Online learning: How a course for frontline managers became a virtual community of practice

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ABSTRACT

Tertiary educators in allied health, human service and social work face the challenge of integrating academic courses with workplace realities. This paper describes how interactive processes between participants in an online graduate course for frontline managers contributed to the creation of a virtual community of practice bridging the academic– workplace divide. Participants built a community of practice as they engaged in constructivist learning in a place of online safety. The paper identifies the benefits of, barriers to, and critical success factors for, a virtual community of practice (Gannon-Leary and Fontainha 2007). Complex adaptive leadership actions required to successfully develop a virtual community are considered. The paper concludes that combining online and face-to-face elements provide the optimal opportunity for a functioning community of practice.

INTRODUCTION

Educators delivering online courses for allied health, human service and social work students face an ongoing challenge to integrate academic and workplace worlds. Thoughtful educational design is required to prepare students for future practice or to provide continuing professional education courses for current practitioners. This paper will address the question: how does a virtual learning environment equip students or practitioners to meet current and future demands of complex work environments? It will be argued that, to address this challenge, academics must critically re-examine 'sage on the stage' pedagogy and shift to a 'guide on the side' approach (King 1993). Equally, students need to take increased responsibility for learning collaboratively by engaging with their instructors and course materials to co-create a constructivist environment. The author suggests that this pedagogical shift consciously reduces academics' knowledge and institutional power roles vis-à-vis their students. Further, students' capacity for independent thinking applied to their workplace tasks is increased(Adams 2010).

The author reports the findings of a small scale research project (2005–2007) as a contribution to meeting the challenge to integrate academia and workplace. Participants were former students from a graduate interdisciplinary course designed for human service, social work and allied health managers and supervisors responsible for frontline staff. The purpose of the course is to develop students' knowledge and skills for effective frontline management. Using theoretical frameworks, students critically assessed their workplace performance systems. Participants engaged in the blended environment of online and face-to-face (F2F) exercises (Aguirre and Mitschke 2010) brought workplace dilemmas they faced for collegial perspectives in the academic context. Participants were offered a safe place to process these dilemmas and problems. Frontline management issues were placed on both the 'virtual' and actual table, benefiting from diverse analysis in the blended community. Connections between participants assuming either their workplace, student or educator roles were made. A temporary virtual learning community (Lewis and Allen 2005) was created. Subsequent analysis of data revealed that findings from other research were in evidence, providing 'aha' moments of unanticipated delight.

The processes by which a virtual community emerged are explored. This exploration is set in the context of the literature associated with F2F and online communities of practice (Wenger, McDermott and Snyder 2002). The development of a virtual community as a complex group is also considered(Arrow, McGrath and Berdahl 2000), together with organisational aspects of learning—narration, collaboration and social construction—described by Brown and Duguid (1991).

LITERATURE REVIEW

Communities of practice (CoP) were first identified by Lave and Wenger (1991) as learning situated in the context of interrelationships between people and their work occurring over a period of time. Wenger et al. (2002)developed this initial formulation to denote group interactions dealing with mutual dilemmas, enthusiasms or concerns in order to add knowledge and wisdom to their professional toolkits.

An extensive CoP literature has emerged since Lave & Wenger's (1991) groundbreaking contribution. Literature relevant to this paper comprises four essential elements: (1) CoP theory; (2) critiques of CoP theory and social work and welfare education perspectives; (3) approaches blending F2F with virtual CoP (VCoP); and (4) intentional planning vis-à-vis spontaneously emerging VCoP.

Communities of practice: Theory

Wenger (1998), as cited in Lewis, Koston, Quartley and Adsit (2010, p.158), proposes five developmental CoP stages encompassing a community's lifecycle:

STAGE	ACTIVITIES
Potential	Individuals with shared concerns operate in isolation
Coalescing	Beginning connection and sense of community
Active	Active participation; community evolves and adapts
Dispersed	Participation lessens
Memorable	Community is no longer central

Kerno (2008) usefully summarises the characteristics of CoP inter alia as a lack of ceremony (no 'come to order' pronouncements); participants' perception of mutual strengths and weaknesses; common stories of practice; shared language including behavioural patterns; and common perceptions of the external environment. Of interest to this project, the lack of ceremony and calling to order—commonly found in conventional academic settings—connects with the shift from the 'sage on the stage' to a 'guide on the side' (King 1993) approach by the course lecturer already noted. Significantly, Kerno also notes (2008, p.71) that CoP relationships may be harmonious or conflicting. Project findings found ample evidence of harmonious synergies between participants; but dissonance also emerged.

The literature, and this article, proposes that applying learning to practice is the critical element distinguishing CoP from the acquisition of knowledge in conventional lecture or classroom contexts (Kerno 2008). Moore (2008) suggests that to grasp the heart of CoP we need to perceive work and learning as social activities which lead to shared meanings, and—by virtue of common communication styles—develop mutual identity. This learning process is a social constructivist endeavour (Bates 2008) which fits the values of the pro-fessional human service communities to which the research participants belonged.

Guba and Lincoln (2005, pp.195, 197) propose that shared meaning and identities in CoP are constructivist meaning-making, or story-telling activities. Stories from partici-pants' workplaces provide the raw material from which practice concepts may be identified as participants construct collective learning and identity while they engage in sense-making processes (Brown and Duguid 1991; Gardner 2006). This process becomes the vehicle by which workplace and academic worlds connect, expressing a constructivist learning

paradigm underpinning the argument advanced in this article. 'Meaning,' says Crotty (2003, p.9), 'is not discovered, but constructed.'

Critiques of communities of practice and social work perspectives

Several critiques of CoP have emerged which are of relevance to this paper. Citing Roberts (2006) and others, Kerno (2008) identifies three challenges: time demands and constraints; organisational hierarchies, or power issues; and the sociocultural environment of the community. Although Kerno sees these challenges as "pervasive difficulties" (2008, p.73) for CoP, the findings reported in this paper suggest that some challenges are strengths, not deficits.

Of the three challenges, time constraints arguably present as a more pressing issue in Aotearoa New Zealand vis-à-vis Australia. OECD data (OECD 2012) reveals that from 2004 through to 2012, average annual working hours in New Zealand at 1775 are consistently higher than Australia's at 1708. Australian working hours show marginal decline, while New Zealand's are essentially static. The discussion on project findings comments on this issue, applicable equally to practitioner and academic VCoP members.

Kerno's perspective on power issues in CoP is based on the chain-of-command thinking of the classical management theorists Fayol and Weber (Kerno 2008, p.74). He suggests that hierarchical structures, centralising power and organizationally sanctioned communication channels run counter to characteristic interactive communications in CoP, to their detriment. Roberts (2006, pp.626-630) addresses 'power, trust and [individual] predispositions' as critical elements in assessing the limits of CoP. This suggests that power cannot be treated in isolation from mutual community trust and individual personality tendencies.

Issues associated with trust and belonging (Dubé, Bourhis and Jacob 2006) and in critical success factors (CSFs) in a VCoP (Gannon-Leary and Fontainha 2007) suggest that the development of trust between participants and a "sense of belonging" particularly applies to computer-mediated communication. Arguably, trust and belonging are mutually reinforcing loops: their development in the context of a blended community will be explored later in this paper.

Applying a social work interpretive lens to CoP, Moore (2008) identifies the potential for rejection of new community participants by existing members such as tenured professors in the United States (US) context—ipso facto a power exercise. It is nonetheless striking that not once does Moore use the words 'power', ' hierarchy' or 'management' in her article.

The relative absence of the power dimension in Moore's social work treatment of CoP illustrates the distributed 'guide on the side' learning context (King 1993). Moore (2008, p.597)sees learning as taking place across diverse levels of expertise: teaching and learning, she argues, are bi-directional; indeed, students will learn as much from each other as from the instructor. The author of this paper proposes that the profession's empowerment practice value potentially strengthens a social work CoP.

Kerno's third challenge (2008, pp.75, 76) relates to the sociocultural environment in which the community is located. He argues that values of collectivist cultures—orientated to

group, community, harmony and interconnectedness—are more likely to create effective CoP than individualistic Western cultures. Roberts similarly argues (2006, p.632) that societies which value community over an individual focus may be more effective in CoP. She proposes that organisational forms are influenced by sociocultural characteristics, drawing a distinction between East Asian business and Anglo-Saxon corporations.

A social work perspective on these sociocultural issues suggests that the profession's underpinning constructivist learning paradigm is essentially collective in nature. Learning, research (Crotty 2003; Padgett 2008) and interactions with service users are all informed by collectivist values; the author suggests that Jarvis's expressive phrase, "person in society" as a practice context (Jarvis 2009) is a collectivist statement. Similarly, Weld & Appleton's (2008) evocative descriptor "walking in people's worlds" expresses a collectivist vision for the profession. As an expression of learning for practice, a social work CoP naturally fits the value of community espoused by Kerno, Jarvis and Weld and Appleton. To understand how such CoPs are created and sustained, Brown & Duguid (1991), as cited by Moore (2008, p. 594), propose three essential elements: story-telling as related to work and practice; collaboration expressing practice-related work processes; and social construction of shared stories which project worldviews into local situations and create identity and membership. Story-telling—a sense-making exercise (Gardner 2006)—contributes to a 'community of enthusiasm' (Askeland and Payne 2007, p.168). This author suggests that such enthusiasm facilitates innovative social work VCoP practice thinking as noted by Cook-Craig and Sabah (2009).

Virtual and blended communities of practice

The account of 'hybrid,' or blended, online learning provided by the US social work academics, Aguirre and Mitschke (2010), closely parallels the project described in this paper. Aguirre and Mitschke report evaluation research indicating higher retention rates in blended courses than either F2F or exclusively online programmes (2010, p.3), arising from the availability of learning tools meeting diverse learning styles. Additionally, the quality of student interaction and performance is enhanced by the combination of virtual and classroom environments. In reporting their own research, Aguirre and Mitschke might have been describing aspects of the project presented in this paper:

The use of a hybrid model allows the learning community that is established in the classroom setting during face-to-face encounters to continue to thrive outside of the traditional classroom setting. Students are able to continue to process, discuss, and critically think about issues that are discussed in the classroom through an ongoing discussion that occurs in the online environment.
(Aguirre and Mitschke 2010, p.3)

VCoP: intentional planning or spontaneous emergence?

As cited in Roberts (2006, p.625), Lave and Wenger (1991) propose that CoPs are not formally initiated but spontaneously emerge—although management can facilitate that process. More recently, Wenger et al. (2002) advance the notion that CoPs can be cultivated, implying conscious decision-making. Moore's (2008)application of CoP thinking to social work online learning does not explicitly address intentionality. The author suggests, however, that Moore's statement (2008, p.598) linking online learning

to "opportunities to connect field educators, faculty, community practitioners, clients and students' implicitly requires planning".

The current project integrated intent with spontaneity. Students were obligated to contribute to online postings by virtue of course requirements, but nonetheless committed to mutual engagement—complemented by the F2F component—thus developing an emergent VCoP.

Virtual communities: Levels, critical success factors, benefits and barriers

Brown (2001)identifies three VCoP 'levels.' Level one is to engage as virtual acquaintances or friends. Level two, kinship identity, arises as participants contribute meaningfully into threaded discussions of mutual importance. Acceptance by others of a participant's contribution is seen as a 'membership card for the community of learners' (Brown 2001, p. 24). Feelings of personal satisfaction arising from communication skills and sharing of knowledge result in kinship identity with the community. The third level, camaraderie, occurring after long-term or intense personal communication, is characterised by electronic or F2F interactions. All three levels are evident in participant comments in the current project.

The analysis of project findings are cast in the benefits, barriers and critical success factors (CSFs) in VCoP identified by Gannon-Leary & Fontainha(2007, pp.6, 7)(Table 1). CSFs fall into three categories: (1) technological/institutional; (2) cultural; and (3) communication skills. Benefits are self-evident, e.g. extending accessibility to geographically separated participants and the potential for improved interactivity between members of the community through synchronous and asynchronous communications (Gannon-Leary & Fontainha 2007). Web 2.0 technologies add to the potential for a collective approach to knowledge construction via participant sharing, replacing one-way communication (Lewis et al., 2010.)

The benefits of ICT in the community under examination must be critically balanced against the barriers and CSFs noted by Gannon-Leary & Fontainha. The author argues that research findings suggest that the absence of an F2F encounter is the key barrier to participants' motivation to participate collegially online. Developing trust in other members of the community is the other side of the same coin: how can socialising take place without F2F communication? Gannon-Leary and Fontainha (2007) suggest that unless the potential for miscommunication is recognised and addressed, reluctance to entrust significant contributions to other participants may develop.

Table 1: Selected Benefits, Barriers and Critical Success Factors

Source: Adapted from Gannon-Leary & Fontainha, 2007, pp.7, 8

BENEFITS	BARRIERS	CRITICAL SUCCESS FACTORS
• Enhanced learning environment • Synergies created • Capabilities extended to higher level • Knowledge sharing & learning • Gaining insights from each other • Deepening of knowledge, innovation & expertise • Feeling of connection • Ongoing interactions • Assimilation into sociocultural practices • Neo-apprenticeship style of learning • Identity development & formation	• Perpetuation vs. Change & diversity • Disciplinary differences • Culture of independence • Tacit knowledge • Transactive knowledge • Specialist language • Collegiality, strong physical community • Creating & maintaining information flow • No F2F to break the ice • Read-only participants (formerly lurkers) • Lack of trust – personal & institutional • Selectivity in ICT use • No body language, misinterpretations • Task-based usage	• Good use of Internet standard technologies • Technological provision • ICT skills • Institutional acceptance of ICTs as communication media • Good communications • Trust • Common values • Shared understanding • Prior knowledge of membership • Sense of belonging • Cultural awareness • Sense of purpose • Sensitivity in monitoring, regulating, facilitating • Netiquette • User-friendly language • Time to build up the CoP • Regular interaction • Good coordination to achieve regular but varied communication • Material resources or sponsorship to bolster & build up the community

The ethical issues and methodology of the project are now addressed. Findings are set out, and their implications discussed.

ETHICS

University of Auckland Human Participants Ethics Committee (UAHPEC) approved the project in October 2005. Interviews for the 2005, 2006 and 2007 student cohorts were conducted after course completion, that is, after course work had been graded, moderated and officially posted. To ensure ethical transparency given that the principal researcher was also the course lecturer, the UAHPEC required a third party to approach the students, a function fulfilled by a senior colleague.

Cultural considerations were not foreseen as an ethical issue. In fact, they emerged through one participant's comment that, to establish human connections as a Māori she needed interactions with other Māori women. A cultural dimension presents as a future consideration in VCoP research given the ethnic composition of the social work workforce.

Research project methodology

The project's original aim was to determine the utility of participants' learning styles for e-learning. As qualitative data were analysed, participants' comments suggested that a VCoP had emerged during the currency of each year's cohort. This inductive observation was not therefore predicated on a research question, aim or hypothesis. Descriptive research led to an exploratory approach as the researcher interpreted statements made by participants.

Data collection for the project used semi-structured questions based upon selected aspects of Dixon's (2000, pp.23-28) evaluation tools (3, 4, and 5) for flexible course delivery:

• Tool 3 Detailed participant evaluation for all delivery modes

• Tool 4 Course design

• Tool 5 Online learning participant evaluation (formative)

These questions canvassed three domains: learning goals and tasks; student and teacher interactions; and the institutional context. Project findings emerged from both the F2F and online elements of the course.

Total enrolment in the three cohorts amounted to 38 of whom sixteen (42%) consented to interviews. Interviews were approximately sixty minutes, audio-taped and individual, with the exception of one with two geographically co-located respondents who opted for a joint interview. Content analysis of the interviews used NVivo software (di Gregorio & Davidson 2008) to code the responses of each participant to a set of common themes, thus enabling comparisons across the sample. The themes were organised around selected benefits of, barriers to, and CSFs for VCoP identified by Gannon-Leary and Fontainha (2007, pp.6, 7). As findings are presented, their location in Table 1 is identified.

It is acknowledged here that the graduate level of the course and, more specifically, the extensive work experience of the participants, means that applying findings and analysis to undergraduate students with no such comparable experience might be problematic.

FINDINGS

Benefits and critical success factors

Benefits and CSFs of VCoP noted by Gannon-Leary and Fontainha (2007) emerged as data were analysed. As participants interacted, evidence of a community came to light as practice concepts became the vehicle by which workplace and academic worlds connected. These synergies illustrated how 'neo-apprenticeship' learning became the raw material for collective learning and identity construction (Brown and Duguid 1991). Barbara, (pseudonyms used throughout) responsible for managing staff in a health NGO setting, described an 'aha' moment as she implemented a performance review system:

I knew about how to set up a performance appraisal system and it came to me at the absolute right time at work so for me my involvement [in the course was] the highlight of that whole qualification [graduate diploma in professional supervision].

Knowledge-sharing and a feeling of connection between the VCoP and the workplace was described by Barbara as she applied course learning 'directly into convening a group of four leaders and managers to rewrite the way that we do our performance development and reviews.' The constructivist nature of the process was demonstrated by her observation that 'it was a collaborative activity in the workplace.'

The connection between the workplace and the VCoP described also applies to inter-personal communications between participants outside the virtual environment. Grace reported on sensitive workplace issues in her telephone interaction with another student:

People were feeling anxious and Angela and I had quite a bit to do with each other. What are we supposed to do here, that sort of [thing] and I think Angela's … boss was not supportive at all. It was dreadful. It was really quite sad.

Such sensitive communication demonstrates that the VCoP was functioning for that participant at level two (kinship identity) or even three (camaraderie) (Brown, 2001).

Gannon-Leary and Fontainha (2007) also note benefits of knowledge extension. Janine, a state sector social work supervisor who read widely, commented, 'it actually made people think', suggesting critical reflection (Fook and Askeland 2007).

An apprenticeship flavour to knowledge sharing is noticeable as Barbara noted that 'being able to talk through with other students about what I'm facing was *real life, real time learning* for me. I had to make sure I was really clear about what I was saying and to hear that they were also facing things that were either new to me or very similar to me' (emphasis added).

Barbara also substantiated Gannon-Leary and Fontainha's (2007) CSFs of shared under-standing, good communications and a sense of purpose as clearly contributing to the specific benefits of extended capabilities, knowledge deepening, and connectedness:

A couple of people who were really diligent in responding to other people's postings and I learned a lot from reading them and then thinking, how can I contribute in a way that adds anything [sic] rather than just putting in a comment for the sake of it.

The sense of belonging as a CSF acted as a catalyst for a range of benefits identified by Gannon-Leary and Fontainha (2007) for Jessica, a state sector social work supervisor:

I got intensely interested in some of the dialogue and I became quite excited that I could log on fairly regularly to see if someone had replied to something I had posted. I guess it might be with an unexpected pleasure and intellectual engagement for me around the online content. I didn't expect the online conversations to capture me.

I was totally fascinated. I thought this is fantastic. People willingly shared. I got information that I may not have been able to access in a classroom. It was much more interesting than I imagined, online.

This response is evidence of enhanced and shared learning, and feelings of connection. Clearly the CSFs of trust, good communications, shared understanding and common values had been met, all contributing to a sense of purpose.

Angela, an NGO manager, clearly engaged with the VCoP, illustrating CSFs of a sense of belonging, trust, common values, cultural awareness and a sense of purpose:

It was more positive than anticipated. Having met the people in that block course I enjoyed the learning. In a classroom I come up with the first thought that comes in my mind whereas [in online asynchronous postings] there's time to read, reflect, look at it again, come back with a more informed and reflective response. I actually missed the interactions with the other students when the web CT [ICT platform] closed down. I felt a sense of loss.

Multiple benefits are evident in those comments: enhanced learning, synergies, extended capabilities, knowledge sharing, feelings of connectedness and identity development are some of the more obvious. Perhaps the most striking expression is that Angela 'felt a sense of loss.' If ever there was evidence of community in this project, that was it.

Rose, a state sector social work manager, commented that the course 'really challenged' her as she observed 'how other people saw things, opening me up to other perspectives' in the process of completing an online task. This illustrates the attraction of intellectual stretch, or what Gannon-Leary & Fontainha (2007), citing Vygotsky (1978), characterise as the benefit of enhanced learning by engaging with others.

BARRIERS

Three barriers (Gannon-Leary & Fontainha 2007) presented themselves in the project. First, noticeable independence emerged from one participant. Second, the need for a F2F component was a common theme, connecting to the lack of body language inherent in a VCoP and the associated issue of ICT as the medium of communication. Third, the need for trust was a strong factor. Notably, the boundaries between CSFs and barriers were sometimes indistinguishable. The lack of a CSF effectively became a barrier.

Alan, an NGO manager, produced what were probably the most striking comments in the three years of the project. Two themes ran through Alan's contribution. The first related to a personal learning style preference: 'I didn't like having to chat with students online. I didn't find that easy and I didn't like it.' The notion of a community was not of interest; Alan preferred an accountability structure, whether in a F2F or online environment:

I prefer face to face because it keeps me accountable. What I would value in an online course is that I'm required to put postings in about various objectives in the course from time to time and then that would have the accountability component sewn into it.

Alan considered that 'accountability to other students [is of] no relevance' in assessing the value of e-learning. Accountability was seen as 'to the course, to the lecturer.' Interestingly, on reflection Alan commented that 'I'm quite surprised that I'm so firm on it [his attitude.]' A culture of independence presents as a barrier to participation in the VCoP.

The independent stance espoused by the preceding participant contrasted with perceptions of a social work professional supervisor, Philippa. She had previously participated in a VCoP as part of an 18-month leadership programme facilitated through a university business school which included 'a big component of online community ... discussion.' After that level of engagement in which 'members knew each other', the community in the current project presented as 'a much thinner experience.' Collaborative learning was not now dependent on personal acquaintance: 'It's not so important actually to have to know that person. It is quite good to just see who the lecturer is and meet the other students but equally I think doing the whole thing online would be fine for me.'

Philippa's comments indicate the limitations of a temporary VCoP of three months' duration (Lewis and Allen 2005). The rich collegiality of her previous experience which included physical proximity proved to be a detracting comparison. Ostensibly contradicting the identified need for F2F interactions, the author suggests that in fact Philippa's perception illustrates her high VCoP expectations derived from previous experience: she notes a 'much thinner experience' this time around.

The second barrier relates to the perception of inadequate time allocation to developing interpersonal relationships in course orientation. Angela, a health NGO manager, considered that a focus on ICT skills took pre-eminence at the expense of 'getting to know' other participants. That said, the same participant commented that 'I was a bit anxious and nervous about' acquiring ICT skills. Consequently,

I didn't actually focus on the people that I was going to be sharing this experience with. So one, there was not time and two, it was like I need to get to know what I'm supposed to be doing here [technologically]. And you can put faces to names and being a visual learner that would have given me a much better handle on the people I began to get to know.

The need for interpersonal and institutional trust as a CSF noted by Gannon-Leary and Fontainha (2007, pp. 4, 6) is connected with ICT skills. Jessica, a highly competent public health sector professional social work leader, commented that in respect of 'technical skill … I was terrified to realize it was an online course.' Apprehensions of that order potentially exercise major influence on the success or otherwise of a VCoP.

Similarly, for Margaret, a professional social work leader in public health, building relational community with other participants was an essential element before online discussions started:

To me it's about meeting [other students] at the beginning, having a relationship with those people not just on line but you've actually met them and then it becomes a community. There's not that integrity of a community when you haven't met them, you don't know who they are. You learn from each other, there's a feeling of reciprocity.

Margaret's comments suggest that VCoP requireF2F interactions: a blended community is in view (Aguirre and Mitschke 2010).

Leadership by the course lecturer to maintain communication was closely allied to the need for F2F relationships in the VCoP. Lecturer feedback was perceived by several participants as a sine qua non for a functioning VCoP; when it was seen as inadequate, participants certainly noticed. Baker (2004) suggests that the immediacy of course facilitator activity online motivates e-learning. Similarly, Bates (2005, p. 61) sees quality of interaction as critical. The importance of the facilitator's e-presence is evident in this statement by Grace:

I thought where is [the facilitator], are we doing alright? Are we on target? I definitely had anxieties around that … I knew [the facilitator] was there but I would have been more reassured had there been a little bit of feedback. Hey troops how are you doing, any difficulties get in touch with me, am busy but I'm still here.

These perceptions illustrate Gannon-Leary and Fontainha's(2007, p.6) observation that the VCoP facilitator must demonstrate leadership and communication skills. That said, Barbara saw the diminished interaction as an opportunity for the VCoP to develop as students wished:

I remember thinking you were taking very much a background approach allowing the participants to drive it. You were there at the beginning and thereafter there was much less, I didn't feel your presence and felt then okay this is allowing us to use this as much as we wanted to.

The last barrier identified relates to interpersonal trust (Gannon-Leary and Fontainha 2007, p.4). This issue is connected to relationship building prior to making online postings.

Participants Kelly and Deborah demonstrated this need for 'virtual community trust' (Casaló, Flavián, and Guinalíu, 2008):

Some people were incredibly academic … I wanted some fast track discussion … I wondered actually with some of the people that were doing this really academic content what am I meant to be doing. It was totally off putting.

It left me thinking … how important is my two cents worth … when you read some of that stuff that people wrote. In all honesty the online stuff I just filled it in to fill the requirements of having done it.

To develop trust, Kara, a state sector social work supervisor, assigned prime importance to meeting other participants at the course orientation prior to the initiation of the VCoP. She commented that launching into online postings without 'face to face human interaction' would be 'horrible.' Establishing human connections meant that

I could picture their faces and the different cultures; I met some other Māori women and I could just e-mail them with anything and we would talk about how we were going. You need that.

These comments indicate a level two (kinship identity) or three (camaraderie) VCoP was achieved for that participant (Brown 2001).

Balancing the preceding statements, Margaret, a health sector professional social work leader, assigned importance to self-motivation in VCoP participation, illustrating personal work preferences:

[At] this [graduate] level you have a responsibility. My expectation was that it is very self-motivated and that if you don't know you ask.

DISCUSSION

The findings of this project are discussed across two sections in order to offer some summative comments. First, the author considers how identified processes contributed to participants' feelings of safety in the VCoP. Those considerations merge into analysis of barriers and CSFs (Gannon-Leary and Fontainha 2007), and how barriers are addressed in order to create a successful VCoP. Second, the characteristics of a complex group (Arrow, McGrath and Berdahl 2000) are explored to explain how the VCoP in this project functioned as a complex adaptive system (Uhl-Bien, Marion and McKelvey 2007).

Virtual community processes and a safe place

The notion of a safe place in VCoP represents the capacity of participants to trust each other to express opinions without apprehension. The author argues that trust is formed through communication styles familiar to participants whereby members feel part of the professional community culture to which they belong (Gibson and Manuel 2003). Analysis of findings suggests that developing trust occurred through common professional modes of communication and shared cultural perspectives. Of these elements, the most critical appears to have been the need to build F2F relationships prior to commencing online posts.

The need to develop a sense of community through F2F encounters is hardly surprising given the professional human service identity of participants. The author suggests that a constructivist approach to learning needs a high context culture (Hall, 1989) in which non-verbal communications assume equal significance with verbal and written exchanges. This paper argues that F2F interactions are needed to develop reflective practice which characterises professional identity (Schön 1983). The implications for community building and development of trust in VCoP restricted to postings and therefore excluding non-verbal and oral communication are manifold and can only be briefly canvassed in this paper.

One participant's comment that community 'integrity' is absent when members have not met each other suggests that developing mutual trust is predicated on F2F interactions. The notion of integrity—values held in common (Gibson and Manuel 2003)—underpins transparent communication. Such integrity is expressed in another participant's comment that in a previous VCoP 'members knew each other' by virtue of physical proximity. The benefits of F2F relationships were captured by another VCoP member's ability to recall 'faces and different cultures' in order to 'talk about how we were going'. Community, integrity and trust in the virtual environment are interwoven qualities, essential for effective participation.

The consequences of a lack of trust and the need for self-efficacy as a motivation to learn (Zimmerman 2000) were unambiguously described by three participants. One participant contrasted 'incredibly academic' students against her own perceived performance and reacted that the experience was 'totally off-putting.' A similar reaction left another member questioning the importance of her 'two cents' worth.' A place of safety is plainly absent, and resulted in one participant completing the required postings only because of course requirements ('in all honesty I just filled it in to fill the requirements.')

These perceptions suggest that a community identity is a pre-requisite to develop online trust between professional human service workers. When the person in social context paradigm (Jarvis 2009) is lacking, practitioners may feel personally and professionally uncomfortable in the VCoP. The risk of 'adverse emotional reactions' (Zimmerman 2000, p. 86) accruing from negative self-images relating to academic competence may also be constructively addressed as trust is developed. In short, the author argues that VCoP in human services need the F2F blended experience (Aguirre and Mitschke 2010) to create a safe environment for meaningful interactions.

Barriers and critical success factors
Trust and distrust are depicted by Gannon-Leary and Fontainha (2007, pp. 6, 7) as a CSF and barrier respectively to developing a VCoP. This section of the paper deals with how perceived barriers may be addressed in order to create a constructivist VCoP. Harnessing CSFs to achieve the same end is allied to that construction.

The culture of independence precluding engagement with other participants articulated by one participant may not be widely shared in human service communities. Bearing in mind Jarvis's (2009) notion of the person in social context, the idea of highly structured accountability to course content and lecturer as distinct from a collegial commitment to

the community of learners may be atypical of members of the profession. The participant's own surprise at his attitude may illustrate that atypicality. The author suggests that balancing individual accountability and commitment to the group (Wlodkowski and Ginsberg, 1995, pp.83-85) in VCoP may be influenced by the modelling e-presence behaviour of the course facilitator. If it is lacking, VCoP coherence is affected detrimentally.

The second barrier relates to ICT comfort levels and the relative importance paid to technological competence at F2F course orientation vis-à-vis social interaction. Strength of feeling relating to ICT competence is evidenced by one participant who was 'terrified' of online learning despite professional expertise. Another participant expressed feelings of anxiety in the same context. The need for self-efficacy as a learning motivator (Zimmerman 2000) noted in the earlier discussion on trust development equally applies to ICT competence. In addition, the research literature on the impostor syndrome (e.g) provides insight into self-perceptions of incompetence. That exploration is not the subject of this paper but may provide future research direction for VCoP development.

Addressing the ICT competency challenge in the context of community-building and trust development suggests that F2F orientation must give equal attention to technology and interpersonal interaction. A sense of belonging—to which the orientation can contribute—is able to break the ice, which if left undone is a barrier to VCoP functionality (Gannon-Leary and Fontainha 2007, p.6). The process of building relationships and gaining ICT confidence can be a simultaneous event, adding weight to the necessity of a F2F blended experience prior to online posts commencing. Convergence of these processes carries the potential to address barriers and harness CSFs (Table 1).

Leadership sensitivity in facilitating VCoP processes is the last CSF to emerge from the findings. Participants who interpreted a perceived lack of course lecturer involvement were divided into two camps. One, the majority, articulated a sense of anxiety or at least concern, consistent with the literature (Baker 2004; Bates 2005). The second camp saw the situation as offering latitude to develop a distinctive identity for the community. To evaluate how and why diverse perspectives emerged, we need to consider the structure of the community under examination. Bell and Kozlowski's (2002) virtual team typologies and leadership functions appropriate for each typology are adopted for this purpose.

The first typology relates to time distribution. Members in 'our' VCoP occupied the same time zone but used asynchronous postings. For this situation, Bell and Kozlowski (2002, pp. 36, 37)propose proactive leadership offering clear structures, direction and goals to enable self-regulation by participants. These authors argue that to develop a collaborative community, critical leadership actions such as F2F gatherings are required. Herein lies a tale to be told for course lecturers. Teaching courses simultaneously and maintaining research and professional job components may cut into time allocation for effective VCoP leadership. Support from tutors or graduate teaching assistants in other courses are called for, enabling increased attention to the online study programme. Where this support is lacking the lecturer, as VCoP facilitator, may struggle to keep up, for example, with almost 500 postings totalling 100,000 words in the space of a few weeks. Strategies to manage

this volume were applied in year 2 of the 3, primarily by reducing the number of assessable postings and instituting F2F orientation at the outset of the course.

Bell and Kozlowski's second typology (2002, pp. 37, 38) relates to functional, organisational and cultural boundaries in team composition, and the complexity of tasks undertaken. This context suggests that leadership in a VCoP is influenced by national and professional cultural constructs. Low power distance leadership, characteristic of Australia and New Zealand (Hofstede1980; Kennedy 2008), proposes that acceptance of leadership is not determined by reliance on hierarchical position. Leadership is perceived by human service professionals in terms of Follett's notion of shared 'power-with' rather than hierarchical 'power-over'(Follett 1995) values. Applied to the VCoP, these cultural mediators imply an egalitarian stance whereby leadership credibility is created by active participation in threaded postings by the course facilitator. Standing back from the online debate may be interpreted as a detached, hierarchical posture. Constructivist community building is a complex task as, ideally, the facilitator needs to visualise each participant's personality, circumstances, and organisational context. The reality for many participants is to sit at a home PC late into the evenings and weekends while managing family and long working hours caused by work responsibilities (OECD 2012). Bell and Kozlowski observe that 'universal strategies' by leaders may require replacement by a tailored approach appropriate for each participant (2002, p. 37).

The third and fourth typologies relate to the team's lifecycle and team roles (Bell and Kozlowski 2002, pp.38-41). Because the VCoP in the current project was time-limited (12 weeks) the need to keep participants focused on the task in hand inevitably influences leadership actions. The facilitator is obliged to prioritise essential activities, not the least of which is grading assessable postings by participants. Marking student assignments is to act out a 'power-over' exercise; while contributing to a constructivist community is a 'power-with' function. The two functions may clash, or at best be held in tension. Empowering leadership functions may become blurred as the complex processes associated with community building are prejudiced by marking participants' contributions. Alternatively, if the course lecturer consciously withdraws from actively contributing to the VCoP, participants' perception of detachment and a hierarchical power stance is a potential outcome defeating the purpose of building a VCoP. These are ongoing polarities to manage, not problems to be solved (Johnson 1992). There are no blueprints. Bell and Kozlowski appropriately observe that 'team members who hold multiple roles are more likely to experience role ambiguity and role conflict' (2002, p.40). They might have been identifying the course facilitator in the current discussion.

Communities of practice as complex groups

The author proposes that engaging with these tensions is best approached through complex adaptive systems (CAS) thinking. Leadership in CAS is exercised by interdependent agents (Uhl-Bien, Marion and McKelvey 2007) . A virtual community composed of equally empowered professional practitioners and academics lends itself to a constructivist knowledge building mode. An enabling, or empowering, leadership model is proposed by Uhl-Bien and her colleagues (2007). Such leadership is the educational 'guide on the side' replacing the 'sage on the stage' (King 1993.).Complexity thinking has, not unsurprisingly, been

applied to VCoP by Colachico (2010, p. 109)who posits that virtual communities are 'complex entities.' Arrow et al. (2000, pp. 38, 39)make the case that complexity emerges from groups whose members are simultaneously connected and distinguished in their roles, relationships and activities. Relationships meet socio-emotional needs and balance a task orientation (Arrow et al., 2000, p. 48.). In the current research, relationship needs for immediacy and trust were identified in participants' comments. Although immediacy and trust can be created in the virtual setting (Casaló et al. 2008), the author argues that physical presence is ultimately necessary. A VCoP would therefore benefit from the 'hybrid' course design identified by Aguirre and Mitschke (2010)as already noted.

CONCLUSION

Findings from this project suggest that a constructivist VCoP embracing workplace and academia is a viable proposition as long as a F2F orientation is built into the process prior to the initiation of online postings. This blended design fits the human service professional group from which the findings emerged, and is needed to establish the sense of community without which online trust may not be formed and constructivist exchanges made. In order to develop community trust the active involvement in the VCoP by the course facilitator is necessary. Further, it is clear that adequate resourcing by the tertiary provider for the facilitator to function in that role is needed.

Successful development of a constructivist VCoP is likely to be enhanced by an under-pinning complex adaptive systems perspective which facilitates Follett's (1995) 'power-with' leadership philosophy. An approach using CAS thinking commits participants, including the facilitator, to interdependence rather than top-down leadership. This paper suggests that power-with interdependence is the heart of a virtual community of practice.

The author proposes that three potential further research investigations offer promise. First, how is the 'power-with' role of the facilitator as a constructivist educator balanced against his/her 'power-over' academic grading responsibilities? This issue naturally connects with a second question: how does a constructivist online community of practice address participant feelings of ICT insecurity and even manifestations of the 'imposter syndrome?' Indeed, is a constructivist paradigm always appropriate in VCoP? Finally, how best can VCoP facilitators create the trust needed for participants to transparently engage with each other? Underpinning all three explorations is the pervasive issue of adequate resource allocation by the host institution for academics in this practice field. Benefits for human service educators and practitioners include development of practical strategies for facilitators to address the dilemmas identified; and in addition, the design of safe virtual environments for practitioners to bridge academia and workplace.

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