

# Four Years On: a Longitudinal Study Assessing the Impact of Membership of a Virtual Community of Practice

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## ABSTRACT

This paper explores the long term impact of a virtual learning community (VLC) from the perspective of community members and their employing organization. It argues that membership potentially has a significant impact on individual identities and careers, and that managed communities provide an important means for strategic workforce development. The study evaluates the impact of membership of a VLC over a four year period within the context of the theoretical frameworks of communities of practice and identity theory. The concept of boundary crossing is also explored in relation to VLCs. The paper considers the benefits to host organisations in supporting structured VLCs as a means of enabling workforce development and supporting change and innovation.

## Keywords

Virtual learning community, workforce development, boundary crossing, professional identity, comfort zones

## INTRODUCTION

In the past decade research in the field of networked learning and virtual learning communities (VLCs) has focused on activities and processes within the community e.g. debates over the notion of community and the design of VLCs (Hodgson & Reynolds 2005), different aspects of learning and group experiences with an emphasis on community building e.g. Brown (2001), McConnell (2005), Mann (2005), and generic issues such as time e.g. Saunders *et al* 2004. Recent developments in the field indicate a shift towards more critical approaches to researching and conceptualising networked learning and learning communities resulting in special editions of journals such as *Studies in Higher Education* 2005 and articles in *Management Learning* 2004. Much of this research tends to focus on the virtual communities and their members who are often treated as entities separate from their parent or hosting organisations. This paper looks beyond the life of the community into its long term impact on individual performance and identity, and also considers its role in promoting change within an organisation.

The paper explores the concept of communities of practice in relation to Wenger and Lave's (1991) work and, in particular, considers aspects such as professional learning in the workplace, the spanning of organisational boundaries, and the development and transformation of professional identities. The shift in emphasis in current literature from exploring communities of practice as self motivated and free-flowing entities to investigating the role of organisations in constructing and supporting communities (Brown and Duguid 2001 and Swan *et al* 2002) is followed in this study which assesses the long term impact of membership of a facilitated community. The community was established and mediated as a blended VLC as members had both formal and informal opportunities for meeting face-to-face and online. Given the temporal and spatial constraints for face-to-face meetings the VLC appeared to offer an important means through which the community could exist and members could participate in it on a regular basis using the virtual learning environment. The study explores the impact of a VLC as one of a number of initiatives to implement change and develop e-learning practice within the university. The paper argues that community membership can have a significant impact on an individual's professional identity and career trajectory; and VLCs also provide a secure base from which to promote innovation and change.

The researchers used an interpretivist approach based on qualitative methods. Data collection methods include the use of the community discussion board messages and also in-depth interviews (held four years after the inception of the community) with six participants, the two facilitators, and the manager of the development unit. Narrative analysis of both the discussion board messages and also the interview transcripts was used to identify

significant themes and issues.

Some interesting themes emerged relating to the professional development of individuals involved in virtual community learning experiences. The in-depth interviews with community members and manager within the sponsoring university provided insights into the long term impact of the community on individual careers and also the impact of the community on performance in the workplace. The researchers identified the importance of the VLC in providing a comfort zone from which members could innovate and take risks. Membership of the community enabled some members to transform their professional identities and career trajectories, while some members embraced the opportunity to develop and enhance their careers in an evolutionary manner.

## **E-LEARNING AND WORKFORCE DEVELOPMENT**

The past decade has seen a rise in the development of virtual learning communities as a means of enabling workforce development and the improvement of performance in the workplace. This development is commonly associated with two strands of thinking: ideas about communities of practice arising from the seminal work of Lave and Wenger (1991) and Wenger (1998); and research and development into computer-mediated or networked learning e.g. McConnell (2000), Hodgson and Watland (2004), and Hodgson (2005).

A community of practice may be defined as “an activity system about which participants share understandings concerning what they are doing and what that means in their lives and for their community. Thus, they are united in both action and in the meaning that that action has, both for themselves, and for the larger collective” (Lave and Wenger, 1991: 98). Wenger (1998) suggested that the most effective learning taking place within the workplace was informal and mediated through communities of practitioners coming together, often quite spontaneously, to collaborate and share their expertise to solve real work based problems. He suggested that traditional work-based training schemes did not result in effective on the job learning and that, in reality, practitioners learnt and developed their professional expertise through their informal discussions and collaborations with other professionals with whom they shared interests and experiences. The development of the concept of communities of practice coincided with the development of learning technologies and computer mediated conferencing tools designed to support groupwork through the Internet. Initial work on communities of practice e.g. Lave and Wenger (1991), Wenger (1998) suggested that they are free-flowing and develop out of existing networks and professional communities of people with common work problems and interests. More recently researchers have identified the importance of ‘managed’ communities of practice where managers or facilitators enable the community to work towards outcomes that are aligned to organisational goals (Swan et al 2002, Lewis and Allan 2004). The current study focuses on a managed VLC which was established to help support and enable organisational change and the development of e-learning across the university.

The flexibility offered by networked learning made it particularly attractive as a means of providing professional education and development (Jones and McCann 2005, McCallister and Matthews, 2001). This flexibility is particularly attractive for workforce development where individual managers, supervisors and project workers need to manage the balance between their work and family life, and may need to travel extensively and/or be available via e-mail or mobile phones on a 24/7 basis (Arbaugh and Duray 2002). VLCs were adopted as a means of mediating workforce development by higher educational establishments as they offered a flexible mode of delivery and one that was not time- or place-dependent (Arbaugh 2000). This study focuses on a UK university that identified the potential of VLCs to meet workforce development and professional development needs within the organisation.

## **CONTEXT**

The context of the study is a learning community established in 2001 by a development unit within a UK university. The purpose of the community was to enable staff to develop knowledge and understanding of e-learning pedagogy, and to equip them with the skills to support e-learning within their role at the University. The programme was validated by the university at M level and also accredited by the Institute for Learning and Teaching (now the Higher Education Academy). Community members included academic staff, information and library staff, ICT support staff and administrative staff, and the community was facilitated by two external facilitators using an underlying pedagogic framework of socio-cultural theories of learning. The community members participated in a series of structured collaborative and co-operative online activities designed to develop their understanding of e-learning theories and constructs, and to highlight implementation issues from a learner’s perspective (Dillenbourg 1999 and McConnell 2000). The participants were also encouraged to reflect on their learning experiences (Moon 1999). The sponsoring university and original members of the learning community were revisited in 2005 in order to explore the long term impact on the individuals and their workplace.

## INDIVIDUAL IDENTITY AND CHANGE

Personal identity is formed and re-formed throughout our lives and Castell (1997) suggests that identity is socially constructed and is therefore dependent on discourses and practices within our social and professional contexts. Different settings e.g. home or workplace influence the way in which individuals construct acceptable or appropriate ways of being i.e. thinking, behaving, and feeling. The development of a new community provides the possibility of creating a new social context in which individuals may explore and develop new and different ways of thinking which may have an impact on their identity. Three approaches to exploring identity are considered in this study: the concept of 'legitimising identity', social identity theory, and the development of a 'provisional self.'

Castell (1997) presents the concept of 'legitimising identity' whereby individual identity is shaped by the needs of the organisation. Individuals may then internalise this identity and construct meaning around it. This approach is relevant to the current study as the institution under consideration provided an opportunity for a group of staff to work together to develop new professional practices and, potentially, support individuals in changing their professional identities. Tajfel and Turner's (1985) present a social identity theory and this is concerned with the process by which people define themselves in relational and comparative ways within their environment. In the context of the current study this theory offers an approach to exploring the processes by which individual members of staff define and re-define themselves by entering new groups or communities that provide access to new role models and different ways of working and thinking. Finally, Ibarra (1999) explores the ways in which individuals construct or modify their professional image and identity, and outlines a three stage process which individuals experience as they move into a new role: creation of provisional selves; testing and experimenting with provisional selves; and selecting, revising or discarding the new role. Ibarra discusses the concept of 'provisional selves' and describes these as 'temporary solutions people use to bridge the gap between their current capacities and self-conceptions and the representations they hold about what attitudes and behaviours are expected in the new role' (Ibarra 1999:3). This approach is relevant to the current study as the VLC provided members with opportunities to experiment with their identity and subsequently change their professional image.

## BOUNDARY CROSSING

The study explores the concept of boundary crossing to illuminate the community member's experiences during and after their structured VLC experiences. 'Boundaries can be thought of as discontinuities in some form of practice' (Walker and Creanor 2004: 1) e.g. between different teams or organisations. Much of the research on boundary crossing or spanning tends to relate to an organisation and its environment and there is relatively little research on crossing internal organisational boundaries (Balogun *et al* 2005). In the context of this study, membership of the VLC involved crossing internal organisational boundaries between university departments, university roles, and for some members boundaries such as access and use of information technology. Walker and Creanor (2004) suggest that boundary crossing may be analysed in terms of personal networks, boundary objects (e.g. diaries, clothes, briefcases) and also through boundary encounters e.g. meetings between individuals representing different departments. The focus in this study relates to personal networks and boundary encounters and the boundary crossings mediated by technology i.e. the virtual learning environment and by the facilitators who brokered boundary crossing and spanning boundaries through planned VLC activities.

## METHODOLOGY

There is a growing body of research into networked learning and it is possible to identify a number of different methodological approaches. Arbaugh and Benbunan-Fich (2003) outline the abundance of quantitative studies, particularly in North America, and attribute this to the need to understand the basic characteristics of networked learning e.g. relationships between learning processes and outcomes. In contrast, other researchers take a qualitative approach and Hodgson and Watland (2004: 204) state that "*much of the research that has been done has not adopted methodological perspectives and methods that are commensurate with the values and ideas of networked learning and is, therefore, not giving us the insights and findings that are as useful or helpful as they might be.*" In order to explore 'under the surface' of e-learners' experiences in a VLC developed using socio-cultural theories of learning and constructivist theories of knowledge this study takes an interpretivist approach based on predominately qualitative techniques.

However, there is a growing argument for using a multi-method approach to research into networked learning e.g. De Laat and Lally (2003), Jones (2004), Arbaugh and Benbunan-Fich (2004), Hodgson and Watland (2004). Jones (2004) argues that quantitative and qualitative research methods are complimentary and together help the researcher to build up a comprehensive understanding of networked learning. The methodology in this study

was developed using ideas from the work of Lally and De Laat (2002) i.e. the use of a multi-method approach involving a wide range of data sources: project documentation e.g. evaluation forms, discussion board messages, learning logs, interviews and online learning environment tracking tools.

In-depth interviews were held with 6 participants, the facilitators, and the manager of the development unit. Data analysis involved content analysis of discussion group messages, interview transcripts and project documentation e.g. completed evaluation forms. The aim of this analysis was to identify general themes with respect to individual development, impact on workplace and impact on organisation. Strauss and Corbin (1998) discuss approaches to coding and suggest that an initial analysis will provide a relatively large number of concepts and these may then be reduced to a small number of higher order concepts. This approach was used and the researchers narrowed down their analysis to identifying key themes and then searching for these in the text-based materials. In line with multi-method approaches, the findings from different data sources e.g. discussion group postings, interviews with members, facilitators and manager(s) were used to validate and triangulate the findings.

## FINDINGS

### Impact on individuals

#### *Changes in identity*

The analysis of the data indicated that, as would be expected, membership of the virtual learning community impacted differently on different members. Membership of the community appeared to have an impact on both the professional identity and workplace practises of some members, and for others it had an impact primarily on their workplace practices. The following discussion is structured around the three models of personal identity explored earlier in the paper.

The analysis suggests that although the VLC provided a continuing professional development programme for members to develop their knowledge and skills, it also played a role in 'legitimising identity' i.e. it played a part in shaping individual identities in a manner that supported the need to develop knowledge and understanding of e-learning and develop e-learning skills within the organisation. For example the VLC enabled the university to facilitate the development of a group who shared a common approach to e-learning and who could take on the role of e-learning champions and facilitators in the future. Members of the VLC would therefore be able to facilitate future VLCs and, four years on, there was evidence that at least two members were involved in this type of professional activity. The role and skills of e-learning facilitators and the differences between the approaches of online facilitators and face-to-face tutors was explored within the community discussion groups and online activities. The two facilitators, who role modeled the required facilitation skills, were regularly challenged as to the rationale for their behaviours and actions as facilitators. Through this process of action, discourse and reflection VLC members had the opportunity to develop and re-define their understanding of what is required as an 'e-learning facilitator' as defined by the university through the e-learning programme.

The data suggests that different members experienced different development processes as they progressed through the life of the VLC. Some members did appear to re-define and re-create themselves through a process similar to that described by Tajfel and Turner's (1985) as their decision making process involved comparative and relational elements. This process was supported within the programme through planned activities and role modeling. In addition, the findings illustrated how some members compared this experience with other e-learning experiences; they compared and contrasted different styles of facilitation, and identified their preferences. For example one member commented "*It was a different experience from XXX [an e-learning programme offered by a different institution] What I really liked about the facilitators was that if anything didn't go quite right they were more than happy to look at it and explore the reasons why it didn't go right. And I think that for an e-learning, learning to be an online tutor that was really important in that they didn't feel the need to be totally in control and be accepted as the, kind of, experts. And through that I thought of them as experts. Because we were all going on a journey and they recognised that and that sometimes things do go wrong and it's a learning point.*"

As mentioned earlier, Ibarra (1999) presents a three stage process: creation of provisional self; testing and experimenting with provisional selves; selecting, revising or discarding the new role. The VLC provided an opportunity for individuals to explore new roles, evaluate them and decide whether or not to accept, modify or reject the potential role. There is evidence of this process of exploring and evaluating potential roles and adopting new identities taking place with three of the members interviewed being at an early stage in their career. They highlighted the importance of the learning community in providing a safe place, a 'comfort zone,' from which they could develop and change. In particular, the importance of working in a supportive

environment was mentioned by all the interviewees. Their experiences within the community had a transformational impact and led to them moving on to part time study on a degree programme and/or promotion within the university. The data suggests that this appears to have been linked to shifts in their perceptions of their own power and status, and this is an area which needs to be explored further. This transformational process links in with the work of Lave and Wenger (1991) and the potential for communities of practice to offer relatively inexperienced members or members who are moving into new professional arenas opportunities to learn, grow and develop their professional identity. One member stated that she had changed her role within the university, received a substantial salary increase and was now speaking at professional conferences she directly attributed her newly adopted professional identity to the confidence she developed through provisional role experimentation during her VLC experiences. These examples indicate that membership of the VLC did have an impact on the professional identity and workplace practices of some members, typically individuals who were at an early stage in their careers. In contrast, individuals who were well established within their careers and with a clear professional identity reported that membership of the VLC did not have a great impact on their personal identity but did have an impact on their workplace practices.

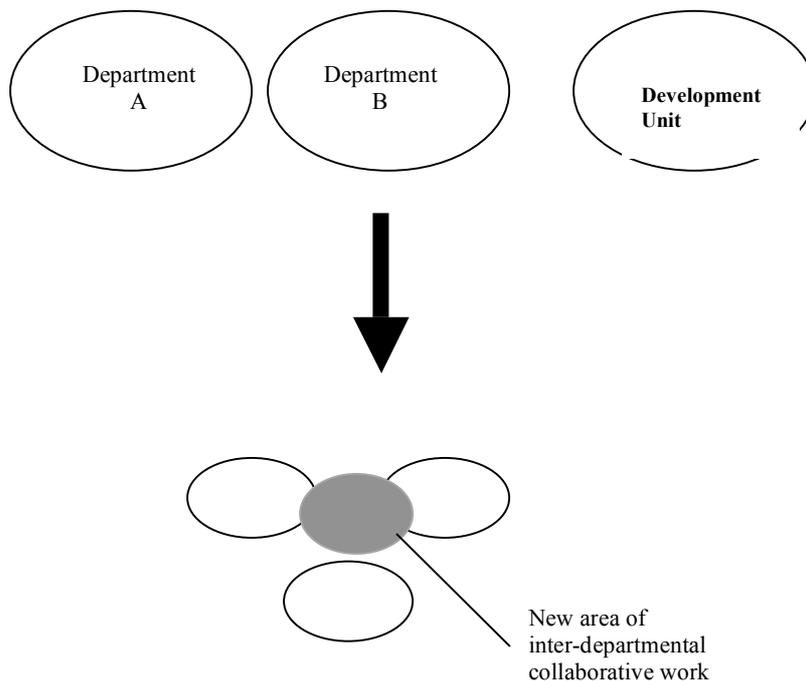
The three models of personal identity explored here: the concept of ‘legitimising identity,’ social identity theory; and the development of a provisional self all provide some helpful insights into the processes of personal development experienced by some members of the VLC. However, none of these theories provide a framework that adequately explains all the individual experiences and this perhaps reflects the complexity of change and development processes. Some members, typically those at an early stage in their careers, identified that membership of the VLC appeared to support changes in their professional identity and also their workplace practices. For other members, those who were well established in their careers, the programme provided an opportunity to consolidate and develop their knowledge and skills and did not appear to have a major impact on their professional identity, and this could be described as ‘incremental’ development. A small number of members indicated that membership of the VLC had not had any impact on their professional identity although it did enhance their ability to contribute to e-learning activities across the university. These initial findings suggest that this is an area that could be explored in more depth.

### *Boundary crossings*

The study findings suggest that the VLC enabled members to cross a number of different boundaries including professional role boundaries and organisational departmental boundaries. The processes involved in boundary crossing are complex as individual members need to negotiate and cross different boundaries and in this study individuals relied in different ways on their learning community, the facilitators and wider professional communities for help and support during this process. The initial boundary crossing for some of the members involved the process of joining the VLC. A small number of members reported that this process was stressful and, in the interviews, a number of people expressed high levels of anxiety at this stage. The facilitators and experienced VLC members supported these members and ‘held their hands’ as they crossed the boundary into membership of a virtual learning group. In other words, the facilitators and members provided a boundary spanning role. Another boundary crossed by some members was a technological one, some members of the community had no previous experience of working within a VLE and for one member at least this caused major problems which were ultimately sorted out as a result of interventions and face-to-face and virtual support from VLC members with technical skills.

There was evidence to suggest that membership of the community promoted boundary crossing with respect to both professional and organisational boundaries. The manager identified that it had facilitated boundary crossing across departmental boundaries and also across professional boundaries. For some members the experience enabled them to develop their professional practice i.e. to expand their work roles to include e-learning or to move into new work roles. The VLC also enabled organisational boundaries to be crossed and, four years on, there was evidence that this boundary spanning had led to the development of new working practices supported formally through the development unit and also informally through the community. This is illustrated in Figure 1.

**Figure 1. Boundary crossing as a result of membership of the VLC**

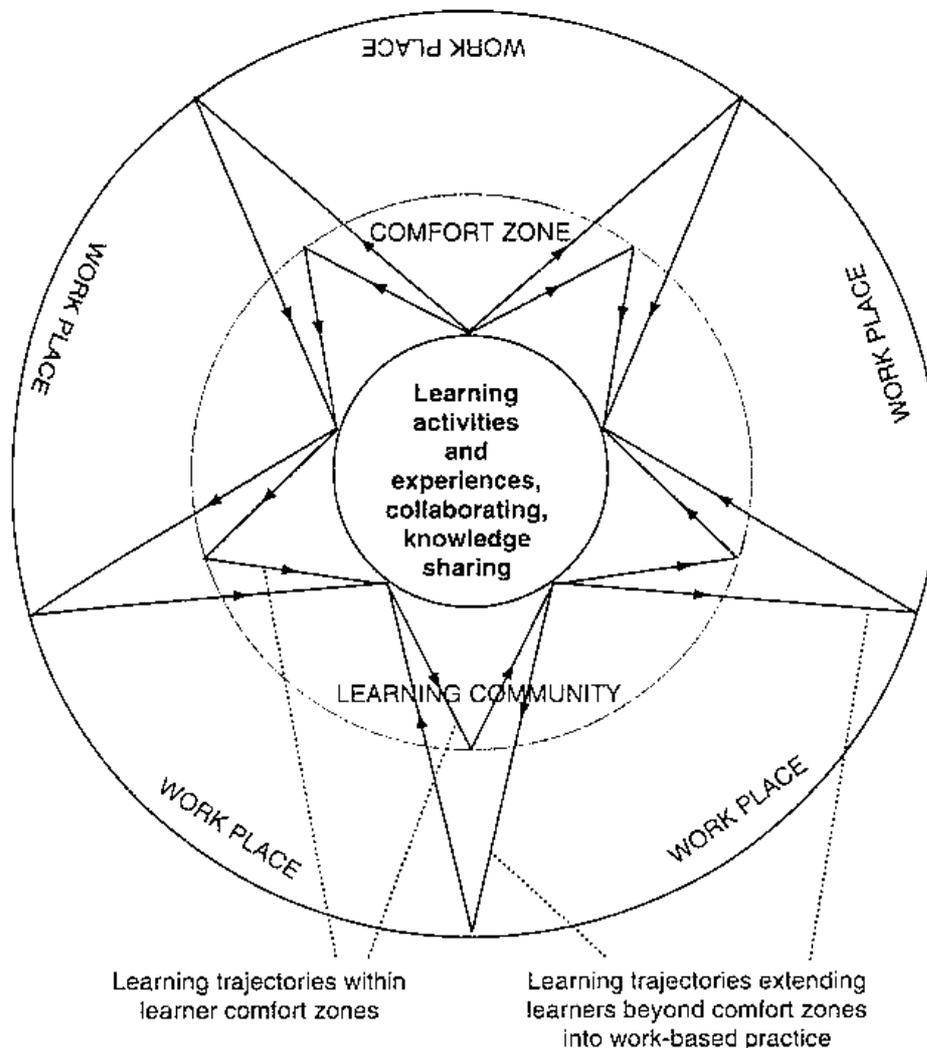


### **Impact on workplace practices**

The study illuminated how the e-learning experience had an impact on the workplace practices of individuals. Specific examples showed that some community members had developed in the following ways: developed the confidence to present papers at conferences; new appreciation of students' experiences at the start of their university careers; an understanding of the importance of social aspects of the student learning experience and the need to develop learning communities within cohorts of full and part time student learners; approaches to working with groups online; development of e-learning facilitation skills; development of innovative teaching and learning activities, materials and programmes.

The development of the VLC provided opportunities for members to develop and change their workplace practices. Once members became established within the community and had overcome their initial anxieties then the community appeared to provide a 'comfort zone' from which they could develop and improve their workplace practices. The development of the comfort zone appeared dependent on individual members' honestly acknowledging their feelings, both positive and negative, within the virtual environment. A visual image of the comfort zone and associated learning trajectories is presented in Figure 2. It appeared that once a comfort zone had been established then members used it as a launching pad, retreating to the security and comfort of being with like-minded professionals when the going was too tough. Members used the community comfort zone to gain the strength and confidence to initiate: new learning trajectories, work practices, innovations and solutions outside the community in the 'real' world of their work and professional lives, these activities took them way beyond the secure boundaries of the community. This process of bursting out into innovation and improved performance, and then returning to the community was a recurrent pattern for those individuals who were fully engaged with the life of the community.

**Fig. 2 Star diagram illustrating comfort zone and learning trajectories**



During their interviews, some members stated that they still felt part of this VLC and were in regular contact with each other via e-mail, phone and face-to-face meetings. These members stated that, four years on, they still made use of their VLC contacts in their workplace e.g. they would contact each other to discuss new ideas and project work, or for technical help and support. One person commented that although she had known another member for ten years prior to the start of the VLC it was only as a result of their work together in the community that she had developed the type of collegial relationship that enabled her to contact this colleague for help and advice. It is worth noting that some members did not appear to experience this development process within this community.

### **Impact on the organisation**

The interview with the manager of the development unit highlighted that the VLC was part of a wider change process which was concerned with developing and integrating e-learning into learning and teaching within the university. The use of a blended learning community provided an environment which appeared to support change and innovation, and that this appeared to be as effective as one that was established involving only face-to-face meetings. The VLC played a significant role in the university's broader change process as it addressed and changed people's perceptions of the uses of information technology in learning and teaching. It enabled the development of a group of people who developed their understanding of what was required to

change and that facilitated the changes. Some members were able to take on roles as e-learning catalysts or champions within the university. In addition, community members networked with each other and also key stakeholders within the university. An evaluation of the programme led to the development of two approaches to e-learning development: two 10 credit module at undergraduate level facilitated by their department for lifelong learning; and a number of short e-learning programmes which were delivered through the development unit.

### **Constraints of the study**

This is an exploratory piece of research and it provides some insights into the development processes experienced by some VLC members and it also suggests the impact on the workplace and organisation. One aspect that needs to be borne in mind is that this was an innovatory programme and perhaps individuals who joined the VLC were not representative of all university members i.e. they could perhaps be described as innovators and trail blazers. Data was obtained from a variety of sources; discussion group messages and also evaluation forms that were generated during the life of the VLC; and interviews with participants who were willing and able to be interviewed by the researchers four years after the formal end of the VLC. The people interviewed were an opportunistic sample and, in particular, they represented members who were particularly willing to give feedback on their experiences. A different perspective may have been gained if the researchers had been able to meet up with all VLC members including those whose experiences were more neutral. In addition, during the interviews individuals were asked to report on their subjective experiences arising from their membership of the community four years earlier. It was challenging in a thirty minute interview to identify and unravel individual experiences and perceptions, and to identify experiences that could be linked to membership of the VLC and those that were linked to or affected by other developmental and workplace experiences. The feedback from the manager was elicited in an attempt to offer another perspective and validate individual perspectives. These initial findings do suggest that identity theory provides a useful vehicle for analysing individual experiences within a learning community and that this now needs to be explored in more depth. In addition, the study suggests that the concept of 'comfort zones' is important in construing some of the processes that take place within a VLC. Again, this concept needs to be explored in more depth.

### **CONCLUSIONS**

This study aims to make a contribution to the knowledge and practice of VLCs and workforce development in a number of ways. It provides some insights into the impact of membership of the community on individual members with respect to their identity and careers. It suggests that individually theories of personal identity do not provide an overarching explanation of changes in identity but they do illuminate some of the personal development processes identified in the study. The study suggests that temporal work constraints and barriers can be overcome through active engagement in VLCs and that more flexible working practices can be the direct result of community membership. Communities can provide a 'comfort zone' a secure and supportive environment from which individual members may innovate and take risks. Finally, the study explores the impact of the community on workplace practices and demonstrates that in addition to influencing particular workplace practices the development of a strong community provides a catalyst for innovation and risk and supports organisational change processes. The study provides two lines of thought for further research with respect to understanding some of the processes that take place within VLCs; the concepts of identity theory and comfort zones

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