

Limitations of an established community of practice in developing online innovation

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This research was undertaken to explore the effectiveness of an already established community of practice among staff at a small rurally-based training organisation as a vehicle through which to develop innovative practice in online collaboration and learning. The research was situated within that ongoing innovation, and used interview and observational techniques to generate the research data from staff and management personnel. Substantial limitations to using an already existing community of practice to develop innovative practice were shown in the research. Development of new behaviours was substantially inhibited by the power of already established behaviours and practices. Additionally, lack of sufficient experience among community members in online technologies was a further barrier to effective and orderly development. The research indicates that the achievement of innovative practice through communities of practice within existing workplaces may best be served by the strategic development of members of those communities, focusing on change from already established behaviours, and by ensuring a mix of skill and experience to support and lead less experienced participants.

Introduction

In this paper we investigate the early transition towards the development of online teaching and learning in a small rurally based training organisation, where the education and training delivery has to date been largely characterised by classroom instruction. The focus in this early development phase was placed upon using an existing workplace community of practice to build capacity among training staff and support staff prior to rollout of online learning opportunities to a broad range of learner clientele. The research intent is to explore the capacity of an already established community of practice to assist participants towards developing innovative practices to enable a greater involvement in the delivery of education and training online.

The potential effectiveness of communities of practice for organisational or individual development has become strong among managers of businesses, educational institutions and community organisations (Wenger & Snyder, 2000; Young & Mitchell, 2000; Fetterman, 2002). This has led more recently to an interest in these communities for particular strategic purposes related to development or change (Wenger, McDermott & Snyder, 2002). Additionally, the belief that online communication supports communities of practice has gained credibility (Robey, Khoo, & Powers, 2000; Rogers, 2000) such that the two can be viewed as capable of working effectively together, with involvement in the one potentially benefiting involvement in the other (Stacey, Smith & Barty, 2004). At the same time as there has been promising comment and some evidence for the possible value of transferring the community of practice concept to the online environment, there is little research that directly focuses on that transfer, how it may be effected, and how beneficial it may be (Schwen & Hara, 2003 p.231). A number of writers (e.g., Preece, 2000; Smith & Stacey, 2003) have noted that existing communities can be disrupted or disturbed by their transfer to an online environment.

Informal learning within a community of practice is 'the process of becoming a full participant in a sociocultural practice' (Lave & Wenger, 1991 p.29) whereby more experienced participants pass on to newcomers the knowledge and skills they have acquired, such that the shared expertise of the participants is enhanced. These kinds of learning transactions may be challenged when innovation is at the centre of the learning. There may be insufficient knowledge within the community for anyone to be able to take on the experienced role. There may also be collective uncertainty or confusion about the knowledge that is to be shared. These limitations may be felt more strongly in small organisations, where the knowledge and experience base is smaller or narrower (Sadler-Smith, Gardiner, Badger, Chaston & Stubberfield, 2000).

O'Donnell et al. (2003, p.81) distinguished between work teams and communities of practice when they suggested that communities of practice develop around shared interests, values and motivations. Wenger and Snyder (2000) point to defining characteristics of communities of practice being associated with a sense of shared expertise and interest in working together and collaboratively. Teams, however, are characterised more as groups of people who work together but without the same sharing of interest, expertise or motivation towards collaborative effort.

The main purpose of the current research is to explore the effectiveness of an already established community of practice as a vehicle for the development among members of innovative practice in online discussion to support learning within a small employment and training organisation. An online community of learning could be expected to be one outcome of successful development here. The relationship between communities of practice and online learning communities has been drawn nicely by Wilson, Ludwig-Hardman, Thornam and Dunlap (2004) when they observed that both are 'instances of complex emergent systems wherein control is distributed among participants'. Wilson et al. observed that an online learning community is characterised by participants who share a number of values and practices and use technology to actively engage with each other in learner-centred activities to foster knowledge development. However, in reviewing applications of online technology to existing communities of practice among legal practitioners, Schwen and Hara noted that the most successful communities were the most likely to avoid collaborative technology. Other researchers (Moore & Barab 2000; McLaughlin 2003) have also observed difficulties in migrating an existing community of practice to become a successful online learning community.

Context of this research

Management of the small (less than twenty staff) employment and training centre had decided to use an existing community of practice in the workplace to develop online communities among staff. They saw this as a viable strategy for developing the procedural and dispositional knowledge (Billett, 1993) necessary to implement online collaborative learning delivery. The management strategy had been to develop a vision for the movement of training to an online delivery mode to be available everywhere and all the time – an important vision for the training centre since its clientele is spread quite thinly across a relatively large geographic area. Additionally the centre needs to cater for the seasonal work patterns of rural workers as well as the shiftwork variations of town-based clients, and lifestyle requirements of all clients including, in particular, young people seeking employment and older people who have retired from full-time work.

Once established, the vision of online learning through discussion was shared and modified through group meetings with staff. Eight staff members, who already worked closely together, formed the identified community of practice that was the focus of this research, and these eight would be most involved with the online developments. The group meetings to develop the vision were aimed at securing the following: a level of shared understanding of the need for online learning provision; some shared understanding that online learning needs to be supported by collaborative discussion online; and a level of shared commitment and ownership through an involvement in the development. That shared commitment was partially based on a pre-existing interest in the initiative among participants, and a recognition that the future viability of the small centre was closely linked to an ability to attract and retain learners

in their different contexts and locations. Part of the shared strategy was agreement that the development of a community of learning based around an existing community of practice would be a useful way to introduce staff to using the technology in order to become comfortable with posting material to a discussion site, and to develop skills of conversation and socialisation online.

As researchers we needed to satisfy ourselves that the participants in this research did indeed already constitute a community of practice, rather than just perhaps being a group of individuals or a work team. The existing community of practice was distinguishable from a team in that they had well-established behaviours in the sharing of their expertise to provide training and support to their clients, and their common purpose was the enhancement of services to their respective individual student clientele. They were characterised in their daily behaviour in a similar way to a community of practice among public defence lawyers described by Schwen and Hara (2003, p.258) in that they regarded themselves as 'underdogs' in the training system, and 'they often moved from workspace to workspace, dialoguing with one another in an animated fashion.'

Research design

The research design consisted of individual interviews with the eight teaching and support staff who participated in the study, and researcher access to the online discussion postings of these participants. The research also included a semi-structured joint interview with the manager of the centre and the IT manager. The participants had a variety of roles, including reception and business management, program development, teaching and social or youth work. Prior to the research data collection phase commencing, the researchers attended a regular staff and management meeting at the centre to discuss the change and development program as it had been developed already, to discuss the planned research with the participants, and to receive participant advice on how best the research may be conducted. Also discussed was the amount of time that needed to elapse between this general meeting and the interview process, to ensure that sufficient activity would have taken place by the time of the interviews. That time lapse was agreed as twenty weeks.

The interviews were framed around exploring the following issues:

- We asked each participant with whom they interacted, for what purpose they interacted and how that interaction took place.
- We traced and recorded typical interactions with people in the same office, with co-workers at the second campus, with people in the local area and in other more distant regional locations.
- We distinguished direct personal interaction (which included telephoning) from interaction online – by email or some other form of asynchronous digital communication – and we asked how online communication helped or hindered their professional interactions (or might do so).
- We asked participants about their involvement with the online discussion forum that had been set up to facilitate learning about online collaborative discussion through professional interaction among the staff.
- The interviews concluded with questions about how people envisaged the future of online communication and learning in the organisation and what was a reasonable expectation in terms of what it could achieve for the development of the centre.

In the interview with the centre manager and the IT manager we asked them to detail the plan they had for organisational development; we asked about problems they might have had with the implementation of the plan and whether the goals they had in mind were being achieved. We also asked them to outline and discuss the change management strategy that had been put in place as part of the initiative to develop towards online delivery of teaching through the early and informal establishment of an online community of practice that was engaged in online learning.

Findings

Interaction within a community of practice

The mapping of interactions that the permanent staff at the centre engaged in showed, as expected, that they regularly work together through a community of practice model, with people interacting in a frequent and purposeful way to support each other in accomplishing particular tasks at work. While one common expression of the community of practice was the sharing of work in a collaborative way to meet required outcomes, there were other expressions of it as well. It was very clear from these interview components that the already established community of practice among these participating staff was a powerful form of interaction for the purposes of sharing and developing knowledge. These interactions were regular and face-to-face, although quite varied in the issues discussed and shared.

Several research participants involved in administration and coordination used online communication comfortably in their daily work, on a one-to-one basis, largely through email with organisations outside the centre. People working under the same roof within the centre did not send each other emails.

Interaction within an online discussion forum

The discussion forum had twenty-nine contributions over a twenty week period; seventeen of these were posted by the IT manager. There were messages about technical assistance as well as announcements about forthcoming presentations, workshops and classes that had professional development value for online learning. A few messages related to events taking place – some of a professional nature and others more social. Among the twenty-nine messages were a few that sought to debate the image of the centre in the community and it was apparent that some controversies raised through that emergent discussion may have reduced participation.

People participated irregularly and the participation was limited in the sense that it did not resemble professional dialogue of the kind that would normally take place in a community of practice. There were no entries where staff asked questions typical of such discussion groups (e.g., messages such as 'does anybody know ...?', 'has anybody tried ...?'), the kind of interaction that characterises informal learning in a community of practice. It seems clear that participants continued to interact in much the same way that they had before the introduction of the discussion forum and that they either had difficulty or saw little purpose in moving online. There was no evidence of negativity towards online communication and discussion, but it was regarded as 'more sensible' to carry out professional practice through other than online means where that was possible.

Participants saw the online initiative almost entirely in utilitarian terms. They did not appear to see it as a learning opportunity where their participation was aimed at developing proficiency and comfort. Instead, they continued to see it only as a means of communication for utilitarian task-related purposes that were more efficiently and comfortably achieved through face-to-face communication.

Organisational development through an online community

The interview with the manager of the centre and the IT manager indicated that there was an alternative way of assessing the value of the move to online communication within the organisation, particularly in relation to the development of a positive disposition towards online learning. They were optimistic in that there was evidence that participants had responded in some way by adjusting their work practices, even if there were no indications in the online discussion group that they had done so.

Management personnel were of the view that the limited exposure through the early and informal approach had been important in achieving considerable gains in relevant procedural and dispositional knowledge in a non-threatening way. Organisational development had taken place, not directly via an online community of practice, but indirectly through a change in thinking. Some teachers had been overheard discussing how they might change their practice

and one of the workers was actively engaged in finding suitable resources in online form to help everyone learn how to develop their professional practice. The point made was that the discussion forum postings were no measure of the changes that had taken place within the organisation over the twenty-week period of the trial.

Discussion and conclusions

What appears evident from this research is that an already existing strongly established community of practice among people who are physically co-located substantially inhibits the movement of that community towards an online environment. As this study has shown, the motivations to engage online are weak in a context of high collegiality. Additionally, it appears evident that the participants in our research were characterised by a strategic and very purposeful approach to the use of online technologies, selectively using the technology where they perceived it to be of use in meeting their operational needs, but choosing not to use the technology when it did not suit those purposes. These findings provide support for other studies (Schwen & Hara, 2003, p.260) showing professionals in different fields (e.g., law, engineering) using communication technology selectively no matter how familiar they are with IT, and that communities of practice which were strongest tended to use online collaboration the least. In their paper identifying gaps in research in online collaborative learning, Smith and Stacey (2003, p.123) also commented that little attention had been paid to the potential for online collaboration to impact either positively or negatively on existing communities of practice. They further commented that there is a likely tension between online collaboration and existing communities of practice, with the potential for each to disturb the other.

Arguably, in a majority of circumstances there is probably little point in attempting to move an established community of practice into an online environment, but there are occasions where there are gains to be made. For example, where the established community is being exposed to an online environment in order to gain online skills for use outside that community, as was the case with the community under investigation here, there is legitimacy about the initiative. However, it appears that the learning potential through engagement in the online discussion for participants in our study was not valued as highly as the more established forms of communication. The value of the online communication as a supplementary form (Trentin, 2001) was clearly not recognised by the participants in the training centre. There was also a sense from the interviews that supports the suggestions by Millen, Fontaine and Muller (2002) that the benefits were not apparent against the cost of extra time spent at the keyboard. However, where participants saw that online technology could provide them with access to people and resources that were not otherwise accessible to them, their enthusiasm was much more apparent. It is pertinent to observe here that along with this greater enthusiasm to use the technology for access to people outside the established community of practice came the perception that online technology is a very useful way to extend the membership of an existing community of practice, or even develop a new community altogether.

Our research also indicates that where the existing community of practice is being challenged to develop skills and knowledge in pursuit of an innovation, a low number of members who already possess those skills is a substantial inhibitor to orderly progression of the community towards the achievement of procedural knowledge required to support the innovation. In the case of our community in this research, although the IT manager had sufficient skills in online collaboration to be able to develop the others, his participation was seen as managerial rather than as collaborative. As Lave and Wenger (1991) have suggested, a successful community of practice is partially characterised by the capacity within it for more experienced participants to assist in the development of knowledge among less experienced participants. Clearly, in the community of practice we investigated here, the ratio of experienced to novice participants was too low to be a critical mass of knowledge to be passed on or shared with others.

We noted in the Findings that some messages posted to the discussion space had been controversial, relating to image projection of the centre in the community, but that these more controversial and argumentative postings seemed to have reduced participation. In an online discussion group with more clear leadership this controversy may well have been an opportunity to develop the discussion further, along with the skills being pursued through the staff development initiative. For example, Law, Lee and Chow (2002) have noted that

controversial postings to a teacher-led electronic discussion among children in a school setting provided opportunity for developing the discussion and enriching its maturity. However, within a community of practice that is well established and whose normal form of interaction is face to face, it is most likely that these more controversial conversations were pursued in that more personal environment in which participants felt most comfortable.

In summary, the low ratio of participants experienced in online discussion, and the propensity for members of an established community of practice to default to its 'usual' ways of interacting combined to reduce the effectiveness of learning being undertaken to support innovative practice. It is suggested that a small organisation that has already a well-established community of practice that includes most staff, if not all, and where the skills and knowledge required for innovation are limited, there may be greater value in more strategically developed communities of practice (Wenger et al., 2002). Such communities of practice may be best developed from subsets of the existing larger community, and include quite deliberately participants from outside the organisation who have capacity to contribute to the ongoing core business of the community, and that also have among them some participants with the skills required to develop and maintain rich online discussions. In that way the procedural skill development can be enhanced, the power of existing behaviours can be reduced, and the online community develop a richness in the business that it transacts in the discussion space, again enhancing the dispositional knowledge.

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