory research approach. In the following sections, I suggest some of the key aspects that informed this choice of research approach.

Designing to fit real needs and authentic practices

A socio-constructivist philosophical stance underpins the choice of research approach. This is predicated upon at least five main factors. The first is the importance of researching into authentic learning situations to which practitioners can relate. A second is an acknowledgement of learners' beliefs and experiences in design and conducting the research process. A third factor is the recognition of adult learners' need to be self-directing and to act in autonomous ways. A fourth factor is to recognize the value of collaboration for learning (the need for participants to engage in dialogue, interaction, and articulation of perspectives for both themself and for others). Not least, a fifth factor is the importance of the social context for learning and community building, including paying attention to social practices in how we shape and use technological tools.

So the studies undertaken have been designed to involve testing out ideas around authentic issues in near naturalistic contexts, and in concert with the practitioners as participants in the research eg in small team tasks and focus groups. Controlled experimentation or rigid empirical work would, by contrast, be highly inappropriate.

Involving the participants in the research process

This research has led me to work closely with learning technology professionals, who are collectively a community with some very specific characteristics. They are often working in distributed ways: in small teams or in isolation (at least from other learning technology professionals). The profession is relatively new, rapidly expanding, with little formalized training, few widely-recognised qualifications and no established professional or regulatory bodies. The members of this community need to develop a diverse range of skills and knowledge that bridge between technology and pedagogy, often also requiring subject matter knowledge. This professional skills base is also rapidly evolving, since it needs to keep pace with changes in technology.

Action-oriented or participatory research is an appropriate methodology to employ with learning technology professionals because it (a) brings isolated and distributed people together around common needs and problems; (b) validates their experiences as the foundation for understanding and critical reflection; (c) presents the knowledge and experiences of the researchers as additional resources upon which to critically reflect; and (d) contextualises what might have previously felt like personal, individual problems or weaknesses. These latter two aspects in particular, are enabled through dialogue in ongoing discussions, such as through the use of focus groups, as used in the studies undertaken. The ongoing dialogue with participants allowed participant views not only to be aired but also to be used to redesign and refine both studies and the associated research questions.

Extending the use of stimulated recall

This research has also featured stimulated recall as an integrated part of the research process. Stimulated or critical event recall (or Interpersonal Process Recall (IPR)) is a process developed by Norman in the early 1960s and reviewed by Tuckwell (1980). The basis of IPR is the realization that humans store vast amounts of information, feelings, impressions and ideas about the events or interpersonal processes in which they have participated. Because of the speed at which human interactions occur much of the detail of these processes is soon forgotten and not available for subsequent reflection. When participants engage in individual or mutual

shared recall of events in which they have been present they can gain insight into their behaviour and learning processes. The recall enables the articulation of many previously unexpressed aspects of practice and/or learning.

Critical event recall provides opportunities for the capture of reflective and analytical observations not directly observable in a completely naturalistic representation. It is a process designed to help access aspects of the learning and working practices not directly available in the representation of the practice, that is, the thinking behind the practice.

In these studies I was able to extend the application of stimulated recall methods as part of the research process. In examples of other research featuring stimulated recall, the culminating point in use of the recall artifact has been to get the subject to recall, reconsider and reflect upon an event: as a resource for analysis of that subject's learning. I was able to take a further step, in which the artifact and its elaboration (ie the annotation made to capture the recall commentary) were made available to peers for their scrutiny and comparison, and further annotation as active participants in shaping the research process.

Taking successive passes through the data

I have also drawn upon grounded theory as a qualitative research method to interpret and organise the data, going through phases of conceptualising the data, elaborating categories, and relating these in propositional statements. In this way, I have been developing theory inductively from the body of the data itself, that is grounded in the data but refined though successive passes through it (Glaser & Strauss (1968); McConnell (2000)**.** For example, this approach was used in the development of multimedia descriptors for video clips (Steeples & Goodyear, 1999). It was central in the first studies too, when practitioners suggested using voice annotations to add explanations to representations. This informed the guidance given to participants for the second studies on annotations.

Data was also gathered from the focus group sessions. These sessions were recorded on video and transcriptions of the sessions were made for analysis. Extensive viewing of the data led to identified themes and issues. Additionally, triangulation was made possible between the observable data (on video), the transcription analysis, my own personal views and understanding and by taking the data back again to the participants for commentary and confirmation.

CONCLUSION

Networked learning environments are now recognized for their role in supporting professional development among practitioners who are geographically distributed, and they are environments that support interaction and connections that can operate in open, flexible and individualized ways. The flexibility in access, and support of remote connections, has fitted neatly with the needs of professional communities of practitioners who otherwise might work and learn in isolation, because of the demands and constraints imposed by their working lives and other commitments.

Research into the educational application of multimedia forms of communication is still relatively novel and in many examples has tended to focus around more transmissive uses of multimedia, such as lectures broadcast as video streams over the web. The area of my research, on multimedia forms of support for human-human interaction through the use of video clips and voice annotations in networked learning environments, remains a rather specialist field of interest but one that I believe is appropriate for the application of action-oriented or participatory approaches to research.

Schon (1987) has asserted that 'what aspiring practitioners need most to learn, professional schools seem least able to teach' (p8). Such views are conceptualised in an almost binary opposition between theory and practice (to put the case quite starkly) and by the difficulty of translating theoretical knowledge into practical action. The tension between theory and practice includes concern about the relevance (or otherwise) of higher education provision to the very real, practical and evolving needs of professional practitioners. A participative action research approach helps make interconnections between practical know-how *and* research or theoretical knowledge. My work in the area of continuing professional development (CPD), has actively attempted to bridge between these apparent oppositions, by using multimedia technologies in innovative ways.

This research work has been largely user-centred and highly participative, and this has enabled me to gain a better understanding of user needs from the user perceptions elicited. The work has also involved the active collaboration of research participants as shapers of the research process. The work has been designed around authentic tasks using an action-oriented approach, building theoretical constructs that are grounded in

qualitative data. The research has made use of multimedia objects as data around which to build a conceptual model.

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