

# Reciprocal peer coaching as a strategy for the development of leadership and management competency

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*Adequate knowledge, cognitive skill and metacognition are the key ingredients leading to the development of leadership mastery. In this teaching demonstration, the application of reciprocal peer coaching to influence knowledge, cognition and more importantly metacognition is discussed. Metacognition is a higher order cognitive process that involves evaluating the state of one's own knowledge base. Hence, metacognition includes such things as knowing what one knows, knowing when and how one comes to know it, being able to think and plan strategically, the ability to represent knowledge effectively and in ways that permit efficient retrieval, and the ability to monitor and consistently evaluate one's own competence. It is the application of metacognition that leads to expertise as it is used to self-evaluate the knowledge framework of the leader.*

*This application of peer coaching involved post-graduate students in the Masters of Leadership and Management Course at the Graduate School of Business, Curtin University of Technology. Student dyads worked as peer coaches on a 24 week community based project designed to develop their leadership competency. The unit in which this experience took place is called Transformational Business Development. This unit is a capstone unit designed to integrate materials and concepts studied throughout the course. The acquisition of mastery was facilitated through the structured use of learning objectives, learning journals and focussed peer coaching sessions. Regular coaching sessions, in which peers reviewed progress on objectives and discussed issues in learning journals took place over the 24 weeks of the project. Participants also wrote three peer coaching reports outlining their experiences with the process. These reports were analysed qualitatively using N-VIVO. Six dimensions of metacognition were identified in the peer coaching reports. The results endorse peer coaching as a strategy to enhance the development of mastery and as a useful addition to the curriculum framework of leadership and other fieldwork programs.*

The development of leadership competency is an ongoing process that can span a career. Acquiring this competency has been described in great detail (Quinn R, Faerman S, Thompson M, & McGrath, M, 1996). Adequate knowledge, cognitive skill and metacognition are the key ingredients leading to mastery. Weaknesses in any one of these three dimensions interferes with developing leadership competence.

Knowledge can be represented as propositional and non-propositional (Higgs, 1997; Higgs & Titchen, 1995a, 1995b). Propositional (declarative) knowledge is derived from research and scholarship and is supported by the professional body. Non-propositional knowledge is divided into two categories (professional and personal). Professional (craft) knowledge incorporates 'knowing how' and the 'tacit' knowledge of the profession. Personal knowledge is influenced by the personal experiences and reflections of a leader. Personal knowledge, such as individual beliefs, values and convictions, also influence propositional and professional craft knowledge. These three forms of knowledge constitute a manager's unique knowledge base.

The knowledge of the leader is developed using cognitive strategies. These strategies have been described by Boud (1988) and are:

- Association: connecting ideas and feeling that are part of an experience and tying it to existing knowledge
- Integration: processing associations to see if there are patterns or linkages to other ideas.
- Validation and validity testing: testing the internal consistency of emerging concepts and tying these to existing beliefs and knowledge.
- Appropriation: making new knowledge an integral part of how one acts or feels.

Pesut & Herman (1992) define metacognition as the self-communication one engages in, or the internal dialogue that one emits before, during and after performing a task. Hence, metacognition includes such things as knowing what one knows, knowing when and how one comes to know it, being able to think and plan strategically, the ability to represent knowledge effectively and in ways that permit efficient retrieval, and the ability to monitor and consistently evaluate one's own competence. It is the application of metacognition that leads to expertise (Nickerson, Perkins, & Smith, 1985) as it is used to self-evaluate the knowledge framework of the leader.

Strohm-Kitchener (1983) argues that most adults are faced with ill-defined problems that are often rife with conflicting assumptions, evidence and opinion, all of which can lead to different solutions. Individuals, especially leaders, need to monitor the nature of the problems they face and the truth value of alternative solutions. Leaders need to understand the limits of their knowledge, the limits of knowing, the certainty of knowing and the criteria for knowing. This is often difficult to do in isolation. Building knowledge, and checking it against the concepts of others, therefore, is a major part of learning (Biehler & Snowman, 1997; Joyce & Weil, 1996). Peer coaching (PC) is a strategy that can be used to support this learning process.

The benefits that emerge from peer coaching from the perspective of building mastery can be understood more readily by examining cognitive development theory. This theory provides a framework for understanding how critical cognitive conflict supports heightened performance and competency (Piaget, 1977; Sullivan, 1953; Vygotsky, 1978, 1986). These theorists argue that peer interaction is seen to promote cognitive development by creating critical cognitive conflicts. If a leader, through deliberations with another manager, becomes aware of a contradiction in their knowledge base, the experience creates a lapse in equilibrium. This instigates the leader to question his or her beliefs and to try out new ones.

The management of critical cognitive conflict appears to be more amenable between peers because they speak on levels which can be easily understood by one another (Damon, 1984;

Foot & Howe, 1998). The informal communications between peers are less threatening than the advice from a superior because issues of evaluation and power are minimised.

Educators can apply cognitive development theory into their curriculum by creating planned controversy in their teaching and learning experiences. By creating situations where learners experience conflict between their own ideas and the ideas of others, the motivation to resolve this conflict will increase.

### **Research Question and Methods**

Research in the area of learning and professional competence is important. More often than not, the 'structures and processes' of professional development programs are described in the literature. However, it is the research on 'learning outcomes' that is arguably the most important. Without this research, educators will never know whether the structures and processes that are in place are producing the desired outcomes. Hence, the formalised application of a peer coaching process, and the impact on learning and professional development outcomes was the focus of this research.

Eleven of fourteen students enrolled in the Masters of Leadership and Management Course at Curtin University of Technology participated in the peer coaching project. Peer coaching was part of the unit requirement. The unit was entitled Transformational Business Development. Student pairs spent eight months leading a community based project. Students were required to establish key learning objectives that related to their project and their individual learning needs. Students were also required to maintain a learning journal in which they documented key learning events, problems, challenges and questions. The learning objective(s) and journal were the resources to help provide some structure and material for discussion during peer coaching.

Students were also required to meet regularly with their peer for coaching sessions. The purpose of PC was to discuss progress on learning objectives and to discuss key learning questions faced by the learner. The coaching was reciprocal with both parties providing support to one another. All students received a three hour orientation to the concept of coaching by the instructor and how it applied to their study and development as a leader. Students also received a comprehensive guide on peer coaching written by the instructor (Ladyshewsky R, 2001) The duration of the PC relationship occurred over two trimesters (24 weeks). All students were required to submit three PC reports over the 24 weeks.

A total of 25 PC reports out of a possible 42 were received for data analysis. While all students were required to complete 3 peer coaching reports, submission for data analysis as part of this research was voluntary. The PC reports were entered into N-VIVO, a qualitative data management software program, for analysis. Six codes describing knowledge, cognition and metacognition were developed by the investigators. These codes were developed by applying the qualitative research methods of content analysis and constant comparison to the PC reports. These six codes aptly describe the extensive writings of the students who participated in this peer coaching experience.

**Expansion of knowledge** – coachee gains more knowledge through the dialogue of peer coaching. This can be new knowledge or it can be knowledge that value adds to existing knowledge frameworks. It is constructed from the knowledge base of both parties.

**Access to tacit knowledge** – one party gains knowledge or ‘know how’ by being able to access the tacit knowledge or ‘know how’ of the other party.

**Verifies knowledge** – a situation where either party experiences a verification of knowledge they already possess.

**Structured conflict-controversy** – a phenomenon of peer coaching whereby existing knowledge frameworks of both parties are thrown into question. There is evidence of questioning and uncertainty expressed by both parties around a specific knowledge set.

**Alternative perspectives** – one or both parties gains a different perspective on a common theme from the other party’s approach or background.

**Coach gains more knowledge** – the coach gains more knowledge through the dialogue of peer coaching. This can be a new knowledge or it can be knowledge that value adds to existing knowledge frameworks. It is constructed from the knowledge base of both parties.

## **Results**

### ***Expansion of knowledge***

By actively engaging in a dialogue with another learner about the state of one’s own propositional and non-propositional knowledge, the possibility of expanding knowledge became real. The PC dialogue enhanced metacognition by allowing students to build upon what they already knew. Knowledge is one component of mastery and the PC experience provided valuable situated knowledge for the learners. Examples illustrating the expansion of knowledge is highlighted below.

“There were many more insights that came out of the structured reflective listening process that had not, and may not otherwise have come into awareness, creating both value for the learner and confidence in the peer coaching process”

“Peer coaching has not only resulted in an increase in information and knowledge about things, but also an increase in self-awareness and self-appreciation.”

### ***Access to tacit knowledge***

When working towards developing skill as a manager or leader, gaining insights into the practices of others can be a valuable experience (Bandura, 1971, 1997). By experiencing the actions of another peer as they elaborate on how they go about solving a problem, the observer can use this experience to build their own personal networks of knowledge. The acquisition of tacit knowledge from another person is difficult. However, when discussions are guided by learners revolving around specific experiences, access to tacit knowledge can become easier. This occurs because the links to long term memory are easier to access because of the focussed attention on specific experience. This enables the person to retrieve and recall their tacit knowledge more readily as it is tied to an experience. Examples illustrating moments where access to tacit knowledge emerged are highlighted below.

“...Jane asked me how ‘I interviewed’ my current boss to ensure it was the right job....”

“explicit and tacit learnings that John and I are regularly writing about and discussing is an integral part of the reciprocal peer coaching process.”

### **Verifies knowledge**

Through the verification of propositional and non-propositional knowledge, learners can generate operational norms for their action. These operational norms are built using knowledge that is known to be true. The verification process, is an important metacognitive skill that helps to build mastery because it enables students to recognize what they know, and what they know they don't know. It also opens up the possibility of discovering things that students didn't even know they didn't know. An example where learners were able to verify existing knowledge is described below.

“John was pleased with the peer coaching I was able to provide as he felt my techniques helped him further explore his current thinking and he gained real value from the sessions”

### **Structured conflict-controversy**

Cognitive development theory describes the benefits of conflict and controversy during discussion as it encourages learners to explore more deeply the nature of their knowledge frameworks. While the outcome of the conflict-controversy process may vary, it is the process itself that is metacognitively rich as it forces both participants to articulate ‘what they know’, ‘what they don't know’ and to discover ‘what they didn't even know they didn't know’. Examples of structured conflict-controversy in action during PC sessions are illustrated below.

“By coaching each other through this difficult decision, we provided the necessary support to make a decision and stick with it. It was a true leadership learning experience for both of us”

“ A fundamental result of our peer coaching has been to encourage a balance between thinking in parallel and in deliberately provoking constructive conflict between us in an effort to further explore possibilities, and this has worked well for us”

### **Alternative perspectives**

Access to alternative perspectives, through the discussion that is part of PC, provides participants with the opportunity to reframe their knowledge. This enriches the metacognitive experience by requiring participants to retrieve what they know and compare and contrast it with what they are hearing in their conversation. In the end, the knowledge base is strengthened which they can use to build their competency. This access to alternative perspectives is integral from a constructivist learning perspective. Alternative perspectives enable students to construct new meaning from what they are experiencing. Examples of where an alternative perspective became apparent and valued are illustrated below.

“ ...through the process of being coached by Jane, I had a major shift in my view on marketing and where it sits philosophically with my future.”

“ ...there was as much to gain from the process of discussing how we both saw different events as there was from the outcomes of such discussions.”

### **Coach gains more knowledge**

While PC positively benefits both parties, it is often the coachee who receives greater cognitive gains from the process. This has certainly been shown to be evident in research on peer tutoring (Gillies & Ashman, 1995; Griffin & Griffin, 1998; Topping, 1996). These

cognitive gains occurs because the tutor must re-organise and explain the material in a way that facilitates the tutee's understanding. In doing so, this leads to a better understanding of the material by the tutor. The same outcome can be seen in PC with the coach experiencing cognitive gains. Examples of this concept are illustrated below.

“While the peer coaching was for Mary, it also allowed me to learn”

“As a consequence of seeking solutions from the other party, each party has discovered more things for themselves, and about themselves.”

## **Discussion**

As noted earlier, the development of leadership competency is an ongoing process and metacognition is one of the key components of building this mastery. The heightening of knowledge, cognition and metacognition through peer coaching was evident in the extensive writings of the students. This supports the use of peer coaching as a model for professional development.

Higgs (1997) and Higgs & Titchen (1995a, 1995b) noted that professional (craft) knowledge incorporates ‘knowing how’ and the ‘tacit’ knowledge of the profession. This craft knowledge is developed largely from reflecting upon personal experiences. Sharing this ‘tacit’ knowledge between peers was a common theme and helped to inform the development of their leadership concepts.

Many of the cognitive strategies described by Boud (1988) were also identified in the writings of the students and subsumed under the coding categories used to describe the students learning insights. For example, students were able to connect ideas and feelings as part of their leadership experience. Testing of these ideas in practice, and then following up their experiences with their peer coaches helped them to integrate this knowledge and to test its validity in practice. The construction of new knowledge through coaching and metacognitive reflection had a clear influence on their actions in their leadership projects.

Clearly, the dialogue that occurred during coaching helped students to understand more deeply the concepts of leadership and the challenges they were facing in their projects. This undoubtedly helped them deal with some of the ill-defined problems (Pesut & Herman, 1992) they were facing in their leadership.

Peer coaching was a method that assisted students to self-evaluate their own leadership competence in an environment that was safe and devoid of power differences (Damon, 1984; Foot & Howe, 1998). This provided students with the monitoring that Strohm-Kitchener (1983) states is essential for the development of leadership mastery.

## **Conclusion**

Learners appeared to have gained considerably from the opportunity to work through their learning objectives and learning questions with a knowledgeable peer. While students often discuss things with each other, the formalisation of the PC process produced salient outcomes as was evidenced from the qualitative comments generated in the peer coaching reports.

The importance of knowledge, cognition and metacognition for the development of leadership competence is heightened in PC relationships. When learners are organized into strategic

partnerships with learning objectives and reflective journals driving the dialogue, educational gains that inform leadership competency are noteworthy.

In this research, evidence was generated that illustrated that participants were able to expand their knowledge base further through discussion and through access to the tacit knowledge of their coach. Participants were able to ground and verify their own knowledge and skills by evaluating them against the propositional and non-propositional frameworks of their peer coach. The structured conflict and controversy heightened learning. Intense debate, argument and disagreement, within an environment of trust and support, encouraged deeper reflection and learning and further grounded what participants did and did not know about their leadership skill.

Knowledge, cognition and metacognition are heightened in the peer coaching experience. As these are the key ingredients that lead to mastery, educational programs should consider incorporating peer coaching strategies into their curriculum. While this research describes learning outcomes in a business school program, the advantages would appear to be transferable to other disciplines in the health sciences, engineering, and education.

## **References**

- Bandura, A. (1971). *Social Learning Theory*. New York: General Learning Press.
- Bandura, A. (1997). *Self Efficacy: The Exercise of Control*. New York: WH Freeman.
- Biehler, R., & Snowman, J. (1997). *Psychology Applied to Teaching* ( 8th ed.). Boston: Houghton Mifflin Company.
- Boud, D. (1988). How to help students learn from experience. In K. Cox & C. Ewan (Eds.), *The Medical Teacher* (2nd ed., pp. 68-73). London: Churchill Livingstone.
- Damon, W. (1984). Peer education: the untapped potential. *Journal of Applied Developmental Psychology*, 5, 331-343.
- Foot, H., & Howe, C. (1998). The psychoeducational basis of peer assisted learning. In K. Topping & S. Ehly (Eds.), *Peer Assisted Learning* (pp. 27-43). London: Lawrence Erlbaum and Associates.
- Gillies, R., & Ashman, A. (1995). Current developments in peer learning. *Unicorn*, 21(1), 77-88.
- Griffin, M., & Griffin, B. (1998). An investigation of the effects of reciprocal peer tutoring on achievement, self-efficacy, and test anxiety. *Contemporary Educational Psychology*, 23(3), 298-311.
- Higgs, J. (1997). Valuing non-propositional knowledge in clinical reasoning: an educational perspective. *Australian New Zealand Association of Medical Education Bulletin*, 24(1), 7-15.
- Higgs, J., & Titchen, A. (1995a). The nature, generation and verification of knowledge. *Physiotherapy*, 81(9), 521-530.
- Higgs, J., & Titchen, A. (1995b). Propositional, professional and personal knowledge in clinical reasoning. In J. Higgs & M. Jones (Eds.), *Clinical Reasoning in the Health Professions* (pp. 129-146). Oxford, UK: Butterworth-Heinemann Ltd.
- Joyce, B., & Weil, M. (1996). The construction of knowledge, metacognition, and conceptions of intelligence, *Models of Teaching* (5th ed.). Boston: Allan and Bacon.
- Ladyshevsky R. (2001). *Reciprocal Peer Coaching: A strategy for training and development in professional disciplines*. Jamison, ACT, Australia: Higher Education Research and Development Society of Australasia Inc.

- Nickerson, R., Perkins, D., & Smith, E. (1985). *The Teaching of Thinking*. Hillsdale, New Jersey: Lawrence Erlbaum Associates.
- Pesut, D., & Herman, J. (1992). Metacognitive skills in diagnostic reasoning: making the implicit explicit. *Nursing Diagnosis*, 3, 148-154.
- Piaget, J. (1977). *The Moral Judgment of the Child*. London: Penguin.
- Quinn R, Faerman S, Thompson M, McGrath M. (1996). *Becoming a Master Manager: A competency framework* (2nd ed.). New York: John Wiley and Sons Inc.
- Strohm-Kitchener, K. (1983). Cognition, metacognition and epistemic cognition. *Human Development*, 26, 222-232.
- Sullivan, H. (1953). *The Interpersonal Theory of Psychiatry* ( Rev. ed.). New York: Norton.
- Topping, K. (1996). The effectiveness of peer tutoring in further and higher education: a typology and review of the literature. *Higher Education*, 32, 321-345.
- Vygotsky, L. (1978). *Mind in Society*. Cambridge, MA. M.I.T. Press.
- Vygotsky, L. (1986). *Thought and Language*. Cambridge, MA. M.I.T. Press.