

The importance of effective knowledge management and conversion: A reflective paper drawing on lessons learnt from a case example ¹

Alice Chivell

University of Technology Sydney, MBA student

Abstract

This paper highlights the challenges projects can face when there is not sufficient monitoring, planning and action taken regarding knowledge management and conversion. Explicit knowledge is seldom enough in the project management arena and tacit knowledge is also required for optimum performance. Tacit knowledge comes from a combination of experience, values, context and intuition and is not easily or readily shared. This paper uses a case example to highlight project setbacks and barriers experienced when important tacit knowledge is not effectively harnessed, converted and shared amongst the project team. Reflecting on the case example, the lessons learnt and actions taken, provides examples of how projects with knowledge conversion issues can overcome the barriers and improve performance. The paper discusses the complexities of power, insecurity and trust when it comes to harnessing and sharing knowledge and ways to address this. It explores a systematic and deliberate way to effectively manage knowledge, drawing on models and processes such as the SECI Knowledge Conversion Process. The paper concludes by discussing the advantages and disadvantages of knowledge management and conversion in projects, acknowledging that despite challenges a focus on these processes ultimately leads to performance improvement and increased project success.

Keywords: knowledge management; knowledge transfer; explicit knowledge; tacit knowledge; project barriers; performance improvement; project success

Introduction

Knowledge management in a project context is a challenging process that is not always effectively handled and monitored impacting performance and success. There is often a focus on information management, that is, the development and transfer of explicit knowledge (Groff & Jones 2003). However, this focus ignores the importance of knowledge management which is required in successful project contexts. Knowledge management sees the effective creation, harnessing, storing and sharing of tacit and explicit personal and organisational knowledge (Hase 2009). Without both forms of knowledge and differing approaches to their transfer, there can be gaps in a project and critical success factors may not be achieved.

The paper is a reflective piece, exploring and drawing on lessons learnt in regards knowledge development, management and transfer in a project management setting. The case example used to draw out this learning is a project that involved the implementation of a domestic violence service for Indigenous Australian women in

¹ This white paper is developed based on the author's assignment submission to the subject UTS15356 Project Performance Improvement, which is offered by the UTS's Master of Project Management (<http://www.uts.edu.au/future-students/find-a-course/master-project-management>).

Western Sydney. This project had both physical and social needs and requirements and therefore both tangible and intangible outcomes. Reflecting on the project procedures and the broader knowledge management process creates a clear picture where project barriers occurred and what strategies could and were implemented to move forward. Drawing on Nonaka, Toyama and Konno's (2000) SECI model supports the notion that the management and transfer of both explicit and tacit knowledge are required to improve performance and increase project success.

Knowledge Management – The Project

The project discussed above involved the development of a service offer, engagement with key community stakeholders, securing an appropriate location for the service, obtaining and retaining staff and commencing the service. The project required varied roles, including the role of Subject Matter Expert (SME) which was the author of this paper's position. The SME was required to develop the service offer and provide guidance and advice to the overall project team. They were not involved in the actual engagement and implementation of the project as this was the project team's role and the SME was working on numerous projects simultaneously.

The SME was brought onto the project as this type of project was new to the organisation. Projects linked to social welfare and service implementation was a field the organisation wanted to move into however at the time they lacked the specific knowledge in the field and rather had generic project management skills. The SME had an educational background and employment history in the required field. That is, they had a bachelor degree in Social Work, with honours related to Indigenous Australian's experience of domestic violence. They had also worked in the field of domestic violence with culturally and linguistically diverse clients allowing them to have developed an embedded knowledge and understanding of the needs of the clientele. They also recognised that the project team would need to continually engage with the community in implementing this project as the real experts and drivers for success were the local Indigenous Australian community.

The SME had what is often referred to as explicit and tacit knowledge. The explicit knowledge had developed from studies, training, research and document analysis whilst the tacit knowledge had evolved through observation, frontline experience and reflection (Collins 2010). It was important that the SME had both these forms of knowledge coming into the project given the sensitivity of the project. That is, historically many policies and service responses to Indigenous family violence have been largely based on western dominant constructions of domestic violence, not considering Indigenous perspectives and therefore not developing buy-in and proving ineffective (Human Rights and Equal Opportunity Commission 2004; Taylor et al. 2003).

At the commencement of the project, the SME provided the project team with numerous documents and research papers regarding Indigenous Australians and domestic violence services. On occasion, the SME also provided classroom like training for the project team. The SME was also available for questions and consults throughout the project. From an outside perspective, this process and information all looked thorough however what became evident over time was that important

knowledge was not understood by the project team and this resulted in large setbacks, barriers and community unease.

At the half way point the project team, other organisational management staff and the SME came together to try and understand what was causing the issues in the project. On paper, the team appeared to be following all processes, meeting timeliness, however, the actual results were showing otherwise. In coming together the group took part in a reflective process, drawing on Kolb's (1984) Learning Cycle as seen in Figure 1. The team looked at the experience of the project thus far, observed, reflected and discussed progress to date. They then began to understand where the challenges and difficulties were coming from and in turn discussed and implemented plans and actions to overcome the existing issues.

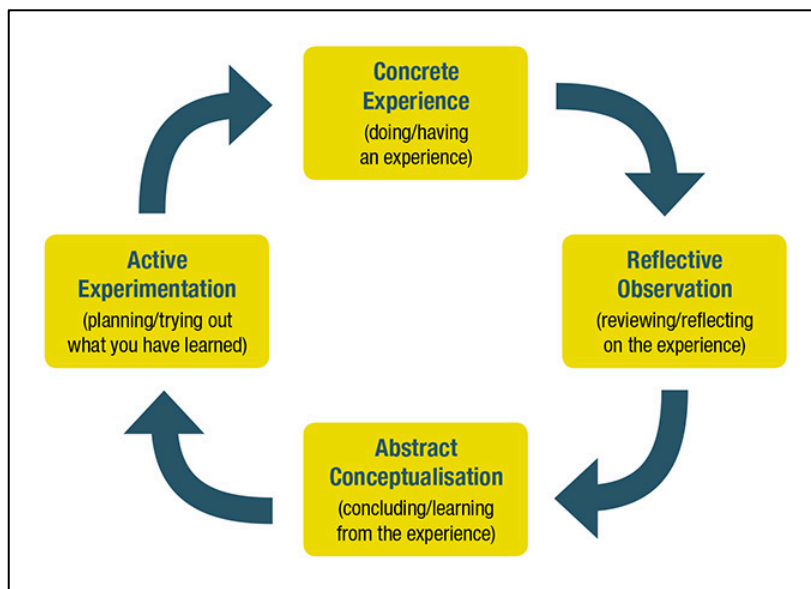


Figure 1. Kolb's (1984) Experiential Learning Cycle

Through the process of reflection, it became evident that the SME had not effectively imparted their knowledge to the rest of the project team and this was causing the main issues. Whilst the SME possessed both explicit and tacit knowledge, there was a lack of understanding of the difference between the two types and in turn the capacity to transfer both types. Not recognising this difference meant that assumptions were made that all the SME's knowledge would be easily and effectively imparted to the relevant project team members to achieve project success.

The explicit knowledge possessed by the SME was readily articulated, accessed and transferred through the document analysis and classroom teaching that had occurred (Nonaka, Toyama & Konno 2000). However, it was the tacit knowledge that the SME had developed through experience that had not been shared. Tacit knowledge is not easily transferred and is a personalised form of knowledge that develops through experience and is influenced by context, values, beliefs and perception (Conway 2014; Nonaka, Toyama & Konno 2000). For projects and organisations as a collective to be successful, it is important that both forms of knowledge, explicit and tacit, are transferred to relevant individuals (Addis 2016). As this was not occurring in the current example the project was continually facing

challenges and barriers in implementation. The project team lacked the required embedded knowledge, and in turn, understanding of the nature of the project (Conway 2014).

Examples of when issues arose in the project included when the project team were required to consult with the local community about the service offer and implementation elements, or when the team needed to find an appropriate location for the service or ensure the right staff were hired to run the service. Assumptions had been made that the project team would understand important elements of engagement in relation to the Indigenous Australian community or victims of domestic violence. The project team approached any Indigenous Australians they could find in the local community, without invitation, to tell them their plans for the project. This did not recognise the importance of building relationships, being invited into the community, seeking advice and consulting and acknowledging that certain community members, such as elders, are who should be approached in the first instance (Briskman 2003). Further, the way the project team approached victims of domestic violence for advice had ramifications due to previous trauma and experience (Atkinson 2002). Not understanding these important elements of engagement meant that community tensions arose, the project had to be halted, renegotiated and required increased resources.

Another challenge encountered due to knowledge deficiencies included securing an appropriate location for the domestic violence service. The project team did not understand the need for location secrecy, discretion and accessibility. This meant potential locations were made public which meant perpetrators of violence could potentially find the location. Finally, whilst the team had been instructed they needed to hire appropriate staff to run the service they did not have the embedded knowledge to realise that these staff needed to be culturally competent. Inappropriate and unqualified staff were hired who were predominantly white Australians. This combined with the developing community tensions meant there was a risk that the service would become a top-down, white led, non-consultative service, which was the very thing we were trying to avoid. Due to the knowledge deficiency, the project team did not have the capacity to understand and manage the engagement, risks and ramifications. From a project success perspective this had large implications, and from a historical Indigenous Australian perspective even larger implications (Lawrence 2002; Lawrie & Mathews 2002).

It took numerous of the mentioned project blocks and setbacks, including deadlines and milestones not being met, financial concerns and community unrest, to realise the extent of the issues. It then took the reflective process to understand that the issues were linked to a collective knowledge deficiency. Initially, it was believed that the wrong project team had been selected or that the team was under performing due to laziness or disengagement. From the SME's perspective, these were easier reasons or excuses to hold on to as it had no reflection on the actions or performance of the SME themselves and someone else could be blamed. However, through further exploration, reflection and discussion it became evident it was the lack of tacit knowledge causing the issues and that changes needed to occur to improve project performance and overall project success (Groff & Jones 2003).

Once knowledge deficiency issue was acknowledged by the group the SME chose to undertake an individual reflection process to better understand their role in the current context. The SME had always prided themselves on clear and effective communication and teaching techniques which had evidently not worked in this instance. What became clear was that whilst the main issue was the SME's lack of understanding of the difference between explicit and tacit knowledge, there was also an element of power complicating the process. That is, whilst the SME held this tacit knowledge they were a valuable and in part indispensable team member and if they imparted this knowledge they could lose some of their value. As Hase, Sankaran and Davies (2006) acknowledge, the notion of power and insecurity can influence knowledge transfer. The SME took some time to work through this concern and drew on more experienced people in the field. Through debriefing and reflection, the SME's ethical and professional value base came through. That is, initial assumptions and approaches were challenged and new ways of thinking about and approaching situations were explored (Cottrell 2011; Fook & Gardner 2007). An understanding that team cohesion, collective identity, trusting environments and effective knowledge transfer would create the best service for the client was acknowledged and seen as the most important thing (Hase, Sankaran & Davies 2006).

Now that the project team had collectively acknowledged the knowledge management issues and the SME could reconcile their power and security concerns then there was an opportunity to use the lessons learnt to move the project forward. It was recognised that trust, respect, reduction of power imbalances and collaboration were at the core of effective knowledge transfer (Hase, Sankaran & Davies 2006). Thus, the first step was for the SME to understand the tacit and overall knowledge they held and explore avenues to effectively transfer this knowledge to the relevant project team members (Pauleen 2009; Polanyi 1983). This required the SME showing vulnerability, open communication, engagement and a willingness to assist and build other's capabilities and skills. This, in turn, would build team engagement and increase individual and collective results (Emerson & Loehr 2008).

A deliberate and systematic approach needed to be acted to help the project overcome the existing barriers and improve performance. An environment where knowledge could be transferred and new knowledge created needed to be developed. Nonaka, Toyama and Konno's (2000) SECI Knowledge Conversion Model as seen in Figure 2 was drawn on for guidance and assistance. Nonaka, Toyama and Konno (2000) believe that knowledge management consists of the SECI Model which is the creation and conversion of tacit and explicit knowledge; the shared context supporting knowledge creation, and knowledge assets or tools supporting the knowledge-creating process.

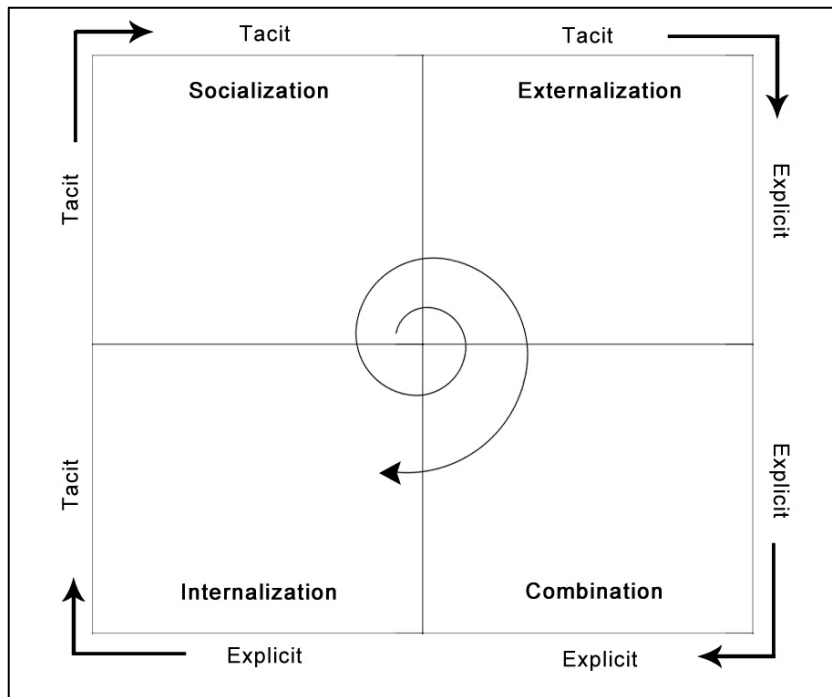


Figure 2. SECI Knowledge Conversion Model (Nonaka, Toyama & Konno 2000)

The SECI model and process breaks down knowledge conversion into four modes, Socialisation, Externalisation, Combination and Internalisation, as seen in Figure 2. As discussed, the project team were already effectively transferring and absorbing explicit knowledge. That is, they were achieving combination which is the simplest form of knowledge or information transfer. It was being achieved by using codified knowledge sources such as documents, guidelines, training packages to create new codified knowledge (Groff & Jones 2003). However other modes of knowledge conversion were not occurring which were required to overcome barriers and enhance performance (Hase 2009). Tacit knowledge needed to be converted to tacit knowledge (socialisation), tacit knowledge needed to be converted to explicit knowledge (externalisation) and explicit knowledge needed to be converted into tacit knowledge (internalisation) (Nonaka, Toyama & Konno 2000). This was a cyclical process that required time, planning and continual monitoring and adjustment.

To commence the holistic knowledge transfer process differing techniques and practices needed to be developed, organised and implemented in line with the SECI process. As Franceschini (2012) stipulates, for the knowledge transfer to be successful the processes must be specific, identifiable, prepared and effectively communicated. There must also be an environment to enable the transfer and the process must be documented. Therefore, time was taken to ensure that each mode of knowledge conversion was comprehensive, modifiable and managed. Table 1 provides a breakdown of the varied techniques and practices used for each mode of knowledge transfer.

Table 1. SECI Knowledge Conversion Process and Techniques (Nonaka, Toyama & Konno 2000)

SECI Knowledge Conversion Process	Techniques and practices used
Socialisation (tacit to tacit)	<p><i>Knowledge is passed through practice, imitation, guidance and observation.</i></p> <ul style="list-style-type: none"> • Project team spent time with Indigenous Australian elders and community members, workers in the field of domestic violence and with victims of domestic violence. These experts shared their knowledge and grievances to build the teams understanding of varied views and experiences. • Some project teams spent time shadowing and working in existing domestic violence services, including ones specifically for Indigenous Australians. This built their frontline experience and in turn their knowledge. • The SME became more actively engaged in the project implementation allowing the project team to observe practices, discuss and imitate in the presence of support. • Team building exercises were undertaken to create mutual trust and unlock tacit knowledge from each other. • SME shared and discussed examples, scenarios and stories from their experience which were relevant to the project.
Externalisation (tacit to explicit)	<p><i>This process required the codification of knowledge allowing it to be spread and transferred.</i></p> <ul style="list-style-type: none"> • Quality control processes were reviewed and updated as a collective, creating checklists for the current and future projects. • The project team was brought together to articulate and share their knowledge about aspects of the project and project setting. They were then jointly used to develop documents and manuals. These were reviewed and updated by all. • Interviews, discussions, brainstorming, concept mapping, consensus decision-making all occurred and were recorded. • Journaling and reflective practices were undertaken. This allowed for the sharing of lessons learnt. • Overall knowledge was better codified into documents and manuals to allow for increased sharing and distribution of knowledge.

Combination (explicit to explicit)	<p><i>Codified sources of knowledge developed, shared and reviewed amongst the project team.</i></p> <ul style="list-style-type: none"> • Manuals, checklists and documents created shared amongst team • Research papers discussing domestic violence and working with Indigenous Australians distributed for review. • SME facilitated classroom teaching. • Planning meetings, strategy development, trend and data analysis occurred.
Internalisation (explicit to tacit)	<p><i>This process involved explicit sources of knowledge being learned and internalised.</i></p> <ul style="list-style-type: none"> • Project team provided access to articles, video's, documents, instructional guidelines and these were discussed, debriefed and examples were brought to life. • On the job, the practice was undertaken to embed knowledge. • Protocol analysis occurred. • Ongoing training in specific topic areas provided. An expert brought in to provide training, classroom became more interactive. • Reflective practice sessions, journaling, and debriefs occurred to support the internalisation of knowledge and in turn modification of existing tacit knowledge.

The most challenging, and many argue the most important, part of the process was externalisation (Hase 2009; Nonaka, Toyama & Konno 2000). This process required continual monitoring and adjustment and it needed to be ensured that other elements of the knowledge transfer process were achieved before it could be. The team needed to engage in coaching and active learning to effectively convert and embed their knowledge (Emerson & Loehr 2008; Megginson & Boydell 1989). It is not just about being taught to perform an activity in a certain way without understanding the rationale and reasoning behind it. It is through the process of demonstration, experiencing, understanding the objectives, reflection, debriefing, discussing issues and exploring new avenues to improve, that learning occurs and autonomous capacities are built (Conway 2014; Lubit 2001). Once this learning is achieved then there is then the added challenge of codifying the knowledge to support future projects and problem-solving.

The knowledge development and conversion process discussed required a continual focus on team trust and cohesions as well as clear role responsibilities and expectations. Without this, the processes were not going to have long term success. As trust built, a further collective reflection occurred allowing individuals and the team to understand and learn from past mistakes, problem solve and make changes in their processes and knowledge to improve performance (Emerson & Loehr 2008; Megginson & Boydell 1989).

The process of reflecting on individual and project knowledge management in the context of this project was both a challenging and rewarding process which came with advantages and disadvantages. The advantages of this focused knowledge management meant that knowledge that was previously tacit and difficult to share was now more accessible and harnessed for the current and future projects. It also meant individuals and the project team could question, challenge and modify existing explicit knowledge (Groff & Jones 2003). The knowledge conversion allowed the project team to better understand the nuances and implications of working with varied cultural and client groups in a project setting. This allowed for improved stakeholder engagement and buy-in and ensured a culturally and socially appropriate and safe service for vulnerable clients was implemented. The process of harnessing, storing and sharing knowledge built team trust, cohesion, participation which improved performance, project outcomes and overall success (Hase 2009; Schon 1987).

The disadvantages of the knowledge conversion that took place to overcome project barriers were that it took time. It took longer to get project tasks done especially due to the observation, shadowing, debrief and reflection that occurred. This meant that at times deadlines and milestones were pushed out or not met. Also, the process required a willingness to engage in new processes and large amounts of documentation and codifying to ensure knowledge could be drawn on moving forward (Martin 2000; Pauleen 2009). Further, the knowledge management and conversion process were a cultural shift for the organisation thus time was taken to on board management staff, taking time away from the project itself.

Conclusion

This paper has discussed the challenges projects can face when there is not sufficient planning and focus on knowledge management. It also discusses the complexities of power, insecurity and trust when it comes to harnessing, converting and sharing knowledge. It then explores avenues and processes that can be undertaken on an individual and collective basis to overcome knowledge deficiencies and transfer issues.

The project experience and the process of reflecting on that experience has brought some key learnings forward which were applied in the discussed project and can be applied in future projects. It is evident that it is important to know at the commencement of a project what knowledge is critical? What knowledge exists and what form is it in? What assumptions are being made? And what knowledge needs to be transferred? If these questions are asked and not effectively answered then the project risks hitting barriers both in team dynamics and project outcomes (Lubit 2001).

This paper has shown that the existence and transfer of tacit and explicit knowledge across project teams are crucial for project success. This process needs to be deliberate and systematic, drawing on approaches such as the SECI Knowledge Conversion Process (Nonaka, Toyama & Konno 2000). This process is further supported by building trust and collaboration, continual reflection, questioning processes and looking at ways to increase capacities on an ongoing basis (Hase, Sankaran & Davies 2006). The process can be challenging and setbacks can be

encountered, however, it is evident that effective knowledge management and conversion can essentially lead to embedded knowledge, greater collaboration and creativity, competitive advantage and overall improved performance (Addis 2016; Lubit 2001; Wiig 1997).

References

- Addis, M. 2016, 'Tacit and explicit knowledge in construction management', *Construction Management and Economics*, vol. 34, no. 7-8, pp. 439-45.
- Atkinson, J. 2002, 'Voices in the wilderness: Restoring justice to traumatised peoples', *The University of New South Wales Law Journal*, vol. 25, no. 1, pp. 233-41.
- Briskman, L. 2003, 'Indigenous Australians: Towards postcolonial social work', in J. Allan, B. Pease & L. Briskman (eds.), *Critical Social Work: An introduction to theories and practices*, Allen and Unwin, Sydney, pp. 92-106.
- Collins, H. 2010, *Tacit and explicit knowledge*, 1st edn, University of Chicago Press, Chicago.
- Conway, B. 2014, 'Tacit knowledge in the workplace', Project Manager- Whitepaper, 6 August, viewed 18 June 2017, <http://projectmanager.com.au/wp-content/uploads/2014/07/TacitKnowledgeintheWorkplace_BrentonConway.pdf>.
- Cottrell, S. 2011, *Critical thinking skills*, 2nd edn, Palgrave, London.
- Emerson, B. & Loehr, A. 2008, *A manager's guide to coaching: Simple and effective ways to get the best out of your employees*, Amazon, New York.
- Fook, J. & Gardner, F. 2007, *Practising critical reflection: A resource handbook*, Open University Press, Midenhead.
- Franceschini, M. 2012, '6 tips for project knowledge transfer', Project Manager, 21 February, viewed 18 June 2017, <<http://projectmanager.com.au/6-tips-project-knowledge-transfer/2/>>.
- Groff, T.R. & Jones, T.P. 2003, *Introduction in knowledge management: KM in business*, Elsevier Science, Burlington.
- Hase, S., Sankaran, S. & Davies, A. 2006, 'Overcoming barriers to knowledge management: Visiting the dark side of organisations', *actKM Online Journal of Knowledge Management*, vol. 3, no. 1, pp. 35-44.
- Hase, S. 2009, 'Heutagogy and e-learning in the workplace: some challenges and opportunities', *Impact: Journal of Applied Research in Workplace E-Learning*, vol. 1, no. 1, pp. 43-52.
- Human Rights and Equal Opportunity Commission 2004, *Social Justice Report 2003*, Chapter 5: Addressing family violence in Indigenous communities, Australian Human Rights Commission, Sydney, viewed 16 June 2017, <http://www.hreoc.gov.au/social_justice/sj_report/sjreport03/chap5.html>.
- Kolb, D.A. 1984, *Experiential learning: Experience as the source of learning and development*, Prentice-Hall, New Jersey.
- Lawrence MP, C. 2002, 'A national disgrace: Violence against women and children in Indigenous communities', *The University of New South Wales Law Journal*, vol. 25, no. 1, pp. 216-19.
- Lawrie, R., & Mathews, W. 2002, 'Holistic community justice: A proposed response to family violence in Aboriginal communities', *The University of New South Wales Law Journal*, vol. 25, no. 1, pp. 228-32.

- Lubit, R. 2001, 'Tacit knowledge and knowledge management: The keys to sustainable competitive advantage', *Organisational Dynamics*, vol. 29, no. 4, pp. 164-78.
- Martin, J. 2000, 'Personal knowledge management: The basis of corporate and institutional knowledge management' in J. Martin & K. Wright (eds), *Managing knowledge: case studies in innovation*, Spotted Cow Press, Canada.
- Megginson, D. & Boydell, T. 1989, *A manager's guide to coaching*, British Association for Commercial and Industrial Education, London.
- Nonaka, I., Toyama, R. & Konno, N. 2000, 'SECI, ba, leadership: a unified model of dynamic knowledge creation', *Long Range Planning*, vol. 33, pp. 5-34.
- Pauleen, D. 2009, 'Personal knowledge management: Putting the 'person' back into the knowledge equation', *Online Information Review*, vol. 33, no. 2, pp. 221-24.
- Polanyi, M. 1983, *Tacit Dimension*, The University of Chicago Press, London.
- Schon, D.A. 1987, *Education the reflective practitioner*, Jossey-Bass, San Francisco.
- Taylor, J., Cheers, B., Weetra, C., & Gentle, I. 2003, 'Supporting community solutions to family violence', *Australian Social Work*, vol. 57, no. 1, pp. 71-83.
- Wiig, K. 1997, 'Knowledge management: An introduction and perspective', *The Journal of Knowledge Management*, vol. 1, no. 1, pp. 6-14.