Influence of Cognitive Coaching[SM] on the Development of Self-efficacy and Competency of Principals

W. Todd Rogers
University of Alberta

Cal P. Hauserman
Athabasca University

Jacqueline Skytt
Alberta Teachers' Association

Abstract

The influence of Cognitive Coaching[SM] on the development of self-efficacy and competency was examined as part of the program evaluation of the Leader2Leader (L2L) Pilot Program for beginning principals in Alberta, Canada. Fifteen qualified principals (coaches) and 23 new principals completed the L2L Pilot Program that took place over 18 months. Self-efficacy and the acquisition of seven principal practice competencies were measured at baseline and the end of the program. The findings present a stronger case for increasing levels of professional competency than they do for increasing self-efficacy. A series of recommendations made and endorsed by the coaches and new principals for improving the process of Cognitive Coaching[SM] are provided.

Keywords: Cognitive Coaching[1], self-efficacy, principal competency

Résumé

L'influence du Cognitive Coaching[SM] sur le développement de l'auto-efficacité et de compétences a été étudiée dans le cadre de l'évaluation du programme pilote Leader2Leader (L2L) pour les nouvelles directions d'école en Alberta, au Canada. Quinze directions d'école chevronnées (les coaches) et 23 nouvelles directions d'école ont suivi le programme pilote L2L sur une période de 18 mois. Le sentiment d'auto-efficacité et sept compétences ont été mesurés au début et à la fin du programme. Les résultats militent plus fortement pour une augmentation des compétences professionnelles que pour un accroissement du sentiment d'efficacité personnelle. Une série de recommandations effectuées et avalisées par les coaches et les nouvelles directions d'école en vue d'améliorer le processus du Cognitive Coaching[SM] sont décrites.

Mots-clés : Cognitive Coaching[2], auto-efficacité, compétences des directions d'école

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1   Cognitive Coaching[SM] is a service marked term, but for literary purposes, the service mark will not appear throughout the remainder of this document.

2   Cognitive Coaching[SM] est une marque de service; pour les besoins de cet article, l'expression ne sera pas accompagnée de la marque de service tout au long du document.

Introduction

Cognitive Coaching involves a non-judgmental and confidential relationship between a coach and the individual being coached that is based on authenticity, honesty, respect, and empathy (Costa & Garmston, 1994, 2002; Ellison, 2003; Ellison & Hayes, 2005). Cognitive Coaching does not intend to change overt behaviour through counselling, the provision of advice, or by telling the teacher or principal being coached what to do. Instead, Cognitive Coaching focuses entirely on developing internal thought processes and self-directedness of the teacher or principal. For example, when working with an individual principal, a coach paraphrases what the principal says, asks questions designed to transform the thinking processes used by the principal when facing new issues or problems, and provides options for the principal to consider. At all times, the coach ensures that the focus of each coaching conversation is on empowering the principal to be confident in working alone and with teachers, students, and parents.

Cognitive Coaching involves three structured conversations. *Planning conversations* help principals being coached to clarify goals for the school, reflect on possible indicators of success, and create a plan for collecting the needed information from students, teachers, parents, and/or other stakeholders. Principals are encouraged to establish a personal learning focus and begin to articulate processes for self-assessment. They are then given a chance to reflect on the planning process and to explore and refine their ideas. *Reflection conversations* provide opportunities for principals to reflect both on their processes and how the implementation of the processes worked. They are encouraged to identify causal factors and create new meaning. They are also given a chance to reflect on the effects of the reflecting conversation and to explore and refine their thoughts. *Problem solving conversations* begin with the existing state of the principal. The coach first acknowledges the existing state and then helps frame the desired state together with the principal. The coach invites the principal to draw on his or her resources to reach the desired state. Coaches create a safe and non-judgmental environment in which they carefully listen, follow the agenda of the principal, paraphrase what the principal says, allow silence and space for reflection, and offer feedback often in the form of a probing question or a possible solution presented in the form of a question. The intent of the three conversations is to develop self-directed principals who are self-managing, self-monitoring, and self-modifying (Ellison, 2003; Ellison & Hayes, 2005).

Self-Efficacy

Self-efficacy refers to "peoples' judgements of their capabilities to organize and execute courses of action required to attain designated types of performances" and "peoples' confidence to attain success in their actions" (Bandura, 1986, p. 391). According to Bandura's theory, people with high self-efficacy—that is, those who believe they can perform well—are more likely to view difficult tasks as things to be mastered than things to be avoided.

Self-efficacy is known to be an important construct in predicting the success of an individual on multiple types of tasks. For example, self-efficacy has a significant impact on goal-setting, level of aspiration, effort, adaptability, and persistence (Bandura, 1986). People with a strong sense of self-efficacy develop deeper interest in and commitment to the activities in which they participate, view new and challenging problems as tasks to be mastered, and recover quickly from setbacks and disappointments. In contrast, people with a weaker sense of self-efficacy belief the solutions to new problems are beyond their capabilities, avoid new and challenging tasks, focus more on personal feelings and negative outcomes, and lose confidence in their own abilities (Schunk, 1990).

In the case of principals, their self-efficacy affects the development of functional leadership strategies and the skillful execution of these strategies (McCormick, 2001). Principals with strong self-efficacy are persistent in pursuing their goals and are more flexible and more willing to adapt strategies to meet contextual conditions. They view change as a slow process. Confronted with problems, high-efficacy principals do not interpret their inability to solve them immediately as a failure. They regulate their personal expectations to correspond to different conditions, typically remaining confident and calm.

In contrast, principals with low self-efficacy perceive an inability to control the environment and tend to be less likely to identify appropriate strategies or modify unsuccessful ones. When confronted with failure, they rigidly persist in their original course of action. When challenged, they are more likely to blame others. Low-efficacy principals are unable to see opportunities, to develop support, or to adapt. They are quicker to call themselves failures and demonstrate anxiety, stress, and frustration.

Principals with high self-efficacy are more likely to use internally based personal power, such as expert, informational, and referent power, when carrying out their roles

(Lyons & Murphy, 1994). Principals with lower self-efficacy are more likely to rely on external and institutional bases of power, such as coercive, positional, and reward power (Lyons & Murphy, 1994).

Self-efficacy is developed by interpreting information primarily from four sources: mastery experience, vicarious experience, social persuasions, and physiological reactions (Pajares, 1997). An individual's interpretations of his or her actions helps create his or her self-efficacy beliefs; success raises self-efficacy and failure lowers it. Of the four experiences, the most influential source is the interpretation of an individual's own mastery experience (Pajares, 1997). The intent of Cognitive Coaching is to develop self-efficacy through planning, reflection, and problem-solving conversations so that principals become self-managing, self-monitoring, and self-modifying in the context in which they work (Costa & Garmston, 2012, p. 28).

Professional Practice Competencies

School principals and their teachers have a critical role in the education of their students because they are the main change agents for their schools. Ideally, principals, working with teachers, provide vision for schools and create a safe and nurturing learning environment (Gaziel, 2007; Supovitz, Sirinides, & May, 2010; Witziers, Bosker, & Kruger, 2003; Youngs & King, 2002). Principals influence student learning indirectly by communicating high but appropriate performance expectations (Nettles & Herrington, 2007) and providing instructional leadership to support instruction that allows teachers to work to the advantage of their students (Gaziel, 2007; Supovitz, Sirinides, & May, 2010; Witziers, Bosker, & Kruger, 2003; Youngs & King, 2002). With respect to student achievement, Kaplan, Owings, and Nunnery (2005) noted that while the "effect [of principals] on student achievement may be indirect, it is crucial" (p. 25). Leithwood, Seashore Louis, Anderson, and Wahlstrom (2004) concluded that school leadership "is second only to teaching among school-related factors in its impact on student learning" (p. 5). Seashore Louis, Leithwood, Wahlstrom, and Anderson (2010) added that there have been no cases of improvement in the level of student achievement without effective school leadership. Further, principals coordinate different elements (e.g., discipline, inner school and extra-curricular activities, parent council, school-wide parent nights, keeping current about and

ensuring proper application of current provincial, state, or national school board policies and regulations) that allow the school to work to the advantage of students.

To assist principals and at the same time hold them accountable, many jurisdictions have developed standards that principals must meet. Such is the case in Alberta with the publication of the *Principal Quality Practice Guideline (PQPG): Promoting Successful School Leadership in Alberta* (Alberta Education, 2009).[3] The *PQPG* was developed over a three-year period. First a Stakeholder Advisory Committee composed of a representative from each of 14 educational organizations and three universities in Alberta developed a draft of the *PQPG*. The draft document was then sent to all school principals, school district superintendents, school council chairpersons, and the stakeholder groups for review. At the same time, the draft was made available on the Alberta Education website for public comment.

Regional focus groups comprised of principals, teachers, school parent council members, school district superintendents, school trustees, and other stakeholders were held to review the revised draft developed from the first reviews. The Stakeholder Advisory Committee then used the focus group feedback to develop the final draft.

The *PQPG* includes a statement on Principal Quality Practice, followed by seven leadership dimension statements, with supporting descriptors or guidelines, reflecting the Alberta context:

1. *Fostering Effective Relationship*
   A school leader must build trust and foster positive working relationships within the school community on the basis of appropriate values and ethical foundations.
2. *Embodying Visionary Leadership*
   A school leader must involve the school community in creating and sustaining shared vision, mission, values, principles, and goals.
3. *Leading a Learning Community*
   A school leader must nurture and sustain a school culture that values and supports learning.

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3   Available from http://open.alberta.ca/dataset/e1bb2149-e78e-4722-98f5-aa1a39170aa9/resource/d69fba5d-5cc0-4dbd-964c-acc0a141b9e7/download/4283110-2009-principal-quality-practice-guideline-english-12feb09.pdf

4. *Providing Instructional Leadership*
   A school leader must ensure that each student has access to quality teaching and the opportunity to engage in quality learning experiences.
5. *Developing and Facilitating Leadership*
   A school leader must promote the development of leadership capacity within the school community for the overall benefit of the school community and education system.
6. *Managing School Operations and Resources*
   A school leader must manage school operations and resources to ensure a safe, caring, and effective learning environment.
7. *Understanding and Responding to the Larger Societal Context*
   A school leader must understand and appropriately respond to the political, social, economic, legal, and cultural contexts affecting the school.

Purpose of Study

The purpose of the present article is to examine the influence of Cognitive Coaching on the development of self-efficacy and professional competency in new principals measured as part of the program evaluation of the effects of Cognitive Coaching included as part of the Leader2Leader (L2L) Pilot Program for beginning principals in the province of Alberta, Canada (Rogers, Hauserman, & Skytt, 2016). The specific research questions addressed were:

a. What is the change in self-efficacy of the coaches and new principals between the beginning and end of the L2L Pilot Program?
b. What is the change in the level of professional competency of the coaches and new principals between the beginning and end of the L2L Pilot Program?
c. Are the changes in self-efficacy and professional competence between the beginning and end of the L2L Pilot Program the same for the coaches and new principals?

While it was expected that both the coaches (Cs) and new principals (NPs) would increase their self-efficacy and competence, it was hypothesized that the NPs would have greater increases than the Cs given the greater experience of the Cs.

Method

L2L Pilot Program

Given the projected retirement of a number of current principals, the Alberta Teachers' Association initiated a 16-month pilot of the L2L Program to support newly appointed principals (Alberta Teachers' Association, 2012). The L2L Pilot Program, which started in mid-December 2012 and ended in mid-May 2014, consisted of:

a. A two-day introductory and orientation workshop held in December 2012;

b. Four one- or two-day professional development workshops held in January 2013, May 2013, September 2013, and January 2014;

c. Cognitive Coaching sessions, four of which were held during the workshops and the rest held between a coach and a new principal during the times between workshops;

d. A two-day Leadership Essentials for Administrators conference held in November 2013 and intended for school administrators in their first or second year; and

e. A Celebration Day held in mid-May 2014, in which the new principals presented the outcomes of either their personal growth plans or plans for leading change in their schools.

Prior to the implementation of the L2L Pilot Program, the coaches (Cs) and new principals (NPs) completed a needs assessment to determine their content knowledge within the seven practice competencies contained in the *PQPG* at the beginning of the pilot program. The assessmet results were used to develop professional workshops that corresponded to the learning needs of the Cs and NPs.

Research Design

It was not possible to use an experimental or quasi-experimental design (Campbell & Stanley, 1963) to allow examination of cause-and-effect relationships due to cost considerations and the short start-up time for the L2L Pilot Program. Consequently, the research design used the Cs as the control group and NPs as the treatment group. To measure the

changes, self-efficacy and principal competency were measured at baseline during the January 2013 workshop and during the Celebration Day in May 2014.

Participants

Fifteen experienced principals from 10 school districts in Alberta volunteered to serve as Cs. Of the 15 principals, 13 had completed the Cognitive Coaching program (40 hours over eight days) and two were currently completing the Cognitive Coaching program.

The NPs applied online. Two of the 29 NPs who applied did not receive approval from their district superintendent. Further, before the beginning of the 2013–14 school year, four NPs left the program—no longer a principal (1), wanted consulting (1), personal or family reasons (2).

Whereas 15 Cs had from 2 to 17 years of experience as a principal prior to the 2012–13 school year, 11 of the 23 NPs indicated that they were in their first year in 2012–13, nine indicated they were in their second year in 2012–13, and three indicated they were in their third year in 2012–13. Of the 15 Cs, five principals were in schools in rural locations, four principals were in small urban schools located in cities with less than 100,000 people, one principal was in a rural/urban school (a rural district next to a city), and five principals were in cities with 100,000 or more people. The corresponding distribution for the NPs was 13 in schools in rural locations, eight in small urban schools located in cities with less than 100,000 people, one in a rural/urban school, and one in a city.

Formation of coach/new principal pairs. During the first introductory workshop held in December 2012, the Cs and NPs intermingled in a series or professional development activities, after which the NPs provided a list of Cs they would like to work with. The list was referred to in order to form coaching pairs, subject to the condition that a coach and new principal could not be from the same school district or adjoining school districts to help ensure geographical representation of the province and to avoid sharing what was said during a conversation with colleagues in the same or adjoining school districts. Eight Cs coached two NPs and seven Cs coached one NP.

Instruments

Principal self-efficacy. The *Principal Sense of Self Efficacy Scale* (*PSES*; Tschannen-Moran & Gareis, 2004)[4] was used to measure the Cs' and NPs' self-efficacy. The PSES asks principals to assess their capabilities concerning (a) instructional leadership (6 items), (b) management (6 items), and (c) moral leadership (6 items). A 9-point Likert-type response scale (1—not at all, to 9—a great deal) is used, with every other point on the scale labelled (3—very little, 5—some degree, 7—quite a bit, and 9—a great deal). Tschannen-Moran and Gareis (2004) reported reliabilities (Cronbach's alpha) of 0.91 for the full scale; 0.86 for *Principals' Sense of Efficacy for Instruction*; 0.87 for *Principals' Sense of Efficacy for Management*; and 0.83 for *Principals' Sense of Self Efficacy for Moral Leadership* subscales. They conducted a factor analysis and reported that the factor loadings for the three factors (subscales) ranged from 0.42 to 0.82 and explained 60% of the variance in principals' leadership tasks and relationship functioning. Further, Tschannen-Moran and Gareis reported that, as predicted, principals' sense of self-efficacy was significantly and negatively related to work alienation and positively correlated to both trust in teachers and trust in students and parents.

Professional practice competence. An important outcome of the pilot L2L Leadership Program was that the new principals would improve themselves on the seven practice competencies for school leaders identified in the *PQCG*. The coaches and new principals indicated how well they could do each of the indicators within each of the seven competencies using a 5-point scale anchored at the end points (1—not well at all, to 5—very well). Unlike the PSES, there was no prior reliability information for the *PQCG*.

Analysis

The responses of the Cs and NPs were entered into the computer with 100% verification by a second person. Given the seriousness of a Type II error compared to the seriousness of a Type I error, univariate rather than multivariate inferential tests were used to analyze the responses. The program directors and members of the Advisory Committee for the

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4   Available from http://wmpeople.wm.edu/asset/index/mxtsch/pse

L2L Pilot Program wanted to know where differences existed between the Cs and NPs between the beginning and end of the program so as to identify what changes in the L2L Program might be needed. Further, the 0.05 level of significance was used for each statistical test.

Correlated *t*-test analyses were used to assess the changes for the Cs and for the NPs between January 2013 and May 2014 for each of the three subscales of the PSES and each of the seven professional competencies of the *PQCG*. Independent *t*-test analyses were used to determine if the changes were the same for the Cs and NPs for each *PSES* subscale and *PQCG* competency. These analyses were completed using the Statistical Package for the Social Sciences (SPSS) Version 23.

Results and Discussion

Principal Self-efficacy

The number of items and total points, mean, standard deviation, internal consistency (Cronbach's alpha), and standard error of measurement for each subscale of the PSES are reported in Table 1 for the pre-test and post-test for the Cs and NPs. Due to the small number of participants, the values of internal consistency (Cronbach's alpha) are for the combined sample of Cs and NPs. Whereas the pre-test means for *Self-efficacy for Instruction* and *Self-efficacy for Management* for the NPs are lower than the pre-test means for the Cs, the pre-test means for Self-efficacy for Moral Leadership are similar for the two groups. The post-test means for *Self-efficacy for Instruction* and *Self-efficacy for Moral Leadership* for the NPs are similar to the post-test means for the Cs; the post-test mean for *Self-efficacy for Management* for the NPs is lower than the post-test mean for Cs. The values of the standard deviations tend to be large, suggesting variability among the Cs and, especially, the NPs. The values of internal consistency for the three subscales are similar to the values reported by Tschannen-Moran and Gareis (2004).

Table 1. Psychometric properties of the subscales of the PSES

	Group	No. of Items/Max	Mean	Stand. Dev.	α^*	*sem*
Self-efficacy for Instruction						
Pre-test	C	6/54	45.33	3.88	0.84	2.27
	NP		39.26	5.21		
Post-test	C		45.87	3.60	0.87	1.93
	NP		42.43	6.24		
Self-efficacy for Management						
Pre-test	C	6/54	42.20	4.20	0.84	2.80
	NP		34.70	6.84		
Post-test	C		43.27	5.51	0.90	2.79
	NP		38.35	9.13		
Self-efficacy for Moral Leadership						
Pre-test	C	6/54	44.00	5.73	0.75	2.76
	NP		42.00	5.43		
Post-test	C		46.73	3.88	0.87	2.26
	NP		45.22	6.56		

* Cronbach's alpha and standard error of measurement (sem) were computed for the combined sample of Cs and NPs due to the small numbers in both groups.

As shown in Table 2, the results of the correlated *t*-test analyses reveal that both the group of Cs and the group of NPs did not change from January 2013 to May 2015. Further, the Cs and NPs did not differ. However, it appears that lack of group differences may be due to the large standard deviations of the differences for the three scales, which indicates that the differences from January 2013 to May 2014 were quite variable for both the Cs and NPs. The differences for *Self-efficacy for Instruction* varied from -6 to +6 for the Cs, and from -15 to +13 for the NPs; for *Self-efficacy for Management* from -8 to +8 for the Cs and from -5 to +26 for the NPs; and for *Self-efficacy for Moral Leadership* from -6 to 19 for the Cs and from -7 to 17 for the NPs.

Table 2. Correlated and independent *t*-tests: *PSES*

Subscale	Group	Difference Mean	SD	$t_{correlated}$	$t_{independent}$
Self-efficacy for Instruction	C	0.53	3.34	0.62	1.65
	NP	3.17	6.49		
Self-efficacy for Management	C	1.07	5.34	0.77	1.18
	NP	3.65	7.29		
Self-efficacy for Moral Leadership	C	2.73	6.47	1.64	0.24
	NP	3.21	5.63		

To further investigate the large standard deviation for the differences and using the pooled standard error of measurement across time, the 68% confidence interval around 0 (no change) was computed to determine the number of Cs and NPs whose self-efficacy decreased significantly, did not change, or increased significantly between January 2013 and May 2014. The numbers are reported in Table 3. For example, the *Self-efficacy for Instructio*n decreased significantly for 3 Cs and 5 NPs, did not change for 8 Cs and 4 NPs, and increased significantly for 4 Cs and 14 NPs. The self-efficacy for 2 Cs and 7 NPs increased for all three scales. For each of the remaining Cs and NPs, the level of self-efficacy varied (across the three scales, no more than 2 Cs or NPs the differences decreased significantly, did not change, or increased significantly, or the difference for one scale decreased significantly, another scale did not change, and for the third scale increased significantly).

Table 3. Number of Cs and NPs whose self-efficacy decreased, stayed the same, or increased

Subscale	Group	Sig. Decrease	No Change	Sig. Increase
Self-efficacy for Instruction	C	3	8	4
	NP	5	4	14
Self-efficacy for Management	C	4	3	8
	NP	6	3	14
Self-efficacy for Moral Leadership	C	3	4	8
	NP	3	8	12

Principal Competencies

Two NPs did not complete the *PQCG* at the end of the program. Therefore, the number of Cs and NPs for the analyses of the *PQCG* were 15 and 21, respectively.

The number of items and total points, mean, standard deviation, and internal consistency (Cronbach's alpha) for each subscale of the *PQCG* are reported in Table 4 for the pre-test and post-test for the Cs and NPs. The values of the internal consistency (Cronbach's alpha) are for the combined sample of both groups. The values of the pre-test mean for the NPs were lower than the pre-test means for the Cs for the first four subscales and more alike for the three remaining subscales. In contrast, the values of the post-test mean for the NPs and Cs were lower than the post-test mean for the Cs. The internal consistencies of the competency scales were greater than 0.70 with the exception of the post-test for Cs for *Developing and Facilitating Leadership* (0.63) and the pre-test for Cs for *Understanding and Responding to the Larger Societal Context* (0.62). While it might be expected that the internal consistency reliability would be higher for the subscales that had the larger number of items than the subscales that had the lower number of items, this was not the case. Further, as mentioned earlier, there were no prior estimates of internal consistency for the *PQCG*.

Table 4. Psychometric properties of the subscales of the PQCG

	Group	No. of Items/Max	Mean	Stand. Dev.	$\alpha^{\star}$	*sem*
Fostering Effective Relationships						
Pre-test	C	9/45	41.47	2.33	0.74	1.51
	NP		39.38	1.91		
Post-test	C		42.60	2.90	0.77	1.29
	NP		41.24	2.19		
Embodying Visionary Leadership						
Pre-test	C	7/35	29.07	2.84	0.74	1.70
	NP		26.90	3.51		
Post-test	C		30.87	2.77	0.82	1.45
	NP		29.19	3.86		
Leading a Learning Community						

	Group	No. of Items/Max	Mean	Stand. Dev.	α*	*sem*
Pre-test	C	7/35	25.27	2.96	0.80	1.43
	NP		23.76	2.83		
Post-test	C		31.20	2.65	0.75	1.50
	NP		29.38	3.07		
Providing Instructional Leadership						
Pre-test	C	8/40	33.53	3.44	0.82	1.85
	NP		28.90	3.58		
Post-test	C		36.00	4.46	0.83	1.72
	NP		31.62	3.72		
Developing and Facilitating Leadership						
Pre-test	C	4/20	17.87	1.55	0.71	1.03
	NP		16.76	1.97		
Post-test	C		18.33	1.40	0.63	0.93
	NP		18.10	1.64		
Managing School Operations and Resources						
Pre-test	C	3/15	13.53	1.46	0.82	0.71
	NP		12.05	1.63		
Post-test	C		14.53	1.24	0.85	0.55
	NP		13.28	1.35		
Understanding and Responding to the Larger Societal Context						
Pre-test	C	4/20	16.60	1.92	0.62	1.20
	NP		15.90	2.00		
Post-test	C		17.27	1.67	0.78	0.88
	NP		17.00	2.05		

* Cronbach's alpha and standard error of measurement (sem) were computed for the combined sample of Cs and NPs due to the small numbers in both groups.

Unlike the case for self-efficiency, the results of the correlated t-test analyses revealed significant gains in competency for both the Cs and the NPs from January 2013 to May 2015. As shown in Table 5, the group of Cs significantly increased their competency for four of the seven competencies: *Embodying Visionary Leadership*, *Leading a Learning Community*, *Providing Instructional Leadership*, and *Managing School Operation and Resources*. The group of NPs also significantly increased their competency

in the same four competencies and for two additional competencies: *Fostering Effective Relationships* and *Developing and Facilitating Leadership*. There was no change for both the Cs and NPs for the seventh competency, *Responding to the Larger Societal Context*. Lastly, there was no difference between the changes for the group of Cs and the changes for the group of NPs for each of the seven competencies.

Table 5. Correlated and independent *t*-test: PQCG

Subscale	Group	Mean	SD	$t_{correlated}$	$t_{independent}$
		Difference			
Fostering Effective Relationships	C	1.13	2.36	1.86	-0.90
	NP	1.86	2.41	3.52*	
Embodying Visionary Leadership	C	1.80	3.08	2.27*	-0.34
	NP	2.28	4.85	2.16*	
Leading a Learning Community	C	5.93	2.15	10.67*	0.28
	NP	5.62	3.88	6.64*	
Providing Instructional Leadership	C	2.47	2.67	3.58*	-0.18
	NP	2.71	4.88	2.55*	
Developing and Facilitating Leadership	C	0.47	1.24	1.45	-1.30
	NP	1.33	2.35	2.60*	
Managing School Operations and Resources	C	1.00	1.25	3.09*	-0.40
	NP	1.24	2.05	2.77*	
Understanding and Responding to the Larger Societal Context	C	0.67	2.92	0.88	-0.47
	NP	1.10	2.57	1.96	

However, as was the case with self-efficacy, there was variability in the numbers of Cs and NPs who decreased their level of competency, who did not change their level of competency, and who increased their level of competency. Using the pooled standard error of measurement and the 68% confidence interval around 0 (no change), the number of Cs and NPs whose competency decreased significantly, did not change, or increased significantly between January 2013 and May 2014 are reported in Table 6. For example, the level of competency for *Fostering Effective Relationships* decreased significantly for 2 Cs and 2 NPs, did not change for 8 Cs and 6 NPs, and increased for 5 Cs and 13 NPs. Interestingly, all 15 Cs and all but one NP significantly increased their level of competency for *Leading a Learning Community*.

Table 6. Number of Cs and NPs whose professional competency decreased, stayed the same, or increased

Subscale	Group	Sig. Decrease	No Change	Sig. Increase
Fostering Effective Relationships	C	2	8	5
	NP	2	6	13
Embodying Visionary Leadership	C	3	3	9
	NP	5	5	11
Leading a Learning Community	C	0	0	15
	NP	1	0	20
Providing Instructional Leadership	C	1	5	9
	NP	4	2	15
Developing and Facilitating Leadership	C	1	7	5
	NP	5	5	11
Managing School Operations and Resources	C	0	7	8
	NP	4	5	12
Understanding and Responding to the Larger Societal Context	C	5	2	8
	NP	3	8	10

This latter finding is likely attributable to the presence of provincial tests at the end of Grades 3, 6, and 9, and the diploma examinations at the end of the most grade courses. Two Cs and 6 NPs significantly increased their level of competence for all seven competency scales. One C and 2 NPs significantly increased for six competencies and did not change for the one competency, which was not the same competency for the 1 C and 2 NPs. One NP significantly decreased for six competencies but significantly increased for a third subscale. One NP significantly decreased for five competencies and did not change for the remaining two competencies. For each of the remaining Cs and NPs, the level of competency varied across the seven competency scales (e.g., significantly decreased in one competency, did not change for three competencies, and significantly increased for two competencies; 3 did not change and 4 significantly increased; 2 significantly decreased, 3 did not change, 2 significantly increased).

The Cs and NPs were administered a questionnaire at the end of January 2014 to get their impressions of Cognitive Coaching (Rogers, Hauserman, & Skytt, 2016). One question asked them to identify the issues they discussed during their conversations. By far, the greatest number of issues were related to developing professional competence.

Using the *PQCG* as a framework, the greatest number of issues raised were related to *Providing Instructional Leadership* (n = 44). Of the instructional leadership indicators, dealing with staff issues was most common (17) followed by the nature of instructional leadership (8), supervising and evaluating teachers (6), and the development of professional growth plans (6). *Managing School Operations and Resources* and *Embodying Visionary Relationships* had the next largest number of issues—17 and 16, respectively. The two most common *Managing School Operations and Resources* issues were related to personnel—new principal in a new school (3) and dealing with a teacher who was on leave of absence (3). The two most common *Embodying Visionary Leadership* issues were developing the school vision and mission (7) and planning and developing professional development (4). Issues and concerns related to *Developing and Facilitating Leadership* and *Fostering Effective Relationships* were mentioned 12 and 10 times, respectively. The most frequent *Developing and Facilitating Leadership* issue was working with the school's parent council, particularly the chair of the council (8). The most frequent *Fostering Effective Relationships* issue was working with agencies like Child and Family Services (6). Five issues related to *Leading a Learning Community* and two issues related to *Understanding and Responding to the Larger Societal Context* were identified, each with a frequency of one.

The finding that the greatest number of issues identified, by far, was related to providing instructional leadership is likely because this competency is more related to student learning and progress than the other six practice competencies. Although principals need to keep current about provincial and school board policies and regulations, their main focus should be to ensure the development and maintenance of effective educational programs and teaching within their schools so as to enhance student learning and achievement.

The increase in the professional competency of the Cs and NPs is due to the success that the Cs and NPs experienced during the duration of the L2L Pilot Program. The Cs experienced success in coaching, and the NPs experienced success in the changes they made in their thinking, actions, self-reflection, and confidence (Costa & Garmston, 1994, 2002).

Conclusion

Taken together, the findings strongly suggest that the L2L Program, with its combination of Cognitive Coaching and workshops designed to meet the needs of NPs, can contribute to the development of professionally competent school principals. However, not all of the NPs benefited from the L2L Pilot Program. Rapport and trust must be established between the C and NP, and the issues to be discussed should be identified by the NP to better ensure success.

As indicated earlier, the intent of Cognitive Coaching is to develop self-efficacy through planning, reflection, and problem-solving conversations so that principals become self-managing, self-monitoring, and self-modifying in the context in which they work (Costa & Garmston, 2012, p. 28). While the self-efficacy either did not change or went up for over half of the Cs and NPs during the duration of the L2L Pilot Program, it went down for a sizeable number of NPs. It may be that there was not a sufficient number of positive experiences from baseline to the end of the L2L Pilot Program for the NPs, and, as a result, their self-efficacy decreased. Further, it is likely that factors both inside and outside the L2L Pilot Program and school influenced the self-efficacy of the Cs and NPs. Unfortunately, it was not possible to personally interview the Cs and NPs to clarify the changes made after the end of the pilot program due to a lack of funds and the involvement of the Cs and NPs in end-of-school activities.

All 15 Cs and 23 NPs indicated that they were confident in the use and application of Cognitive Coaching. Additionally, they would recommend the L2L Leadership Program to an NP but not without consideration of the 21 recommendations they made and endorsed in January 2013. Of the 21 recommendations, the following 10 related to Cognitive Coaching were endorsed by at least three-quarters of the Cs and the NPs:

- Provide new principals with a primer on the Cognitive Coaching process prior to the beginning of the coaching/mentoring process so that new principals are better informed about the process at the beginning of the coaching/mentoring process (e.g., one-day workshop with an introduction followed by modelling in which the workshop leader works with one of the new principals, lunch question and answer session, second modelling but with a different new principal);

- Begin coaching with a series of consecutive weekly meetings of the coach and new principal (e.g., meet once a week for two or three consecutive weeks followed by a one- or two-week break and then once a week for a further two or three consecutive weeks) to create a safe, trusting, honest, and non-judgemental environment;
- Establish guiding expectations or structure for coaches and new principals to follow (e.g., establish guidelines for establishing a schedule for contacts (weekly, biweekly, monthly; face-to-face, telephone, e-mail), need for Cognitive Coaching and consulting, procedures to follow when the coach or new principal cannot make a scheduled contact);
- Increase the number of face-to-face meetings;
- Pair coach and new principals from adjoining school districts or within a region so as to facilitate face-to-face meeting;
- Encourage visits between schools of the coach and new principal, so that the coach and new principal are aware of and have greater understanding of the context in which each works;
- Provide financial support for coach–new principal pair travel so as to facilitate face-to-face meetings and allow school visits;
- Summarize each coach/new principal interaction at the end of each session with questions such as the following:
    i.   How well did the session go?
    i.   What, if anything, needs to be discussed further at our next session?
    i.   Did any new issues come to mind as a result of today's session?
- Hold a debriefing session at the end of the coaching process; and
- Review the length of formal time for the coaching (e.g., is one year sufficient, assuming the process starts at the beginning of a school year, or are two or more years needed?).

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