

A MODEL OF PROFESSIONAL DEVELOPMENT DELIVERY FOR VET TEACHERS BY VET TEACHERS: AN EVALUATION

*Jo Balatti James Cook University
Martha Goldman Tropical North Queensland Institute of TAFE
Phil Harrison Tropical North Queensland Institute of TAFE
Bob Elliott Southern Queensland Institute of TAFE
Meredith Jackson Wide Bay Institute of TAFE
Gillian Smith Southern Queensland Institute of TAFE*

Professional development (PD) can be costly with the outcomes often difficult to measure and sometimes, even intangible. Training and education organisations are seeking new ways of responding to the challenge of developing the expertise of their teachers to teach effectively in times characterised by changing student profiles and changing government and community expectations and demands. This paper reports on an 18 month long action research project involving three Queensland TAFE institutes that trialled a grassroots PD model. Three features characterised the model; the PD was planned, prepared and delivered by teachers for teachers. The project included a formal evaluation of the trials. This paper explains the rationale for this model to PD delivery and reports on the results of its implementation. It discusses how and why the model evolved in different ways in the three sites and it analyses the strengths and weaknesses of such an approach to delivering professional development in TAFE institutes. The paper concludes with some insights that the trial offered on how PD fits or can fit in the organisational life of 21st century TAFE institutes.

Introduction

Planned professional development (PD) for teachers in VET organisations draws on a range of delivery models and content (Kennedy, 2005) but rarely is the choice of model and content made by the teachers; and even more rarely, is the PD delivered by the teachers themselves. TROPIC (*Teachers Reflecting on Practice in Contexts*), the name of the PD model that is the subject of this paper, is an exception to this approach. TROPIC is a grassroots model of PD which VET teachers both design and deliver. It is embedded in teachers' everyday work and is designed to enhance the quality of interaction and learning in the communities of practice (Wenger, 1998) to which teachers belong. TROPIC is organic in that it attempts to accommodate both teachers' needs and organisational demands by adjusting to both. How well the PD model managed to accommodate the often conflicting demands while still retaining its fundamental philosophy is the focus of this paper.

Trials of the TROPIC model were conducted over approximately an 18 month period in three regional Queensland TAFE institutes. Together, they provided a range of organisational conditions in which the model was "tested". While the outcomes for most participants were very positive, the outcomes are not the focus here. The biggest issue that all three trials faced was the less than expected take up of TROPIC. This issue is explored here and in so doing, the following question is addressed: What does the TROPIC experience tell us about the "fit" between this grassroots model of PD and its host organisations?

Background to TROPIC

The origins of the TROPIC model lie in a PD program for school teachers designed to improve their behaviour management by using a set of micro-skills in their interactions with students (Davidson & Goldman, 2004). In addition to workshops delivered by an external expert, the program included classroom profiling whereby a suitably trained teacher would observe a peer teaching a class and record observations on a pre-prepared checklist. These observations would be shared with the teacher.

Between 2003 and 2008 when the trial referred to in this paper began, Martha Goldman, a TAFE teacher, had co-trained colleagues at several TAFE institutes in the micro-skills and in classroom profiling. By the time the trial had commenced, the content, format and mode of delivery had evolved to better suit the TAFE context. The content had broadened to include a broader set of communication skills and some teaching strategies. The “classroom profiler” had become a “mentor” and the checklist had been adapted. TAFE teachers were now facilitating the PD. During this period, there had been no systematic attempt to embed TROPIC in any of the institutes.

In June 2008, teachers who had trained in TROPIC embarked on a trial of embedding the PD in their respective TAFE institutes. Some external funding was made available to the institutes for the trial. The trials were part of an action research project that involved implementing, monitoring, modifying and evaluating TROPIC. The purpose of the trials was twofold. The first was to increase teachers’ capacity to teach more effectively. The second was to understand the dynamic between the innovative PD model and the host organisation in which it was nested. This paper explores learnings associated with the second purpose.

While the actual content of the PD in this trial had to do with communication skills, the TROPIC model can be used for other content. The purpose of TROPIC was recorded on the TROPIC wiki as follows:

TROPIC is a professional development program by teachers for teachers. Its purpose is to support teachers to implement effective strategies for positive teacher-learner interactions and to continuously improve teaching practice through sharing and reflection.

Hence from now on, TROPIC refers to the *model* of PD delivery and not to the content that is delivered using that model.

Description of the TROPIC model

The TROPIC model implemented in the three sites comprised seven elements:

- *A one day teacher workshop*: to be delivered using a constructivist approach by the TROPIC trainers to teachers in their site;
- *A two day mentor workshop*: for volunteers who had completed the teacher workshop and who wished to mentor peers through observations and professional conversations. Ideally mentors were to be practising teachers. If mentors were currently managers, they were not to mentor their supervisees.
- *Mentoring*: after participating in the one day training, teachers could take up the opportunity to discuss their teaching with mentors who would observe their teaching using a set of guidelines.

- *An inhouse team of trainers in TROPIC*: to deliver the workshops.
- *A TROPIC leadership team*: to champion, drive and implement TROPIC. Tasks included PD delivery of; mentor matches; and communication with management.
- *Cross institute collaboration and communication*: to maintain consistency of quality across the institutes and to share problems and solutions.
- *A TROPIC Co-ordinator*: to monitor progress and quality across the sites where TROPIC was implemented.

Because it was anticipated that modifications to one or more of the elements above might take place, four principles were agreed upon to ensure that the philosophy of TROPIC would not be compromised. These four principles were i. that participation at any level be voluntary; ii. that the mentoring and feedback be confidential; iii. that all aspects of the PD be non-judgemental; and iv. that the PD be planned and delivered for teachers by teachers.

Literature review

Locating TROPIC in the PD literature

A range of PD models exists and, more often than not, a PD program combines characteristics from various models. TROPIC was no exception. Kennedy (2005) used 'purpose' as the means by which to categorise PD models and developed a typology or spectrum of nine models. She listed the models in increasing order of capacity to be transformative in purpose. She defined transformative capacity as being the model's potential to increase "capacity for professional autonomy" (p. 246). A transformative purpose requires transformational learning which needs learners, "to become aware and critical of their own and others' assumptions" (Mezirow, 1997, p. 10). Mezirow claims that in the 21st century where constant change would be the norm and where work would become more abstract and technology more sophisticated, workers, in this case teachers, require learning that empowers them as "autonomous agent[s] in a collaborative context rather than to uncritically act on the received ideas and judgements of others." (1997, p. 8).

The VET teachers who are making a difference appear to be engaged in transformative learning and action. In her recent study of trends in innovative teaching practices, Figgis (2008) noted the following to be common practices: detailed observations of everyday practice; exploration of unstated assumptions of self and others; and open dialogue about one's "observations, assumptions, conjectures and ideals" (p. 9). She also noted that most of the innovative practice "emerged from work groups rather than from individual practitioners" (2008, p. 9).

Kennedy (2005) explains that the models that have the least capacity to generate transformative action have the transmission of knowledge as their primary purpose. The two models that do have transformative action as their purpose are the action research model and the transformative model. Some models such as the coaching-model and the community of practice model can either have knowledge transmission as their purpose or they can provide opportunities for transformation. The TROPIC model combined aspects from a range of models to be transformative in purpose.

Locating PD in organisational capability

Staff professional development activity in an organisation contributes to organisational capability, a concept that Clayton, Fisher, Harris, Bateman and Brown (2008) relate to "an organisation's capacity for undertaking, through its employees, a

particular productive activity” (p. 14). Researching the relationships among organisational culture, structure and capability in the VET sector where “change has been recognised as the status quo” (p. 13), they conclude that

The close alignment of individual development and organisational vision, strategy and business goals lies at the very heart of organisational capability.

Building capability depends on each provider’s ability to integrate, combine and reconfigure existing knowledge, skills and resources to arrive at the higher-order capabilities that will accommodate rapidly changing contexts. (2008, p.40)

Implicit in this conclusion is the necessity for management to attend to the learning needs of their organisations. Clayton et al (2008) describe the impediments to alignment as “disconnects between strategy, structure, culture and people management” (p. 40). Included amongst the disconnects and present in all seven TAFE institutes that were the subjects of the study are “cultural disjunctions” (2008, p. 27) among subcultures in the organisation or between some subcultures and what is perceived as the dominant culture. A common cultural disjunction was evident in the perceptions that teaching team members had about what they valued and what management valued:

Work teams typically saw their team cultures as being student- and community-focused....However, they frequently felt at odds with senior management, who were perceived to be dollar-driven and more concerned with budgets, marketing, processes, targets, audits, compliance, strategic alliances and external environments than with teaching and learning. (2008, p. 27)

Clayton et al (2008) also point out that building organisational capability is different from one institute to another. Capability which includes the capacity for learning, especially the capacity for transformative learning is influenced by internal environmental factors such as the organisation’s history, its resources and what Mezirow (1997, p. 11) calls its “socio-political conditions”. It is also influenced by external environmental factors such as geography and clientele.

In a synthesis of the work-based learning literature, Chappell and Hawke (2008) conclude that the learning environment in VET organisations is influenced by four factors: the ways jobs are structured, the work process environment, the social interaction environment and the managerial environment. Schein (1996) identifies two specific conditions that impact an organisation’s learning environment. The first is the presence of a “parallel learning system” and the second is the presence of some organisational “slack”

A parallel learning system is a group of employees undergoing similar learnings who form a support group to enrich the learning process. Schein (1993) states that individual learning, especially habit and skill learning, is best supported in a group situation where there is the psychological safety to experiment and make mistakes. This may require temporarily moving employees out of the normal everyday work structure into a learning space where new norms can become established. Schein describes organisations as having an immune system that can attempt to destroy new learning if it is perceived to threaten established norms and values.

Furthermore, for a temporary parallel system to emerge, the organisation needs to have some slack. Learning cannot occur if the organisation is so stressed for time and

other resources that learners are not given the physical and psycho-social space to learn.

Methodology

The action research model applied was similar to one that had been used successfully in another action research project involving multiple TAFE institutes (for a detailed description see Balatti, Gargano, Goldman, Wood & Woodlock, 2004). Theoretically, the model drew on the work of Kemmis and McTaggart (1988). Structurally, the model comprised three institute based action research teams with representatives from those teams, called the Team Leaders, comprising the membership of a fourth team, the core action research team. The external facilitator/evaluator was also a member of the core action research team. The purpose of the core action research team was to develop a common understanding of TROPIC amongst its members, to share problems and solutions and to take opportunities to co-deliver onsite training. The purpose of the institute teams was to implement TROPIC in their respective sites in ways that best suited the institutional environment while maintaining the principles of TROPIC.

The action research process began with the TROPIC leaders from the three sites meeting for a two day workshop with the external facilitator/evaluator. The main outcomes of the two days were a co-developed and shared understanding of the TROPIC model; a revision of the existing training manuals; a sharing of learnings to do with organisational change in particular the factors that could possibly impact the implementation of TROPIC; and a detailed draft implementation plan for each site. The plans were finalised on site and endorsed by management. During the course of the trial, core members communicated via monthly teleconferences, written progress reports and posting of material on the shared wiki. Toward the end of the trial, face to face or teleconferenced interviews were conducted with participants in the project, managers and one TAFE director and feedback sheets were distributed to participants. The trial concluded with a one day meeting of the TROPIC leaders at which data were analysed and reflections shared.

Consistent with the action research approach, the evaluation process used in this project was a participatory evaluation process (Patton, 2002). Team leaders collected co-analysed data during the trial. Where possible, team leaders participated in the interviews with the external evaluator and tentative findings were verified by the team leaders. Analysis of data for this paper used a thematic approach. The themes used to report the findings were generated through a process of comparing categories emerging from the data across the three sites.

Findings

The trials proceeded at each site under the leadership of TROPIC leaders who had different backgrounds and different TROPIC experience. They also proceeded under different organisational conditions. Progress occurred at different rates and the results in terms of the number of teachers who engaged with the different levels of TROPIC also varied. Participation in the one day training (or equivalent) was highest where TROPIC was made part of an induction program. Participation in the two day mentor training was not as high as TROPIC leaders expected.

In all three sites, modifications were made to one or more of the TROPIC elements and in some respects, even to its principles. The challenges and changes to TROPIC experienced during the trials are reported here in terms of TROPIC putting down roots; embedding itself in the organisation; and changing shape in search of a best fit.

TROPIC putting down roots

Putting down roots, i.e., getting established, required a team effort. TROPIC teams were formed in two sites with each site having two TROPIC leaders and two other team members. In one team, all four members were able to deliver training. The second team had a different composition and included a Human Resource Officer who assisted in marketing and recruiting participants. In the third site, despite many efforts, a team did not form. When one of the two TROPIC leaders withdrew very early in the trial, a replacement could not be found. Implementing TROPIC became very difficult for the remaining team leader in this site.

Putting down roots proved a further challenge in periods of change or even instability. For example, almost all team leaders had at least one role change during the 18 months which also often meant having different line managers who often knew little about TROPIC. Furthermore, most team leaders and mentors did not have TROPIC activity as part of their job definitions. As one leader explained, “niceties” such as TROPIC drop to the bottom of the list when other tasks are deemed more important.

TROPIC embedding itself in its host organisation

A tension that had to be dealt with in each site was the extent to which TROPIC needed to connect with existing organisational structures and processes while at the same time, not compromise its principles. The belief shared to varying degrees amongst the team leaders was that for TROPIC to maintain its integrity it had to stand apart as much as possible from the dominant organisational culture with its systems and processes. If it did not, it was feared that the four principles (voluntary participation; confidentiality; non-judgemental feedback; and teacher control of content and delivery) could not be maintained. Efforts aimed at changing teaching culture would thus be thwarted.

It became evident very quickly that if TROPIC were to survive, it had to embed itself in the organisation by connecting with a range of existing systems, programs and practices. It could not exist independently of other formal or informal organisational entities. The reasons for this were many and each TROPIC trial responded to the need to embed itself in different ways.

The shortage of time for all participants was one driving force. For example, marketing, promoting, recruiting, recording and producing certificates of participation were time consuming activities and all the institutes already had systems in place that provided these functions. Following up participants who had indicated they wished to be mentored or to mentor was another task that was time consuming and for some teachers, also uncomfortable to undertake. In one institute that had the HR capacity, the TROPIC team delegated that task to HR personnel.

Another issue that the TROPIC team leaders recognised early as negatively influencing the take-up of TROPIC was its apparent lack of legitimacy and value in the eyes of management and prospective participants. To have it recognised as legitimate work, approval was sought and given to include TROPIC as a recognised

PD option that would contribute to fulfilling requirements for teacher facilitation currency. Some team leaders were also successful in having their respective Faculty Directors include their role of mentor and trainer in their annual Leading Vocational Teacher agreements.

From the team leaders' perspective, effective embedding required more management support for TROPIC. They felt that TROPIC had low status in their organisations, a situation that could have been ameliorated if managers had actively promoted the program.

From the perspective of the managers interviewed, they would have appreciated more detailed knowledge of TROPIC including regular status reports. Some managers acknowledged that they knew less about TROPIC than they would have liked. Some were also of the view that TROPIC would have more participants if it were institutionalised e.g., be absorbed by other programs such as induction programs or linked with existing programs such as coaching/mentoring programs.

TROPIC changing shape

In each site, TROPIC changed in format, content or both to better fit into the existing organisational conditions. Significant adaptations in one or more sites were to do with the voluntary participation in the program and the format of the training.

A key principle to the design of TROPIC was voluntary participation at any level, whether it be participating in the one day workshop, the two day mentor training, or choosing to be observed. Even choosing to observe was not compulsory. The corollary was that if staff members did volunteer to participate, providing the prerequisites were met, then they would be accepted. The rationale was the belief that only through voluntary participation would the desired outcomes of change in personal practice and change in teaching culture occur. One team leader claimed, "If we stop being voluntary, we have nothing".

Two of the three trials maintained the principle of voluntary participation but the third did not. The third made TROPIC a component of the induction program and those new teachers who had had no experience teaching were strongly encouraged to then complete a "commitment sheet" in which they indicated when they would like to be observed. In that same institute, managers vetted applicants for the mentor training, a change resulting from cases where TROPIC mentors had not been considered appropriate mentors in their everyday work by their managers or their peers.

Managers interviewed for the evaluation regarded the voluntary aspect of the program as an impediment to better participation rates. One argued that it is the very teachers who need the training that do not volunteer. Another explained that notwithstanding the risk of the program being considered "remedial" in nature, it is very useful for a manager to have a program to which teachers with difficulties can be directed.

As a strategy for introducing cultural change, a team member (not a teacher) likened voluntary participation to "Chinese water torture". In her view, the process is too slow in building up the critical mass required to make a difference. In contrast, advocates of voluntary participation did not view it as the primary cause for low participation rates. They argued that better management support in the form of time release and encouragement would increase participation.

The format of TROPIC also changed in two of the three sites. The one day training workshops changed to three 1.5 hour sessions delivered over a period of weeks. The change was driven by constraints (lack of time for participants to have one day of PD) and creative thinking about how to deliver similar outcomes in shorter blocks of time. This mode of delivery proved successful in attracting participants. One institute had also introduced a blended delivery of TROPIC in response to participants spread over many geographically dispersed campuses.

The biggest challenge

From the TROPIC leaders' perspective, the biggest challenge across all three institutes was the mentoring component. Upon completion of the one day workshops the number of participants who requested or indicated interest in having their teaching observed was well over 50%. In practice, the observations completed were far fewer with most being done by the team leaders.

As far as the TROPIC leaders were concerned, engagement in this aspect of the program was the key to producing a positive cultural change amongst the teaching teams.. Talking about one's teaching with another in a non-judgemental and confidential setting was thought to lead to the deprivatisation of practice, to an increased sense of professional teacher identity and to improved teaching/learning experiences for students. It was hoped that, over time, it would lead to professional conversations about one's teaching to colleagues becoming common practice.

The TROPIC leaders fully anticipated that this would be a challenge and had taken measures to maximise the quality of the mentoring through PD. To minimise any perceived risk, one trial kept the identity of the mentoring pairs outside organisational surveillance. The leaders also paid attention to the matching of the pairs, with any requests made being taken into account. They modelled the expected practice and attempted different ways of reducing the anticipated anxiety including having prospective mentors and mentees meet during the training. In one site, a team leader belonging to a teaching team in which co-teaching was a common practice extended an email invitation to all the mentors to observe him teaching a class of young students whom he anticipated would be challenging. Such an invitation was not part of normal practice in that institute. Four took up his offer.

Discussion

The uncomfortable "fit" between the TROPIC model and the contexts in which it was located differed in degree and in some ways, also in kind, across the institutions. The issue of fit can be usefully explained with reference to three aspects of organisations: their structures, their cultures, and their capacity to implement innovations of this type. In terms of organisational structure, elements particularly pertinent to implementing TROPIC were role descriptions, timetabling, industrial relations, and accountability systems. In terms of culture, the "culture disjunctions", especially between management groups and teaching groups, caused difficulties in communicating effectively about TROPIC. The perception that the dominant culture was one that seemed to devalue teaching and learning was also relevant to the question of fit. Finally with respect to capacity, critical factors were the available resources (funding and time) to accommodate the trials, the level of stability staff were experiencing; and the amount of "slack" available within the organisation.

The explanatory value of these sets of factors is illustrated here by exploring the mentoring element of the trial:

From a structural perspective: PD of this kind and peer observations were not in any formal role or job descriptions and therefore not recognised as “legitimate business”. Timetabling restrictions inhibited observations from taking place. There were logistical (as well as financial) difficulties in finding substitute teachers for when people were attending training. TROPIC fell outside any line of management and therefore did not get as much institutional support.

From a cultural perspective: The prevalent culture amongst teachers did not include the practice of peers entering other teachers’ classrooms for the purpose of observation. Mentors appeared as reluctant as the prospective mentored. Management systems tend to value quantitative measures to ascertain effectiveness. At least initially, TROPIC was about qualitative changes in practice.

From a capacity perspective: Funding was not available to replace teachers when they participated in the PD workshops. Institutes with geographically dispersed campuses had additional logistical and cost issues. Some TROPIC leaders were overstretched and not able to devote the necessary time to TROPIC.

An uncomfortable fit of itself need not suggest that TROPIC is worth pursuing or that it best be abandoned. The decision also involves the purpose of the professional development. Using Kennedy’s (2005) framework for analysing PD models, TROPIC is clearly located at the transformative end of the spectrum. The model is about acquiring knowledge that goes far beyond skill acquisition. It involves exploring, in community, assumptions about one’s own teaching and about how adults learn. It was also a model that disrupted the status quo within the organisation in terms of how PD is organised and delivered. It may also be argued that for the participants, TROPIC proved to be an empowering experience in the sense that at least momentarily they did not feel dominated by a culture that was not of their making. Evidence of this transformative capacity is clearly heard in a participant’s summary of the significance TROPIC had for him:

The conversations we have in TROPIC are....about things I’m actually interested in. I couldn’t care less about TAFE governance. I couldn’t care less about the bureaucracy. I couldn’t care less about the money ultimately. I couldn’t care less about student hours. What I’m really interested in is teaching and learning. Instead of having meaningless conversations about contact hours, we talk about how you actually teach someone something; what you learn from relating to people. They’re real conversations. In a sense, TROPIC adds to one’s sanity.

Conclusion

TROPIC is a professional development model that has *Teachers Reflecting On Practice In Contexts*. That there were teachers prepared to lead the TROPIC trial generally with little or no relief from their other duties, that three TAFE institutes were prepared to host it, and that it was supported at the state level suggests that there is an openness and commitment to innovative practice in TAFE. It also suggests that there was a shared belief that TROPIC could be doable and that it was worth doing.

The trials in the three TAFE institutes showed that the model was able to adapt in different ways to better accommodate the needs of both the teachers and the organisation. The trials also showed the risks associated with adaptation in terms of compromising the underlying principles of TROPIC.

While the trials revealed much about the model itself they perhaps revealed even more about the organisations in which the model was attempting to establish itself. Although the organisations were similar in many respects by virtue of belonging to the same state system, they provided very different environments in which TROPIC as a “parallel learning system” attempted to grow. Organisational capacity in terms of resources including time differed across the institutes. Proactive support from management also differed as did flexibility of existing organisational practices to accommodate TROPIC. All impacted the take up of TROPIC by participants at every level of engagement.

TROPIC, like any initiative that is counter-cultural, experiences a tension that needs to be managed. The tension comes from needing the support of the organisation which is hosting it while at the same time staying sufficiently outside it so that new practices and values can grow. Early attempts to establish TROPIC as much as possible outside of the organisational requirements and expectations proved unviable. However, to have TROPIC “built in and not bolted on” to the organisation carries the risk that it will be assimilated into the existing dominant culture that many teachers perceive as one of measurement, compliance and accountability and not one of teaching and learning. In so doing, it may run the risk of surrendering its underlying principles and not achieving its desired outcomes.

But does the tension need exist as much as it does? The following two statements of purpose, the first from a TAFE director in a discussion about the value of professional development and the second from a TROPIC leader summing up the benefit of TROPIC suggest not necessarily so:

Statement One: *We don't produce widgets. What we sell is the experience people have with our teachers. That's just critical to our success. Our only competitive advantage is to say that we provide quality delivery.*

Statement Two: *TROPIC is the hat that gives us licence to value the core work we do which is teaching. And teaching is the core business of TAFE Qld.*

Clearly, there is agreement about the organisation's common purpose. Nevertheless, the trials would suggest that structural, cultural and capacity related aspects of the organisation are “running interference”. At the end of the trials, the challenge to how best minimise the “interference” in the respective sites remained.

Acknowledgement: Financial support for TROPIC from Strategy and Research, Product Services, Department of Education and Training is acknowledged.

References

Balatti, J., Gargano, L., Goldman, M., Wood, G. & Woodlock, J. (2004). Improving Indigenous completion rates in mainstream TAFE: An action research approach. NCVET, Adelaide.

Chappell, C. & Hawke, G. (2008). Investigating learning through work: What the literature says— Support document to Investigating learning through work: The development of the Provider Learning Environment Scale. NCVET, Adelaide.

Clayton, B., Fisher, T., Harris, R., Bateman, A. & Brown, M. (2008). A study in difference: Structures and cultures in Australian registered training organisations. NCVET, Adelaide.

Davidson, M & Goldman, M. (2004). Oh behave... Reflecting teachers' behaviour management practices to teachers. Learner and Practitioner: The heart of the matter, the 7th Australian VET Research Association Conference 17-19 March. Retrieved 20th January 2010 from http://www.avetra.org.au/Conference_Archives/2004/documents/PA023DavidsonGoldman.PDF

Figgis, J. (2008). Regenerating the Australian landscape of professional VET practice: Practitioner-driven changes to teaching and learning. NCVET, Adelaide.

Kemmis, S & McTaggart, R (eds) (1988). The action research planner, Deakin University, Victoria.

Kennedy, A. (2005). Models of continuing professional development: a framework for analysis. *Journal of In-service Education*, 31:2, 235-250.

Mezirow, J. (1997). Transformative Learning: Theory to Practice. *New Directions for Adult and Continuing Education*, 74, 5-12.

Patton, M. Q. (2002) *Qualitative research and evaluation methods* (3rd ed.). Sage, Thousand Oaks

Schein, E. (1996). *Organizational Learning: What is New?* MIT Sloan School of Management. Retrieved 20th January 2010 from <http://dspace.mit.edu/bitstream/handle/1721.1/2628/SWP-3912-35650568.pdf?sequence=1>

Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity*. Cambridge University Press, Cambridge.

