

Educators' motivation for continuing professional learning

Susan Beltman

Curtin University of Technology

Professionals' learning and motivation is regarded as social, situated and constructed. For successful implementation of new professional learning, consideration of both person and context is needed. Individual motivational beliefs regarding activities are, for example, inseparable from and mutually shaped by the social context in which these activities are situated. This paper reports a mixed methods study examining the relevance, effectiveness and implementation of a professional learning program, as perceived by 68 Australian educators. Participants reported enhanced personal development and valued the course, but workplace demands and limited structured support were constraints on implementation. Methodological issues associated with research in authentic professional learning settings are discussed. The study confirms the significance of exploring personal and contextual factors to gain a holistic understanding of professional learning initiatives, and to maximise their actual implementation in practice.

Introduction

Conducting research in authentic education settings presents conceptual, methodological and practical challenges. For example, a review of the characteristics of Australian empirical research in pre-service teacher education, suggested that most studies were small scale and isolated, with a relatively weak conceptual base (Nuttall, Murray, Seddon, & Mitchell, 2006). When researching motivation in education, 'capturing the nature of the process of contextual motivation' presents conceptual and methodological challenges (Järvelä & Volet, 2004, p.194). Likewise, in school contexts studying situated motivation can be methodologically difficult and 'messy' (Turner & Meyer, 2000). Webster-Wright (2009), working in the area of teacher professional learning, also has acknowledged the difficulties and limitations of researching learning that is embedded in practice.

This paper attempts to acknowledge such challenges and make explicit the conceptual background and some of the difficulties faced when examining educators' beliefs about the value of professional learning. The reported study explored the motivation of Australian educators to implement new practices in their workplaces. Specifically, it examined the perceived relevance and effectiveness of the cognitive coaching professional learning program (Costa & Garmston, 2006) for Australian educators' practice.

The following contains a brief summary of some key theory and research relating to motivation and to professional learning. Then the complex nature of authentic professional learning is illustrated. Participants in the study were engaged in cognitive coaching and this strategy is outlined and related research findings presented. The specific aim and research questions guiding the study conclude the introduction.

Motivation

Motivation refers to an individual's engagement, participation and persistence in particular activities (Beltman, 2005). If individuals are to persist and implement professional learning in their everyday practice, they would need to be motivated. Consistent with current conceptualisations of learning and motivation, individual motivational beliefs regarding the self and learning activities are seen as inseparable from the social context in which these activities are situated (Järvelä & Volet, 2004; Winne, 2004). Similarly, in the workplace, to understand individual cognitions and actions, the social practices in which they are embedded must also be considered (Billett, 1998). Two specific established theories of motivation were used to inform the present study. The expectancy value theory of motivation foregrounds individual beliefs about the self and the learning activities. Goal theory is concerned with individual motivational beliefs as well as beliefs about the social context.

Expectancy value theory, a long standing cognitive approach to motivation, has generated a large body of research (see, for example, Watt, Richardson, & Tysvaer, 2007; Wigfield & Tonks, 2002). This approach suggests that key factors in motivation to engage and persist in activities are individual beliefs such as confidence in one's ability to successfully implement new learning and a belief that this will have positive benefits to the person and to his/her practice. Such factors would need to be considered when examining motivation for continuing professional learning.

Another primarily cognitive approach to motivation is goal theory. This theoretical approach has also produced a large body of research which includes an examination of the perception of the context in which activities occur (see, for example, Kaplan & Maehr, 1997; and Urdan, 2004). When professionals return to their workplace after off site learning, or wish to change their practices on the basis of individual reflection, it is important to consider how factors in that workplace might affect this. Goal theory provides one way of tapping into individual beliefs about their workplace.

Professional learning

In traditional models of professional development, courses designed to improve professionals' practice may be developed by external authorities. Such courses are often delivered on a 'one off' basis and held outside the setting in which they will be implemented. Such approaches, Ann Webster-Wright (2009) maintains, are incongruent with notions of engaged, self directed professionals and of 'situated, social and constructed' workplace learning (p.19). Webster-Wright argues for using the term continuing professional learning (CPL), rather than the more traditional professional development (PD) which implies a deficiency in the professional.

Traditional models of professional development may have limited success in changing workplace practice. For example, Vermunt and colleagues (Vermunt, Bakkenes, Brekelmans, & Wubbels, 2008) examined factors affecting how experienced teachers

implemented a national innovation in secondary education. Change in beliefs did not necessarily result in a change in practice. More contextual factors, such as teachers' perceptions of their school's educational vision, were also important. Organised learning environments where teachers were able to learn collaboratively with their colleagues, rather than in professional isolation, seemed to be important for change in professional practice. Even where proposed changes in practice appear theoretically sound and are well structured, actual changes in practice may not occur. For example, success of professional development may be limited because of individual teacher beliefs that conflict with the new practices (Kubanyiova, 2008), or because of a more contextual bureaucratic factor such as administrative control devaluing teachers' professionalism (Sandholtz & Scribner, 2006).

Authentic professional learning is seen as "complex, diverse and situated" in nature (Webster-Wright, 2009, p.14). Eraut (2007), viewed sociocultural and individual theories of learning as complementary rather than competing. In other words, both contextual and personal aspects of professional learning need consideration. He mapped three main types of learning activities used by newly qualified professionals in their first three years of employment. Work activities themselves, such as working along side others or solving problems, sometimes led to learning as a by-product. Some learning activities such as reflecting or giving and receiving feedback were located within existing work processes. The third group of learning activities occurred during specific learning processes located at or near the workplace. Such activities could include being coached or mentored, short courses or independent study.

Hodkinson & Hodkinson (2005), also conceptualising learning as both individual and contextual, studied the main ways experienced teachers learnt. The three main ways were: through reflecting on their own individual teaching activities, through generally informal collaborative interactions with others, and through planned learning undertaken with the explicit intention of learning something new. Short courses may lead to effective learning if teachers value the learning and are able to take back and further develop matters raised as part of ongoing practice. Off site courses can be valuable in enabling contact and collaboration with others in related but different working situations. The effectiveness of learning was influenced by teachers' personal dispositions, by departmental cultures and their mix of collaboration and individualism and leadership style, and by school management and national policy and regulation.

In contrast to dominant views of learning as acquisition within an 'audit culture' which can create a 'restrictive' learning environment (Hodkinson & Hodkinson, 2005, p.125), 'expansive' learning environments need to be encouraged. These include the following characteristics (p.124).

- Close collaborative working
- Colleagues mutually supportive in enhancing teacher learning
- An explicit focus on teacher learning, as a dimension of normal working practices
- Supported opportunities for personal development that goes beyond school or government priorities

- Out of school educational opportunities including time to stand back, reflect and think differently
- Opportunities to integrate off the job learning into everyday practice
- Opportunities to participate in more than one working group
- Opportunity to extend professional identity through boundary crossing into other departments, school activities, schools and beyond.
- Support for local variation in ways of working and learning for teachers and work groups
- Teachers use a wide range of learning opportunities

These authors suggested that creating such environments would need schools to change their emphasis on individual teachers working within closed, isolated classrooms. Time would be needed for teachers to take part in activities outside their lessons and school, to reflect on these and to apply new learning in their practice

Cognitive coaching

Cognitive coaching (Costa & Garmston, 2006) uses a peer coaching model as a way of assisting students, teachers and school leaders. Coaches act as mediators, using conversation maps and other tools. Underpinned by both cognitive and humanist theoretical perspectives, participants in the coaching process develop mutual trust so that the person being coached is empowered to become more self directed and to use his/her inner resources more effectively. The person being coached evaluates what is good or poor about his/her own work.

Prospective coaches take part in a series of two four day professional learning foundation seminars about three months apart. Part I focuses on understanding the essential aspects of cognitive coaching and learning about the planning and reflecting conversation maps (Costa & Garmston, 2005). Concepts such as Holonomy and the Five States of Mind are introduced. The second set of seminars focuses on the problem resolving map and the use of other tools such as elements of rapport, response behaviours (e.g. pausing and paraphrasing), mediative questions, pacing and leading. Skills are demonstrated and modelled by a facilitator and practised by participants throughout the seminars. Further training is available to those wishing to become training facilitators themselves.

A literature search relating to cognitive coaching found a general lack of current empirical research. Searching the internet and publications from the Centre for Cognitive Coaching (Centre for Cognitive Coaching, 2006a; 2006b; Costa & Garmston, 2005; 2006), revealed that most literature consists of descriptive and theoretical accounts, unpublished dissertations, and conference papers or reports emanating from Centre for Cognitive Coaching. There were fewer peer reviewed journal articles or book chapters outlining empirical studies. Exceptions comprised smaller case studies (see, for example, Perkins, 1998; Reed, 2006) and two longitudinal studies (Clinard & Ariav, 1998; Edwards & Green, 1999a, 1999b; Edwards, Green, & Lyons, 2002).

In a cross cultural mentoring study, teachers in US and Israeli schools were trained to act as mentors to student teachers from universities (Clinard & Ariav, 1998). One component of their training was a modified version of cognitive coaching which focused on planning and reflecting conversations and data gathering through observing the student teachers. The study used an action research methodology and focused on the impact of the project on the mentors. The mentors reported changes such as more ongoing reflection of their own practice, applying cognitive coaching skills with their own students and collaborating more with other teachers in their school. The allocation of blocks of time for mentoring was seen as necessary for 'meaningful mentoring' (p.105). A follow up session after six months was important as it took time for participants to assimilate what they had learnt and they benefited from opportunities to "think and talk about their experiences" (p.102). Benefits in mentors' private lives were also reported. "All mentors repeatedly acknowledged the crucial role of training in cognitive coaching for their mentor activity" (p.105).

Concern with the attrition rate of teachers undergoing professional development programs prompted a longitudinal study with approximately 200 teachers in an experimental and a control group (Edwards & Green, 1999b). Teachers who persisted in the professional development program tended to be in schools where more teachers were involved in the project. Principal support and early active participant engagement in practising skills were more important for retention than personal characteristics. Edwards, Green, & Lyons (2002) reported a positive relationship between cognitive coaching and teacher efficacy and between cognitive coaching and school culture. Thirty three teachers in the study also provided audio tapes of their coaching conversations over a three year period (Edwards & Green, 1999a). Teachers who had undergone cognitive coaching training were more enthusiastic and collegial. Over time, participants became more comfortable and the conversations less stilted, more thoughtful and introspective. Coaches became less directive, and the teachers being coached more directive. One of the most frequently mentioned difficulties with cognitive coaching was lack of time for practice and implementation. The authors suggested that school districts should put as much time and resources in supporting teachers in practising their coaching skills as they did in providing the initial training.

Present study

The cognitive coaching training program in this study was conducted by an external facilitator away from the workplaces of most of the participants – features not conducive to changes in practice according to literature reviewed above. However, it did include some aspects of more desirable professional learning. For example, participants generally self selected to undertake the training. The course also consisted of two seminar series with time in between for practice and reflection.

The aim of the study was to tap into participants' beliefs about their own individual skills and knowledge, as well as their views about the environments within which they were

expected to practice and implement their new knowledge. The main research questions were:

- How useful and relevant do Australian educators perceive cognitive coaching to be?
- What impact is cognitive coaching perceived to have on professional practice?
- How can the impact or effectiveness of cognitive coaching be maximised?

Method

Procedure

A mixed methods approach was taken, with quantitative and qualitative data gathered over time. Fixed response and open ended survey questions were distributed at three time points: soon after the first four day seminar series (Survey 1), during the final session of the second seminar series (Survey 2), and about three months after the training (Survey 3). Survey 2 was personally distributed and collected and Surveys 1 and 3 were emailed. Interviews were conducted during the second seminar series. Taking part in the research was voluntary and confidentiality was assured. Consent forms were obtained for Survey 1 and after that completion of a survey or interview was assumed to indicate consent.

Participants

Participants were 68 Australian educators from four Australian states who self selected to attend cognitive coaching foundation seminars in Tasmania or Western Australia in 2007 and agreed to participate in the study. Most were in support roles such as consultants or professional learning leaders or in administrative positions such as principals. They interacted on a regular basis in their workplaces with students, teachers, administrative staff and parents. Primary, secondary and district high schools were represented as were the government and non-government sectors. There were more females than males in the sample (females 57.4%, males 32.4%, missing n=7).

Numbers at each course varied as some participants only attended the first seminar series, and others attended the second series after completing the first in the previous year. Attendance on each day of the seminars varied slightly according to illness and urgent situations arising in participants' workplaces. Not all participants completed all surveys and although names were requested, not all identified themselves. In total, 68 participants completed 101 surveys (Survey 1 n=30, Survey 2 n=49, Survey 3 n=22) and nine were interviewed.

Instruments

Participants' perceptions of the usefulness, relevance, and impact of cognitive coaching were gained in three ways. First, brief *survey and open ended questions* were completed at three time points. Second, a researcher developed questionnaire, *Cognitive Coaching Scales*, and an established questionnaire, *Patterns of Adaptive Learning Scales (PALS)* (Midgley, C. et al., 1996) were administered. Third, an *interview* schedule was developed for the study.

Survey and open ended questions

Demographic data and initial perceptions (Survey 1, n=30) were gathered regarding participants' beliefs about their expectancy of success and about the value of the seminars. Participants indicated on a three point scale (1= not, 2= somewhat, 3= certainly) how true the following statements relating to their beliefs and feelings were of them.

- The first set of cognitive coaching seminars have assisted in my personal development
- I feel confident that I will consciously practise the skills covered in my everyday work
- I look forward to attending the second set of cognitive coaching seminars
- I think that the cognitive coaching seminars will make a positive difference to my professional practice

Although only recently completing one seminar series, participants were asked to “give an example of any way participation in cognitive coaching has already had an impact on your professional practice.”

Perceptions were gathered after the second seminar series (Survey 2, n=49) with a similar three point scale for the following statements.

- The second set of cognitive coaching seminars have assisted in my personal development
- I feel confident that I will consciously practise the skills covered in my everyday work
- I look forward to applying the skills I have learnt during cognitive coaching seminars
- I think that the cognitive coaching seminars will make a positive difference to my professional practice

Participants were asked for an example of how their experiences in the second series would likely influence their professional practice, and for their main concern regarding implementing cognitive coaching.

Finally, after participants' return to the workplace, Survey 3 (n=22) was distributed. It contained four statements for rating similar to the previous surveys.

- The cognitive coaching seminars have assisted in my personal development.
- I think that the cognitive coaching seminars have made a positive difference to my professional practice
- I consciously use the cognitive coaching skills in my everyday work
- I look forward to attending further cognitive coaching seminars

Cognitive coaching scales

Six cognitive coaching scales were developed from the open ended comments in the first two surveys and distributed with Survey 3. The aim was to gain the views of all participants regarding the areas that were raised most frequently just after the first and during the second seminar series, and to see if these were the same issues once they had returned to their workplaces. Comments from the open ended questions in surveys 1 and 2 were grouped according to similar themes indicated by the scale names in Table 1. The

most frequent points raised were converted to items. Each scale contained six items. Responses were on a five point Likert scale (1= never, 2= seldom, 3= sometimes, 4= regularly, 5= always). The 36 items were randomly presented and examples of items appear in Table 1. The common stem for each item was: “since doing the cognitive coaching (CC) course I”

Table 1: Item examples of cognitive coaching scales

Scale	Item example
Use of skills	... consciously use the cognitive coaching maps
With whom skills used	... use CC with beginning teachers
Outcomes of CC	... have had others seek me out to provide CC conversations
How skills were used	... use/discuss CC with someone outside my workplace
Future use	... would like to do more CC workshops
Difficulties encountered	... find CC not really applicable in my situation

The Cronbach alpha coefficients for each scale were calculated and appear in Table 2. The 'difficulties encountered' scale had very low reliability (.46) and was omitted from further analyses.

Table 2: Item reliability of cognitive coaching scales

Scale	Item example	Alpha
Use of skills	consciously use the cognitive coaching maps	.69
With whom skills used	use CC with beginning teachers	.73
Outcomes of CC	have had others seek me out to provide CC conversations	.83
How skills were used	use/discuss CC with someone outside my workplace	.78
Future use	would like to do more CC workshops	.67
Difficulties encountered	find CC not really applicable in my situation	.46

Patterns of Adaptive Learning Scales (PALS)

To measure participants' perceptions of their workplace, three scales from PALS (Patterns of Adaptive Learning Survey) (Midgley et al., 1996) were distributed with the final survey: *accomplishment* (6 items), *power* (7 items) and *personal teaching efficacy* (7 items). These contain a five point Likert scale (1= strongly disagree, 2= disagree, 3= somewhat agree, 4= agree, 5= strongly agree). The 20 items were randomly presented and examples of items appear in Table 3. These scales have been shown to have reasonable internal consistency and this was evident in the present study. Table 3 presents Cronbach alpha coefficients reported by the developers of the scales and those of this study.

The PALS scale of *Accomplishment* “refers to teachers' perceptions that the school emphasises innovation, excellence, and hard work for teachers” (Midgley et al., 1996, p.16). These factors are known to be associated with teachers' motivation to put in effort and persist in their work. The scale of *Power* “refers to teachers' perceptions that the school emphasises competition among teachers, and affords more opportunities and

resources to some teachers than to others” (p.17). Such factors are associated with less motivation to put in effort and persist in difficult situations, as well as less enjoyment of the task. The scale of *Personal Teaching Efficacy* “refers to teachers' beliefs that they are contributing significantly to the academic progress of their students, and can effectively teach all students” (p.20). Teachers' efficacy has been shown in previous studies to relate to their use of new learning.

Table 3: Item examples and reliability of PALS scales.

Scale	Item example	Alpha (PALS)	Alpha (this study)
Accomplishment	In my school, teachers have many opportunities to learn new things	.82	.67
Power	In my school, some teachers have more influence than other teachers	.84	.87
Personal teaching efficacy	I am certain I am making a difference in the lives of my students	.69	.80

Interviews

Nine face to face formal interviews were conducted to examine participants' beliefs about the usefulness, relevance and impact of cognitive coaching in more depth. Participants from various locations and working in a variety of professional roles were individually interviewed during the second seminar series. They were asked about their reasons for involvement in cognitive coaching, their beliefs about the usefulness of the seminars in comparison with other professional learning, any changes in practice (in particular any successful outcomes) and future plans.

Data analysis

All data were entered into a data base and the SPSS statistical package was used to obtain descriptive statistics such as frequencies and means for survey questions. Reliabilities of scales and correlations between them were also calculated using SPSS. It was originally intended to compare responses of participants across time points but as the number completing all surveys was small and not all surveys were identified, each time point was considered separately and changes over time were not part of the analysis. Qualitative comments from Surveys 1 and 2 were coded manually by the researcher and cross checked by a research assistant. Detailed notes were taken during the interviews and comments were coded in relation to the areas of questioning then summarised.

Results

Initial perceptions of usefulness, relevance, and impact of cognitive coaching

Participants were positive about their experiences in the first series of cognitive coaching seminars (see Figure 1). They were less confident that they would practise in their everyday work compared with the other items. When asked about the impact cognitive

coaching had already had on professional practice, nearly all ($n=27$) said a variety of skills had been used. Most ($n=22$) had practised their skills with various types of colleagues in educational settings. Eighteen people reported evidence of positive outcomes. As one professional learning leader said:

I am often asked by people to provide advice on a variety of matters. I have used the skills I have learnt in cognitive coaching to take my colleagues through both planning and reflecting conversations. This has been a useful process for each person I have worked with and one of these people now seeks me out for a conversation so that she can get "things clear in her head" (ID9, S1).

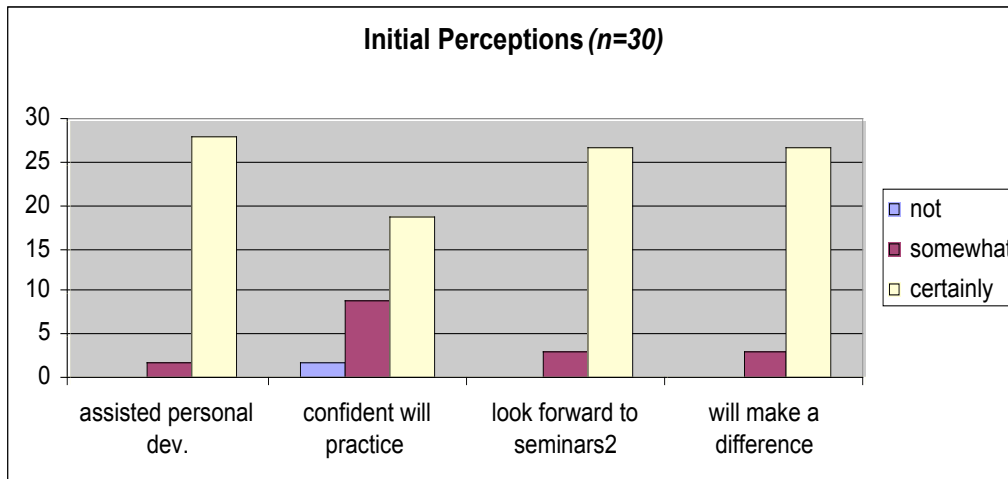


Figure 1: Frequency of initial responses

Perceptions of usefulness, relevance, and impact after training

Survey

At the completion of the second seminar series, Survey 2 was completed by 49 participants. Only 10 of these had also completed Survey 1 so no direct comparisons between groups were made. Responses were very positive for the second survey with no one selecting the 'not at all' option. Similar to Survey 1, responses to the item about using cognitive coaching in practice were less positive than the other items (see Figure 2). Examples of how the second series of seminars would likely affect their professional practice reflected greater understanding of coaching (23%) and the development of particular skills (23%). For example, one person said:

I have a better understanding of the different cognitive styles of some of my colleagues and think this will assist me in working with them. I have a clearer understanding of the 'states of mind' and will be more conscious of this in my own coaching (ID42, S2).

Participants were asked to report their main concern regarding the implementation of cognitive coaching. Responses were provided by 46 participants (4 said they had no concerns). Finding the time to practise and use the skills learnt was the most frequent concern (27%). As one participant said:

It's having time to become more familiar with the material so that I feel comfortable in using all the different tools and maps (ID59, S2).

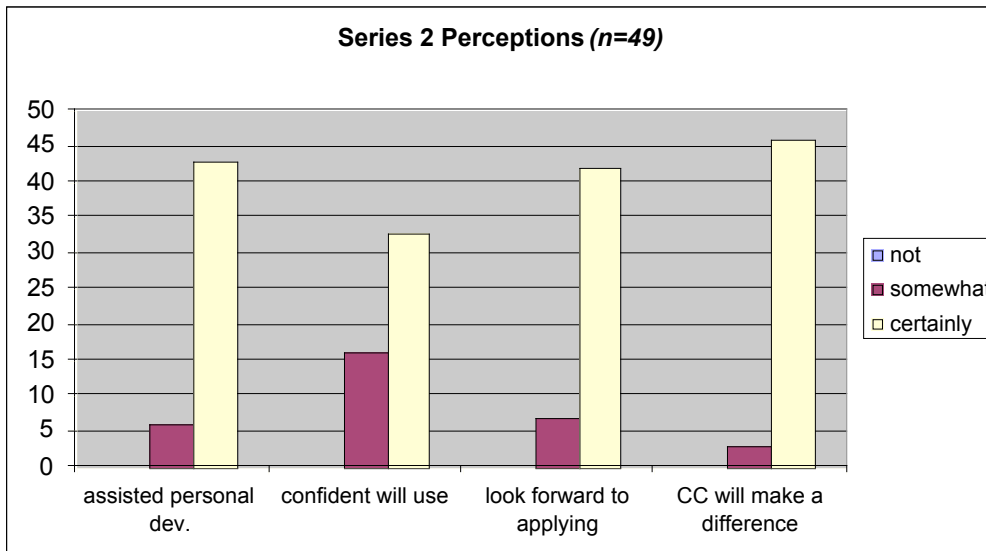


Figure 2: Frequency of responses after second seminar series

Interviews

Nine interviews were conducted during the second Seminar Series and revealed detailed examples of *successful practice*. For example, a secondary inner-city school principal had been using paraphrasing at his staff meetings and had noted a great reduction in tension and increase in rapport which had encouraged him to keep using the skills.

Participants reported strong *positive emotions* such as feeling less stressed as they no longer felt responsible for solving other people's problems, and felt they were doing better in their work. For example, an administrator said: "I smile more. I feel confident. Panic has receded". She was able to empower others to solve their own problems.

Successes seemed to outweigh *difficulties* but not every situation was successful. For example, one school head of teaching and learning reported finding it hard not to return to problem solving mode. She still had to have the frameworks in front of her because she had not mastered this "in my head yet".

Support for practice and finding opportunities for general discussion of cognitive coaching was an *issue* for most. Two non-teacher trained administrators said finding time

for practice was an issue. Two school principals had no colleagues who had done the training and thought this would have been helpful. A regional school development officer wanted to become an accredited trainer but felt that this was a huge time and financial commitment.

When interviewees spoke about how they would use cognitive coaching in the *future*, their answers reflected a tension between positive personal beliefs and practical contextual issues. Most said they intended to continue practising and refining their skills while reflecting on their own performance. One principal intended to target his new teachers on his return. A non-government senior school consultant also wanted others to have access to the training and a professional learning leader intended to continue an action research project with people he coached in his school cluster.

Perceptions of usefulness, relevance, and impact from the workplace

The final survey was distributed approximately three months after the second seminar series and 22 replies were received. Only 9 of these participants had also completed both Surveys 1 and 2. Not all participants completed the cognitive coaching and PALS scales. Some said that specific questions referring to classroom teaching were not relevant to them. As before, responses were very positive, with the item referring to actually using cognitive coaching in practice again reflecting somewhat less confidence than the other items (see Figure 3).

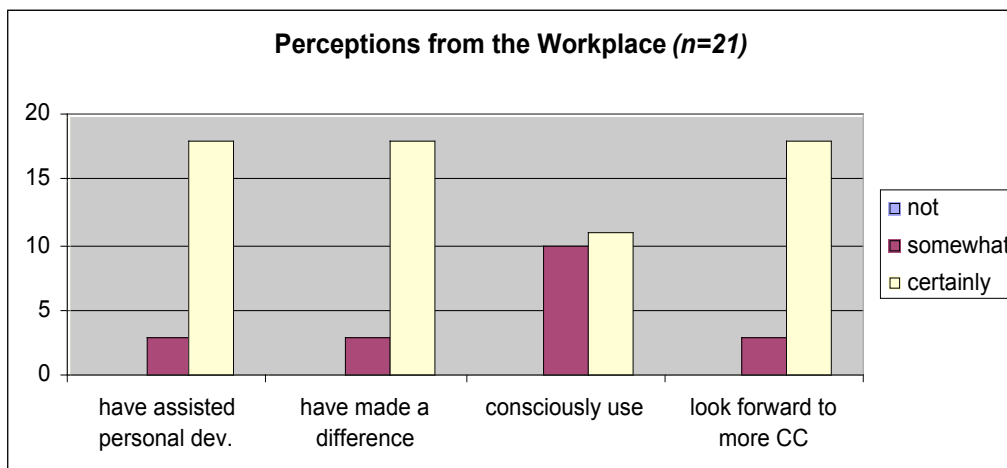


Figure 3: Frequency of responses after return to workplace

Table 4 shows the means and standard deviations for the cognitive coaching scales ($n = 20$) and for the PALS scales ($n = 15$). Means for the cognitive coaching scales were all above 3.00 on the 5 point scale. Participants most strongly indicated that they were using a variety of skills ($M = 3.64$, $SD = .53$), were experiencing positive outcomes ($M = 3.66$, $SD = .63$) and were especially hoping to continue to develop these skills in the future ($M = 4.38$, $SD = .64$).

The PALS scale of Accomplishment indicated that teachers perceived that their schools focused highly on encouraging and supporting innovation and excellence in their teachers ($M= 4.21, SD=.41$). Participants were confident (Efficacy) that they were effective in their workplace ($M= 3.97, SD=.52$). The low mean ($M= 2.12, SD=.75$) of the Power scale indicated that the participants did not perceive their schools to foster competition and inequitable situations.

Table 4: Means and standard deviations for all scales

	Scale	Mean	Standard deviation
Cognitive coaching	Use of skills	3.64	.527
	Use with whom?	3.13	.783
	Outcomes of CC	3.66	.624
	How use skills	3.34	.582
	Future	4.38	.639
PALS	Accomplishment	4.21	.406
	Power	2.12	.748
	Efficacy	3.97	.516

The relationships between all the scales were investigated using Spearman's rank order correlation due to the small sample size for both the cognitive coaching and the PALS scales. Significant results are reported in Table 5. All cognitive coaching scales correlated positively and significantly with each other. The strongest correlations were found between *Use of Skills* and *Use with Whom?* ($r= .88, n= 22, p<.01$), and *Use of Skills* and *Outcomes of CC* ($r= .63, n=22, p<.01$). In other words, practising the skills with a variety of people was more likely to be associated with perceived positive outcomes. Another strong correlation was found between *Outcomes of CC* and *Future* ($r= .71, n=22, p<.01$). That is, those who experienced positive outcomes were more likely to be intending to continue to develop their skills in the future.

Table 5: Significant Spearman's rank order correlations between cognitive coaching scales

	Use of skills	Use with whom?	Outcomes of CC	How skills used	Future	Power
Use of skills						
Use with whom?	.88**					
Outcomes of CC	.63**	.59**				
How skills used	.45*	.51*	.55**			
Future	.57**	.71**	.79**	.56**		
Accomplishment						-.70**

** $p< .01$. * $p< .05$

There were no significant relationships between any of the cognitive coaching and the PALS scales. There was a strong, significant, negative correlation between the PALS scales of Accomplishment and Power ($r= -.70, n=15, p<.01$). That is, the more schools were

perceived to be supportive of innovation and excellence, the less focus they were perceived to have on power and competition.

Discussion

Summary of findings

How useful and relevant do Australian educators perceive cognitive coaching to be?

Participants were very positive in their appraisal of cognitive coaching and its relevance for their practice as indicated in their responses to the surveys and interviews. They indicated that they were using a variety of skills with different people in their work place and were planning to continue to develop these skills in the future. For many this was a new way of thinking and working and for most, the people they worked with in their coaching had also responded positively. Participants already seemed to be from workplaces where innovation and excellence were supported and this experience had added to this.

Their enthusiasm and the positive outcomes noted by others had in some cases resulted in participants being asked to train or teach other staff the skills they had learnt during the seminars. Some had given an overview of what they were now trying to do but actually passing on the skills was seen as a problem. One school development officer explained her dilemma as that she wanted others to know about cognitive coaching but did not want it used in a manipulative way. Her manager wanted her to teach it but she had refused. She said you can't just "half teach it". It was important that coaching experiences were positive because if someone has a bad coaching experience they "won't go back for more". Such responses illustrate the tensions sometimes experienced between individual beliefs or autonomy and managerial imperatives (see, for example, Kubanyiova, 2008; Sandholtz & Scribner, 2006).

What impact is cognitive coaching perceived to have on professional practice?

Participants were not completely confident that they would use cognitive coaching skills in their everyday work. It is possible that this related to issues of time or their role in a school as those who were less confident were either principals or administrative (non-teaching) staff. However, participants did give examples of specific changes they had made in their professional practice that they considered to be positive. They spoke about particular skills they had used and how their new understandings had affected their whole way of working. Not surprisingly, when skills were used with different people in different situations, participants were more likely to see positive outcomes and then more likely to want to continue to develop those skills in the future. A few months after completing the training, participants were still using cognitive coaching in diverse ways in classrooms, at staff meetings, and in large projects designed to enhance student learning across schools.

The people in this cognitive coaching course were generally experienced educators and often held administrative positions in their schools. In this case they would play a role in determining the ethos and working environment of those schools. The three PALS scales (Midgley et al., 1996) indicated that the individual educators were confident in their own

abilities and that they perceived the schools in which they worked to encourage them to be collaborative and to share their expertise. The fact that participants had been supported by their schools to attend the cognitive coaching seminars could be seen as further evidence of supportive environments.

Such workplaces are consistent with several features of expansive learning environments (Hodkinson & Hodkinson, 2005). For example, colleagues were mutually supportive and personal development opportunities were provided. The structure of the cognitive coaching framework was also consistent with such an approach as it provided a time to stand back, reflect and think differently, while also providing the opportunity to develop specific skills in collaboration with professionals from different contexts.

How can the impact or effectiveness of cognitive coaching be maximised?

Finding the time to practise and use the skills learnt was participants' most frequent concern. This finding is consistent with that of Edwards and Green (1999a). Clinard and Ariav (1998) found that allocating blocks of time for mentoring was necessary and a follow up session after six months was important in providing opportunities for assimilating learning. Participants in this study suggested that a formal follow up with the cognitive coaching facilitator would be a beneficial addition. Future cognitive coaching training plans to include more ongoing structured support in the workplace.

Participants made other suggestions to improve future training seminars and to support their own implementation practices. Having multiple staff members trained enabled cognitive coaching to be embedded into school practice, but those with no collegial support found it difficult to sustain their enthusiasm and skills. Encouraging the allocation of time for practice in the workplace, organising a formal follow up with the original facilitator, and ensuring that more than one person from a workplace undergoes the training were seen to be likely to enhance the effectiveness. The desirability of learning collaboratively with colleagues is supported by existing research (Vermunt et al., 2008).

Methodological limitations

It was planned to investigate longitudinal changes in individual participants to see if their perceptions changed over time. This was not possible and given the small number of participants any conclusions must be tentative. Educational research is viewed as limited by various constraints, including the complexity of individuals, and a "myriad of situational elements" (McMillan & Schumacher, 2006, p.18). This was certainly the case for this study where participants' working and personal lives intervened in their capacity to attend the training sessions as planned. However, when personally approached, individuals were willing to give generously of their time and expertise.

The second survey was personally distributed. The higher response rate probably reflects the desirability of face to face contact (the researcher was a participant observer in the training) and the time pressures already mentioned. Email requests for surveys and information were less successful. Such experiences are consistent with documented issues

regarding working in educational settings. For example, Gall and colleagues (Gall, Gall, & Borg, 2007) suggested that "Carrying out your research in a setting where you are known as a friend and colleague makes it much easier than if you are regarded as an outsider with unknown motives" (p.90).

The study's findings would have been strengthened by observations of professional performance in the work place as utilised by Eraut (2007), but this was not possible within the available resources. Replication of the study with other groups and other types of professional learning would add richness to our understanding of how best to provide for and support educators implementing their new learning in their workplaces.

Educational and theoretical significance

The positive outcomes of the professional learning described in this study can be linked with current views of learning and motivation where both the individual person and their workplace context must be considered. Individual beliefs and cognitions are seen to be situated within multiple, dynamic social contexts. Billett (2001) suggested that while interactions with more experienced workers and the opportunities provided in the particular community of practice are important, context does not solely shape learning. Ultimately "individuals determine how they engage with the activities and guidance afforded by the workplace (i.e. whether it is full bodied or superficial engagement)" (p.4). Hodkinson and Hodkinson (2005) also found that the effectiveness of professional learning was influenced by teachers' personal dispositions.

The individuals in this study were confident and positive about their experiences and the changes needed to more successfully put their new learning into place. Eraut (2007) suggested that confidence to proactively seek learning opportunities is an important factor in workplace learning. Within the Expectancy Value framework participants believed they would be successful and they valued the new skills they were developing. From a Goal Theory perspective, they saw their schools and workplaces to be encouraging of collaboration rather than competition and of the sharing of expertise. Such educational settings encouraged and supported innovation. Those participating in the training had volunteered to do so. Rather than mandatory professional development, such an approach may maximise the positive outcomes of an innovation. The participants were able to give detailed examples of how they had influenced other individuals in their workplaces and how others were expressing a desire to learn the same skills. Forcing compliance with top down initiatives may not lead to such changes.

The structure and nature of the actual professional learning also contributed to the likelihood of successful implementation. The training was consistent with some of the learning activities such as reflecting and coaching that are typically used by successful new professional in or near their workplaces (Eraut, 2007). It also reflected features of Hodkinson and Hodkinson's (2005) expansive learning environments. Although off site for most participants, the seminar series allowed many formal and informal opportunities for observation, discussion, feedback and sharing of experiences. Support and feedback in

the workplace itself can also be beneficial (Eraut, 2007) as can follow up sessions (Clinard & Ariav, 1998) and both these ideas were suggested by participants in the study.

Conclusion

The findings from the study indicate that the cognitive coaching training seminars were useful and relevant for Australian educators and impacted positively on their professional practice. Participation in the training was voluntary and those involved came from supportive, collaborative work settings. Consistent with other recent research on motivation (Beltman & Volet, 2007), participants' perceptions of their personal and contextual situation shaped the nature and extent of their engagement and persistence (i.e. their motivation) in their new way of working. While there are issues involved in gathering data from participants within authentic learning settings, findings may contribute to our understanding of both theory and practice. The study confirms the significance of exploring both personal and contextual factors to gain a holistic understanding of professional learning initiatives, and to how maximise their implementation in practice.

References

- Beltman, S. (2005). *Motivation of high-achieving athletes and musicians: A person-context perspective*. Unpublished Doctor of Philosophy, Murdoch University, Perth, Western Australia.
<http://www.lib.murdoch.edu.au/adt/browse/view/adt-MU20050728.140548>
- Beltman, S., & Volet, S. (2007). Exploring the complex and dynamic nature of sustained motivation. *European Psychologist, 12*(4), 314-323.
- Billett, S. (1998). Understanding workplace learning: Cognitive and sociocultural perspectives. In D. Boud (Ed.), *Current research and new agendas in workplace learning* (pp. 47-68). Adelaide: National Centre for Vocational Education Research, Adelaide.
- Billett, S. (2001). *Co-participation at work: Knowing and working lives*. Unpublished manuscript. Centre for Cognitive Coaching. (2006a). Bibliography. [viewed 18 Dec 2007]
<http://www.cognitivecoaching.com/bibliogr.htm>
- Centre for Cognitive Coaching. (2006b). Overview of cognitive coaching. [viewed 18 Dec 2007] <http://www.cognitivecoaching.com/overview.htm>
- Clinard, L. M., & Ariav, T. (1998). What mentoring does for mentors: a cross-cultural perspective. *European Journal of Teacher Education, 21*(1), 91-108.
- Costa, A. L., & Garmston, R. J. (2005). *Cognitive coaching foundation seminar: Learning guide* (6th ed.). Highlands Ranch, CO: Center for Cognitive Coaching.
- Costa, A. L., & Garmston, R. J. (2006). *Cognitive coaching: A foundation for renaissance schools* (2nd ed.). Norwood, MA: Christopher-Gordon Publishers.
- Edwards, J. L., & Green, K. E. (1999a, April). *Growth in coaching skills over a three year period: Progress toward mastery*. Paper presented at the American Association for Research in Education, Montreal. [verified 25 Nov 2009] <http://www.eric.ed.gov:80/ERICWebPortal/contentdelivery/servlet/ERICServlet?accno=ED439114>
- Edwards, J. L., & Green, K. E. (1999b, April). *Persisters versus nonpersisters: Characteristics of teachers who stay in a professional development program*. Paper presented at the American

- Association for Research in Education, Montreal. [verified 25 Nov 2009]
<http://www.eric.ed.gov:80/ERICWebPortal/contentdelivery/servlet/ERICServlet?accno=ED439115>
- Edwards, J. L., Green, K. E., & Lyons, C. A. (2002). Personal empowerment, efficacy, and environmental characteristics. *Journal of Educational Administration*, 40(1), 67-86.
- Eraut, M. (2007). Learning from other people in the workplace. *Oxford Review of Education*, 33(4), 403-422.
- Gall, M. D., Gall, J. P., & Borg, W. R. (2007). *Educational research: An introduction*. Boston: Pearson Education.
- Hodkinson, H., & Hodkinson, P. (2005). Improving schoolteachers' workplace learning. *Research Papers in Education*, 20(2), 109-131.
- Järvelä, S., & Volet, S. (2004). Motivation in real-life, dynamic, and interactive learning environments: Stretching constructs and methodologies. *European Psychologist*, 9(4), 193-197.
- Kaplan, A., & Maehr, M. L. (1997). School cultures: A critical variable in student motivation and learning. In H. J. Wahlberg & G. D. Haertel (Eds.), *Educational psychology: Effective practices and policies*. Berkeley, C.A.: McCutchan.
- Kubanyiova, M. (2008, August). *Motivation and possible selves in language teacher conceptual change*. Paper presented at the 11th International Conference on Motivation, Turku, Finland.
- McMillan, J. H., & Schumacher, S. (2006). *Research in education: Evidence-based inquiry* (6th ed.). Boston: Pearson Education Inc.
- Midgley, C., Maehr, M., Hicks, L., Roeser, R. W., Urdan, T., Anderman, E. M., et al. (1996). *Patterns of Adaptive Learning Survey (PALS)*. Ann Arbor: University of Michigan.
- Nuttall, J., Murray, S., Seddon, T., & Mitchell, J. (2006). Changing research contexts in teacher education in Australia: Charting new directions. *Asia-Pacific Journal of Teacher Education*, 34(3), 321-332.
- Perkins, S. J. (1998). On becoming a peer coach: Practices, identities, and beliefs of inexperience. *Journal of Curriculum and Supervision*, 13(3), 235-254.
- Reed, L. A. (2006). *Case study of the implementation of cognitive coaching by an instructional coach in a Title 1 elementary school*. Unpublished Doctor of Education, Texas A&M University. [verified 25 Nov 2009] <http://txspace.tamu.edu/handle/1969.1/5939?show=full>
- Sandholtz, J. H., & Scribner, S. P. (2006). The paradox of administrative control in fostering teacher professional development. *Teaching and Teacher Education*, 22(8), 1104-1117.
- Turner, J. C., & Meyer, D. K. (2000). Studying and understanding the instructional contexts of classrooms: Using our past to forge our future. *Educational Psychologist*, 35(2), 69-85.
- Urdan, T. C. (2004). Using multiple methods to assess students' perceptions of classroom goal structures. *European Psychologist*, 9(4), 222-231.
- Vermunt, J. D., Bakkenes, I., Brekelmans, M., & Wubbels, T. (2008). *Personal and contextual factors and secondary school teachers' adaptation of innovation*. Paper presented at the 11th International Conference on Motivation (August 2008), Turku, Finland.
- Watt, H. M. G., Richardson, P. W., & Tysvaer, N. M. (2007). Profiles of beginning teachers' professional engagement and career development aspirations. In A. Berry, A.

- Clemans & A. Kostogriz (Eds.), *Dimensions of professional learning: Professionalism, practice and identity* (pp. 155-176). Rotterdam, The Netherlands: Sense Publishers.
- Webster-Wright, A. (2009). Reframing professional development through understanding authentic professional learning. *Review of Educational Research*, 79(2), 702-739.
- Wigfield, A., & Tonks, S. (2002). Adolescents' expectancies for success and achievement task values during the middle and high school years. In F. Pajares & T. Urdan (Eds.), *Academic motivation of adolescents* (pp. 53-82). Greenwich, Connecticut: Information Age Publishing.
- Winne, P. H. (2004). Comments on motivation in real-life, dynamic, and interactive learning environments. *European Psychologist*, 9(4), 257-263.

Dr Susan Beltman, a lecturer in the School of Education at Curtin University of Technology, Perth, Western Australia, teaches in educational psychology. Her research focuses on how others such as role models and mentors shape the motivation of people in different contexts: athletes, musicians, educators, students and at-risk young people.
Email: S.Beltman@curtin.edu.au

Conference presentation

A version of this paper was presented by the author at the British Educational Research Association Annual Conference, University of Manchester, UK, 2-5 September 2009.
<http://www.beraconference.co.uk/2009/>