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community of practice

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This paper focuses on academic skill-building through using cross-institutional collaborative approaches in developing quality learning and assessment tasks for experiential placements. A curriculum planning template was used for the collaborative work, with materials developed being disseminated on a specially designed online repository website. Results, analyzed within a community of practice framework, indicate the activities. There is potential evident for building a more mature community of practice given the value of the collaborative learning process involved. This would need additional opportunities and leadership over an extended timeline. Some longer term changes in curriculum planning and impacts on wider networks are also evident. This case study provides a model which is relevant across all disciplines and which highlights professional learning occurring through collaborative academic work focused on relevant practice. (Asia-Pacific Journal of Cooperative Education, 2011, 12(1), 39-50)

Keywords: community of practice, experiential placement, professional development

BACKGROUND

Quality experiential placements are an essential aspect of preparatory programs in the health professions, with university health educators increasingly establishing collaborative partnerships with accreditation agencies, professional associations and industry groups as an essential part of these processes (ALTC, 2010). To further support quality student outcomes, academics working within professional preparatory programs need to be continuously updated in discipline-specific aspects and also up-skilled in curriculum planning, learning and assessment approaches (Cox, 2001).

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Traditionally, educational skill-building has occurred through one-off attendance by participants at specific conference events. Based on behaviorist learning theory and individual cognition models, the focus at these one-off events is on knowledge transmission by expert presenters (Spillane, 2002). While information transmission is useful, increasingly these one-off events have been criticized as ineffective in terms of changing educational practices due to the lack of opportunity for individuals to explore new ideas and to develop in-depth understanding which supports making links to localized situations. Research highlights that effective professional learning occurs within situated and 'real life' contexts, and through collegial work in ongoing networks, coaching and mentoring (Kenway, Henry, Johnson, Matthews, Blackmore, White, Muhleback & Bates, 1999; Rhodes & Houghton-Hill, 2000; Joyce & Showers, 2002).

These collaborative network situations operating over longer timeframes may become communities of practice. Communities of practice have been defined as "groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly" (Wenger, 2006, p. 1). Wenger, McDermott and Snyder (2002) define three structural elements of a community of practice as the domain, practice and community. The domain is the shared focus activities, the "concern, set of problems or passion about a topic," while practice relates to the body of shared knowledge and common values, with community members seeking to "deepen their knowledge and expertise" on a topic by learning from each other. The third structural element of community is about interpersonal relationships, the sense of identity and cohesion involved. Therefore, communities of practice models highlight professional learning occurring within groups which work together over an extended timeframe and develop common values. Joint activities occur in face-to-face or in online contexts and the newcomers are gradually inducted into the situation while also being encouraged to introduce 'fresh' ideas and highlight innovative practices (Lave & Wenger, 1991, 1998; Owen, 2004).

Some researchers (Grossman, Wineburg & Woolworth, 2000; Bolam, McMahon, Stoll, Thomas, & Wallace, with Greenwood, Hawkey, Ingram, Atkinson & Smith, 2005) have highlighted the levels of maturity of groups operating as professional learning teams and communities of practice. Many interest-focused groups initially operate at a 'starter' level in terms of individual commitment to the group, with individuals and teams undergoing a period when commitment increases ('developer'), prior to participants showing a strong sense of identity and group learning as a 'mature' community of practice.

While communities of practice are generally self-organizing and rely on internal leadership and building sustainability through team members valuing the collaborative work and relationships, formal organizational structures can be used to nurture the community (Wenger, 1998). More formalized leadership can support learning communities through provision of comprehensive and systematic approaches. This includes time for ongoing and supportive collegial learning which challenges ideas and builds new skills and subsequently leads to rethinking and changes in curriculum practice (Senge, 1994; Bolman & Deal, 2003; Heifetz & Lindsay, 2002; Darling-Hammond & McLaughlin, 1995).

Various communities of practice models for professional development and skill-building of academics have been researched. These include establishing regular face-to-face sessions for discipline-specific and issue-focused cross-disciplinary groups within particular institutions

(Cox, 2001; Wade, 2007) and also facilitating online networked communities of practice across various disciplines (Timberlake, 2008).

In the health professions, research on communities of practice and their impacts has been more limited than for other professions (Bentley, Browman & Poole, 2010; Grimshaw, Nielsen, Judd, Coyte & Graham, 2009). Le May's (2008) work on communities of practice using examples from the United Kingdom and Canada outlined weekly meeting session times which were used for generation of ideas, problem-solving and analysis of current work practices. Benefits of collaborative professional development and improved patient care were highlighted. Similarly, Parboosingh's research (2002) among physicians which involved ongoing shared professional learning sessions within a community of practice indicated benefits of increasing access to rich data, experiences and mentors.

These health profession examples regarding professional development impacts provide information about an under-researched area concerning the establishment of a cross-institutional community of practice relevant to pharmacy experiential placements.

An Australian Learning and Teaching Council (ALTC) funded project aimed to improve pharmacy experiential learning through establishing cross-institutional collaborative workshops and follow-up activities and evaluating the impact on academic practices and student learning. The workshops focused on developing quality learning and assessment tasks using a curriculum planning template and online repository website, with these aspects being outlined in a forthcoming paper. The current paper reports on written feedback obtained following two collaborative workshops and also external evaluator interview data originating from a number of processes throughout the project. Findings about the impact on pharmacy educators' professional learning and subsequent curriculum planning are presented in this paper. Potential for wider application across other professional degree programs is highlighted.

METHOD

In investigating professional learning relevant to building quality tasks for pharmacy experiential placements, a case study approach was used. This approach enables an examination of workshops as a "single entity" or model (Ary, Jacobs & Razavieh, 1990) relevant to the "real life context" (Yin, 2003, p.13), with detailed examination providing insights and having potential for wider application in other communities of practice situations. Pharmacy professional learning survey and interview data was gathered about the effectiveness of the workshops and other professional development aspects including aspects such as those in relation to curriculum change.

Four workshops were conducted including two collaborative curriculum planning workshops for academics and professional/registration board representatives, and supervising preceptors within an existing annual Australian national pharmacy education forum and conference program. Most Australian pharmacy schools were represented at the various conference workshops involving sixty-five participants. The focus was the collaborative preparation of quality learning and assessment tasks using a curriculum planning template. Dissemination and follow-up occurred through the specially designed online repository website.

A list of potential topics relevant to experiential placements was forwarded to workshop registrants prior to the education forum events. Attendees selected a topic and brought topic-related materials from their own institutions to these workshops. Topics covered varied with each workshop but included aspects such as patient case studies, health information, introduction to hospital pharmacy, patient counseling in complex situations, scaffolding for placement, portfolios, teaching-research nexus, and pre-placement primary health. Each topic group was supported by a group leader, with leaders and other participants sharing materials from their own universities and then working collaboratively in groups of three or four to create a new assessment task using the online template. At the completion of each workshop, a written survey was distributed to attendees to gauge the effectiveness of the sessions. The survey included 5-point Likert scale items and free response questions, with questions relating to views about the workshop, professional learning, and intentions about sharing information with networks and with colleagues. Manual collation and analysis were undertaken.

After the workshops, over a three to four month timeframe, follow-up occurred with assigned group members and then the tasks were finalized with their teams using mainly online or phone communication between members. A quality assurance process was used by the project team prior to publication of tasks. Attendees were then provided with updated information about task publication, with access to the material given to registered website users.

Throughout the project, the external evaluator gathered data by conducting 15-20 minute semi-structured interviews in person or by phone. Semi-structured interviews were used to encourage a conversational approach. In the interviews, questions were asked about the value of the collaborative workshop events, including the online repository website and workshop processes, influences on beliefs and practices and intentions to share materials with colleagues and networks. Some variations in questions were used dependent on the stage of the overall project. Using purposive sampling to increase the likelihood of more expansive and in-depth responses, twenty-four project contributors who had previously interacted with various aspects of the project were selected for interview. Most interviewees had either attended a previous conference education forum, were part of the project team/reference group or had participated in other state and territory consultations in various project aspects. Interviews conducted in person were tape-recorded by the evaluator and manual notes were taken for telephone interviews. Manual collation and analysis occurred.

In this paper, collated survey and interview data were analyzed by the researchers using the previously-outlined communities of practice key concepts.

RESULTS

Key features previously introduced which are generally associated with communities of practice models were evident in the written surveys and interview data, with results presented within the thematic areas as follows:

- Shared Interest Area;
- Collaborative Work Valuing; and
- Relevant Practical Materials Development.

SHARED INTEREST AREA

A key feature of community of practice membership is the involvement in a domain or joint enterprise which goes beyond the task itself and includes a commitment to values and shared identity evolving through working together over an extended timeline (Wenger, 1998).

Attendees at workshop events, some of whom were also involved in other aspects of the project as project team or reference group members, provided written feedback in terms of the workshop processes and intention to share ideas with others. One hundred percent of survey respondents expressed satisfaction about the collaborative workshop process, 87 percent intended sharing workshop information with colleagues (13% were neutral) and 100 percent intended to disseminate information to other networks.

There was a range of free response comments provided by survey respondents and these reflected positive attitudes to the pharmacy experiential placement workshops as the shared interest area, with examples being: "Lots of ideas and sharing of experiences" and "informative, enjoyable, well-coordinated activities." Other comments indicated the "usefulness of links to attributes and competencies," "and the value of "collaboration, [and a] structured approach to task/activity development."

Similarly, in the interviews regarding the *workshop events as shared areas of interest and establishing values*, highly positive responses were made by interviewees. Comments related to the degree of sophistication which was evident within the project materials in terms of key aspects relevant to experiential placements such as competencies; the usefulness of linking tasks to competencies within the materials collaboratively developed for publication on the website; and considering pedagogical reasons for activities that students undertake. Example comments are:

- Really positive. Thinking about the pedagogical reason we're doing things; activities we can take home and use; where are the students going; what do we want them to achieve, as we're doing this morning. Where we want the students to go, rather than focusing on the tasks (December 2009 interviews).
- We had a significant shift towards sharing, learning from each other, without threatening people's IP (Evaluator report, Interviewee 5, September 2010 interviews).
- Strong sense of common purpose, trust in problem-solving, not competitive (May 2009 interviewees).
- Consistent tone set by people at the front; terms of reference clear, funding, next steps, good navigation: not imposed, handled well (Evaluator report, Interviewee 6, September 2010 interviews).
- All the workshops worked well. We were focused on *doing* in small groups of 2/3, putting ideas together. It was all very successful and positive. The third workshop was particularly productive, finishing tasks; we felt we were well under way (May 2009 interviews).

However, reflecting the need for extended time to build the community and develop commitment and a shared learning focus, the issue of gaining follow-through on tasks so they could be polished for the website publication was also raised. Example comments of these various aspects included:

- As an outsider to the profession, workshops really valuable, people happy to be there, very positive. However, sad that benefits tended to stop as soon as they left the room (Evaluator report, Interviewee 3, September 2010 interviews).
- To engage other stakeholders needs more time than the 16 months since the early workshops. Plans for APSA 2010.... Hope to establish a subcommittee to see the Project embedded in a professional body to keep momentum up with more tasks on website (Evaluator report, Interviewee 5, September 2010 interviews).
- A very good approach, but disappointing that there was not more input from people there, and others. People were not clear about what was to happen when they went. It was new; hard to know what it would be about (Evaluator report, Interviewee 7, September 2010 interviews).

The issue of being able to follow through new ideas after the workshops within localized institutions was also raised by some respondents in the interviews. Finding time to attend workshops was another issue of concern to a limited number of interviewees, although linking the workshops to a high-profile national pharmacy conference occurring after academic staff had completed lectures and assessment responsibilities was viewed positively.

COLLABORATIVE WORK VALUING

The importance of interpersonal relationships in supporting learning within a community of practice has been highlighted in the literature (Wenger, 1998; Owen, 2004; Lave & Wenger, 1998). This was especially evident in the survey feedback free response comments.

Similarly, in the series of interviews conducted throughout the project, a positive response to the collaborative work was especially highlighted in terms of sharing ideas around a task and networking value which occurred especially through the education forum workshops.

The following comments by various interviewees capture the ideas frequently expressed about the collaborative value of the conference education forum events:

- Today: Great! The networking; getting input, swapping notes; extremely useful while we were sitting down working together. You get really good input (December 2009 interviews).
- Collaboration. New ways of looking at my teaching but ideas [are] not completely
 new. It's validating my knowledge. I'm learning that I've already thought about
 things that others may not have. It's validating my ideas. It's OK to have a multiangle approach; that my approach is not too complex and that the concept of
 competencies we are using is not black and white (December 2009 interviews).
- The workshops and other meetings within my institution have opened up communication about experiential learning and learning in general. The networking and collaboration with experienced people willing to share has been invaluable (Evaluator report, Interviewee 9, September 2010 interviews).

The cross-institutional, national sharing in a competitive university context was particularly valued as evident in these responses:

- Collegiality: engaged people on different occasions from different institutions to share ideas. There's not usually the opportunity to do that (December 2009 interviews).
- Collegiality people coming along to contribute and sharing their experiences, breaking down the silos between the states (May 2009 interviews).

One interviewee highlighted some specific benefits of collaboration as follows:

• Collaboration [is] significant because: [it's the] only way to produce owner-free materials; big and small schools contributed equally - important due to competitive jealousies; we maximized opportunities to collaborate as much as possible, especially in [the] Sydney workshop, and supported smaller schools such as Bendigo to attend; provided opportunities to think more widely; enabled people to use and adapt activities; gave benefits for smaller or less experienced schools; added more ideas and broader perspectives; produced better product in shorter space of time; addressed more issues; were designed coherently (Evaluator report, Interviewee 4, September 2010 interviews).

The diversity of participant backgrounds was a particular aspect receiving positive response in the interviews in terms of collaborative work, with academics being the predominant group but also being involved. Example comments reflecting these perspectives were:

- The workshops provided an academic approach with input across a range of aspects experiences, people, ages, personalities. Some gems came out of the workshops (Evaluator report, Interviewee 1, September 2010 interviews).
- Mostly academics involved, but students and professional bodies were invited to early workshops; some follow-through of tasks was provided by representatives of professional bodies (Evaluator report, Interviewee 5, Sept 2010 interviews).

With respect to the *impact of the project on others* outside of workshop attendees, including colleagues and professional bodies, there were varying degrees to which this had occurred. Most indicated that there were ideas which they would be taking back to colleagues including this comment:

Yes, hope to move forward and share good/bad with colleagues; learn from each year's results so there is a graded improvement/progression for student experiences and their work (December 2009 interviews).

However, despite the overall emphasis on the positive aspects of collegial work, there were individual comments made about some negative aspects of collaboration regarding unequal contributions. An example response was:

Some people did not feel empowered to speak – were overshadowed by louder members in small groups. There was some competition between the small groups. It could have been better with more people from community and hospital practice (Evaluator report, Interviewee 1, September 2010 interviews).

RELEVANT PRACTICAL MATERIALS DEVELOPMENT

Wenger (1998) also highlights active involvement of members of the community as they learn from each other while developing relevant materials and resources for practice.

This was evident in interview comments which showed all conference participants from various institutions and professional organizations reporting positively about the impact of the project and collaborative workshop events in terms of *influences on beliefs and practice*. Key themes related to using particular website activities in student learning activities and reworking assessment grids, as well as links to competencies. Example comments about the overall influence of the project on practices are:

- I'm becoming more sophisticated as an assessor in the use of marking grids in both teaching and placements. The competencies have focused my thinking and teaching I now use them in First Year (May 2009 interviews).
- Reflection to be able to explain what it is. It goes beyond thinking, to the context I
 have to get students to think about. Nice activities in relation to assessment e.g.
 reflecting on style and the way the students write, how they put themselves into it.
 - I've seen a difference in students putting down their expectations through my use of this material, and other academics are picking it up (Evaluator report, Interviewee 1, Sept 2010 interviews).
- I've shifted across to using competencies in both the placement workbook and 1st year portfolio to explain why we do things. The teaching team has also gone back to see where the skills development is, and now have a progression going through the four years. The concepts of scaffolding and skills development have come to the fore; also that the uni is a safe environment in which to test skills this is linked to scaffolding. I've introduced a new style of testing in exams, based on prac(tical) work. The formative tools used in the portfolio are also used in exams, so that the students are used to what is expected (December 2009 interviews).
- Several things have happened to bring about a number of improvements: this
 collaboration, staff changes, and change in Faculty structure. Now the Portfolio
 gives much more structure. Before this, many students and Preceptors struggled
 with lack of guidance in Placements (Evaluator report, Interview 9, Sept 2010
 interviews).

Examples of changes noted in student learning which participants highlighted as resultant from their involvement in the project were:

- More focus on the learning objectives and expectations for placement
- Reflection a difficult concept to encourage in students; now asking students in all year levels and at all placements to report in this style
- Group assignments asking students to be critical so they report positive and negative aspects of the experience – not just what they think I want to hear! (May 2010 interviews).

General summary comments from two individual interviewees to the external evaluator about the value of the project and collegial work are as follows:

• It has been a really positive project: has got people thinking about experiential learning in a structured way. Took it out of the institution...The networking process: people from different backgrounds talking about learning; could we do things differently. The impact on the profession and on students has been a huge

benefit (Evaluator report, Interviewee 9, September 2010 interviews).

 Here, we meet bottom-up and top-down aspects – this has been a great journey in my development as a teacher;... To form a community of scholars around this has been very enriching.

DISCUSSION

Academics from across Australian pharmacy schools, together with some representatives from professional/registration and other stakeholder bodies, were engaged in an annually conducted national professional conference within especially convened education forum workshops. Workshops involved the use of an online curriculum template to develop relevant learning and assessment tasks in relevant topics. At the sessions, there was a strong sense of shared purpose and a willingness to be involved and to learn from each other. Given the context in which universities usually operate in competing for student enrolments, it was noteworthy that attendees were generally prepared to share materials from their own institutions, overcoming potential issues of intellectual property through developing new resources as a result of the educational template provided and the collegial discussion.

This shared focus on topics of interest and valuing of learning together is consistent with communities of practice aspects including the national cross-institutional collaborative emphasis which received such positive commendation from interview and survey respondents. The benefits of representatives from large and small universities being involved, diverse age range and backgrounds of participants and the inclusion of academics from various states and territories were aspects which were particularly valued. Furthermore, benefits of collaborative work were identified in terms of opportunities to consider a wider range of ideas through collective discussion; benefits for academics from smaller or less experienced schools; and more ideas and broader perspectives producing better learning and assessment tasks in a shorter space of time.

However, collaborative work should not be romanticized and some respondents were concerned about dominant voices within some groups and competitiveness between topic groups. These ideas are consistent with other research work such as Hargreaves' (1992, p. 217) "contrived collegiality," Head's (2003) 'contested nature of collaboration;' and Fielding's (1999) 'invisibility of power,' with genuine debate not occurring and with politeness and congeniality occurring in its place. The key point is that more extended timelines and further opportunities for building of formal and informal personal contacts are needed in order to establish trust and shared values and to facilitate a challenging of views, deep learning and change through the process of more ongoing dialogue.

It is characteristic of communities of practice that through more extended collegial opportunities, the community of practice evolves and a sense of identity is developed with other community members. In this current project, collaborative work was evident for some participants, particularly those involved in a range of project aspects such as project team/reference group members or those involved in several collaborative workshops. Within this group of participants, rethinking of views and making actual changes in curriculum planning practices were outcomes identified. However, reflecting other previously discussed research regarding communities of practice evolving over time (Bolam et al., 2005; Grossman et al., 2000), participants at the pharmacy workshops were probably really only working at the starter or developer stages rather than operating at a mature level, although valuing the

opportunity to work on a particular topic of interest and to share ideas. An extended timeframe is needed to really build the community and develop sufficient resources within the online repository to establish something more ongoing.

This further building of a sense of commitment and extended timeline will be developed in the future through some additional resources to support the project leaders in establishing more conference workshop sessions, publication of tasks, and additional promotional work. A sub-committee within a national professional body is being planned to provide wider leadership into the future.

Indeed, more formalized leadership of communities of practice is an interesting concept. Wenger (1998) highlights that communities of practice arise informally, involving people who have a common interest in regular interaction and in solving problems and learning from each other. They are not necessarily bound by organizational affiliation. However, despite the spontaneity, Wenger (1998) also highlights the notion of nurturing communities of practice, in the manner in which the pharmacy online repository community has been supported by the project team, with some continuity planned for the future. It is anticipated that, given the cross-institutional nature of the online repository of learning and assessment tasks, connection through annual workshops and publication of materials on the website, the developing community of practice will evolve further. Contacts over an extended timeline will possibly support the emerging community of practice in becoming more mature.

Further website expansion is planned and development of additional tasks through future collaborative workshops and other ongoing work led by a national professional body may enable a community of practice to become established at a more mature level, particularly in regard to experiential placements. Further research to examine long term impacts and monitor the evolving nature of the community of practice is warranted.

CONCLUSION

A series of national collaborative pharmacy workshops focused on developing quality learning and assessment tasks using an online template provided an opportunity for participants to work together on a topic of shared interest process. Participants were very positive about the collaborative process and the opportunity provided to work together, sharing ideas and current practices. Relevant practical materials were jointly developed and published online.

This project may be viewed as a case study regarding cross-institutional professional learning which has application for other professional disciplines. Initial funding can certainly establish some structures and processes, but what is really important is building sustainability which is dependent on leadership and further funding and support being available. Funding and support allows maintenance and expansion of the website, organization of additional collaborative workshop sessions and further promotion of the value of collegial curriculum planning work.

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REFERENCES

- Ary, D., Jacobs, L. & Razavieh, A. (1990). *Introduction to research in education*. New York, NY: Holt, Rinehart and Winston.
- Australian Learning and Teaching Council. (ALTC). (2010). *Disciplines Setting Standards*. Issue 1. February. Retrieved on 25 February 2010 from www.altc.edu.au/standards.
- Bentley, C., Browman, G. & Poole, B. (2010). *Conceptual and practical challenges for implementing the communities of practice model on a national scale a Canadian Cancer Control Initiative*. Retrieved on February 3, 2010 from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2820037/.
- Bolam, R., McMahon, A., Stoll, L., Thomas, S., & Wallace, M., with Greenwood, A., Hawkey, K., Ingram, M., Atkinson, A. & Smith, M. (2005). *Creating and sustaining effective professional learning communities. Report to Department for Education and Skills*. Retrieved on March 10, 2010 from http://www.dcsf.gov.uk/research/data/uploadfiles/rr637.pdf.
- Bolman, L.G., & Deal, T.E. (2003). *Reframing organisations. Artistry choice and leadership*. San Francisco, CA: Jossey Bass.
- Cox, M. (2001). Faculty learning communities: Change agents for transforming institutions into learning organizations. In D. Lieberman & C. Wehlburg (Eds.), *To improve the academy*, 19, (pp. 69–93). Bolton, MA: Anker.
- Darling-Hammond, L., & McLaughlin, M.W. (1995). Policies that support professional development in an era of reform. *Phi Delta Kappan*. April. 96(8), 597-604.
- Fielding, M. (1999). Radical collegiality: Affirming teaching as an inclusive professional practice. *The Australian Educational Researcher*, 26 (2), 1-34.
- Grimshaw, L., Nielsen, J., Judd, M., Coyte, P., & Graham, I. (2009). *Use of communities of practice in business and health care sectors: A systematic review.* [online]. Retrieved on March 4, 2010 from http://www.ncbi.nlm.nih.gov/pubmed/19445723?ordinalpos=1&itool=EntrezSystem2.P
 Entrez.Pubmed_P
- Grossman, P., Wineburg, S., & Woolworth, S. (2000). What makes teacher community different from a gathering of teachers. December. Seattle, WA: Centre for the Study of Teaching and Policy..
- Hargreaves, A. (1992). Cultures of teaching: A focus for change. In A. Hargreaves & M. Fullan (Eds). *Understanding teacher development*. (pp. 2218-240). New York, NY: Teachers College Press
- Head, G. (2003). Effective collaboration: Deep collaboration as an essential element of the learning process. *Journal of Educational Enquiry*, 4(2), 47-62.
- Heifetz, R. A., & Lindsay, J. (2002). *Adaptive leadership practices*. Retrieved on February 20, 2009 from http://www6.miami.edu/pld/adaptive.htm.
- Joyce, B. & Showers, B. (2002). *Student achievement through staff development*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Kenway, J., Henry, C., Johnson, R., Matthews, R., Blackmore, J., White, G., Muhleback, R. & Bates, R. (1999). *New approaches to teacher professional development in devolved environments*. Report. Kenway, Victoria: Deakin University.
- Lave, J., & Wenger, E. (1991). Situated learning legitimate peripheral participation. Cambridge, UK: Cambridge University Press.
- Lave, J., & Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity*. Cambridge, UK: Cambridge University Press.

- Le May, A. (2008). Communities of practice in health and social care. New York, NY: Wiley-Blackwell.
- Owen, S. (2004). Situativity theory and emerging trends in teacher professional development. Retrieved on March 4, 2010 from http://www.aare.edu.au/04pap/owe04331.pdf.
- Parboosingh, J.T. (2002). Physician communities of practice: where learning and practice are inseparable. *Journal of Continuing Education in the Health Professions*, 22 (4), 230-236.
- Rhodes, C., & Houghton-Hill, S. (2000). The linkage of continuing professional development and the classroom experience of pupils: Barriers perceived by senior managers in some secondary schools. *Journal of Inservice Education*, 26, 413-435.
- Senge, P. (1994). The fifth discipline fieldbook: Strategies and tools for building a learning organisation. New York, NY: Doubleday.
- Spillane, J. (2002). Local theories of teacher change: The pedagogy of district policies and programs. *Teachers College Record*. 104 (3). April, 372-420.
- Timberlake, T. (2008). *Rationale, restrictions and responses; Online academic development to promote a community of practice.* ASCILITE conference. Retrieved on February 25, 2010 from http://www.ascilite.org.au/conferences/melbourne08/procs/timberlake.pdf.
- Wade, A. (2007). Faculty learning communities and teaching portfolios as a mentoring model. *Academic Leadership*, 2(4). February. Retrieved on February 25, 2010 from http://www.academicleadership.org/emprical research/Faculty Learning Communities and Teaching Portfolios as a Mentoring Model.shtml.
- Wenger, E. (1998). Communities of practice: Learning as a social system. *Systems Thinker*. June. Retrieved on February 21, 2009 from http://www.co-i-l.com/coil/knowledge-garden/cop/lss.shtml
- Wenger, E. (2006). *Communities of practice*. Retrieved on February 25 2010 from URL: http://www.ewenger.com/theory/
- Wenger, E., McDermott, R. & Snyder, W. (2002). *Cultivating communities of practice: A guide to managing knowledge*. Retrieved on May 16, 2010 from http://www.providersedge.com/docs/book reviews/Cultivating Communities of Practice.pdf.
- Yin, R. K. (2003). Case study research: Design and methods. (Vol. 5: 3rd ed.). London, UK: Sage Publications.