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DEALING WITH CHANGE IN HONG KONG SCHOOLS USING STRATEGIC THINKING SKILLS

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Abstract

This paper reports an investigation into the strategic thinking skills of school leaders in Hong Kong. By adapting the Strategic Thinking Questionnaire in the school context and based on data self-reported from 543 Hong Kong school leaders, three cognitive capabilities with strategic thinking were identified: reflection, systems thinking and reframing. The study determined that (a) the use of the strategic thinking could distinguish between more and less successful leaders, (b) school leaders' understandings of system dynamics had significant effects leadership effectiveness, and (c) while systems thinking explained much of the variance in the success variable, there was a cumulative impact of the use of all three capabilities. These findings have implications for training, professional development, and selection of aspiring leaders.

Key words: Strategic leadership, educational administration, organizational change, thinking skills, Hong Kong

Introduction

Hong Kong, like many societies, has been undertaking a major restructuring of its school systems (Education Commission, 1999, 2000). Ever since the 1982 report: A Perspective on Education in Hong Kong, proposed by an international panel of experts, which gave a very detailed systematic analysis of the strengths and limitations of the Hong Kong education system, educational reforms in Hong Kong have risen to prominence. The then Education Department (now, the Education and Manpower Bureau) has taken an active role in its follow-up work. With the publication of the seven successive Education Commission Reports (Education Commission, 1984, 1986, 1988, 1990, 1992, 1996, 1997), The School Management Initiative (Education and Manpower Branch & Education Department, 1991) and Information Technology for Learning in a New Era (Education and Manpower Bureau, 1998), the city has experienced a pervasive and influential transformation of its education system.

The school reform movement began by remedying the inadequacies of teacher training (Education Commission, 1984). It was followed by the School Management Initiative requiring schools to enhance their practice of delegation, empowerment, teacher autonomy, accountability, and parental involvement (Education and Manpower Branch & Education Department, 1991). The upgrading of 35% of

primary school teachers' degrees, to the level of bachelor or higher, immediately followed the initiative (Education Commission, 1992). Five years later, the achievement of high quality education through schools' self-evaluations and quality assurance inspections was highlighted (Education Commission, 1997).

Complexity created by these waves of change requires that leaders act and think strategically. Change provides opportunities, growth, innovation, as well as threats, disorientation, and upheaval. Whether a leader is able to appreciate change depends very much on their attitude in perceiving it. As far as educational leaders are concerned, their abilities to deal with change lies entirely in how they think and how they help their members prepare themselves for continuous professional development and school improvement.

Theoretical Framework

The changes confronting Hong Kong mean that educational leaders must possess, or add, the capability to think strategically and to facilitate the on-going process of change. Cognition is the way thinking is accomplished as individuals acquire knowledge, manipulate ideas, and process new information and beliefs. We are not alone in this assumption. Argyris and Schön (1978) were leaders in the development of reflection as an important cognitive skill needed by leaders trying to make sense of their ever changing worlds. Peter Senge (1990) in his seminal work, *The Fifth Discipline*, advised government, corporate, and educational leaders that the new challenges of globalization demand them to practice systems thinking and to transform their organizations quickly. Pisapia (2009) and Pisapia and Lin (2011) joined the work of Senge and Argyris and Schön adding the cognitive process of reframing to the mental skills needed to practice strategic thinking. They hypothesized that successful and less successful leaders use these three cognitive processes (reflection, systems thinking and reframing) differently, especially in times of complexity. When developed, these capabilities help leaders make sense of complexities facing the organization and enable them to identify, predict, respond, and adapt to non-linear change opportunities and challenges.

The theoretical framework guiding this study builds on the earlier work of Argyris, Schön, Senge, and Pisapia. Regardless of the architecture presumed to underlie human cognition, knowledge must be retrieved, activated, and/or recreated to influence actions and perceptions. We assume that three cognitive processes of systems thinking, reframing and reflection will be potential distinguishers between successful and less successful leaders in Hong Kong. It is apparent from the descriptions found in the paragraphs that follow that the three processes complement each other. For example, the role of context, mental models, and framing is evident in each process. However, there is enough dissimilarity to warrant individual descriptions. Leaders use information gathered through systems thinking and reframing during the process of reflection to make sense out of situations. These three processes assist leaders in (a) reframing situations so they become clearer and more understandable; (b) reflecting and developing theories of practice which guide actions; and (c) thinking in more holistic ways. They also aid leaders in seeing events and problems in terms of concepts, which are useful ways of thinking effectively about problems.

In summary, systems thinking, reframing and reflection, in all of their forms, are important cognitive skills for leaders to possess. The perspective one takes away from this literature is that there is no one best way to create corrective or unique solutions. Each situation presents different motives, problems, and preferred outcomes that result in different choice of strategies. The job of the leader is to select the process that fits the circumstances. Systems thinking gives the leader the ability to see patterns and interrelationships. Reframing provides the advantage of multiple perspectives. Reflection gives the leader the ability to see why certain choices work and others do not, which is tied directly to the uniqueness of each choice situation. We believe that leaders who possess the ability to engage in these cognitive processes will be more effective than those who possess these abilities in lesser quantities. The use of these processes enables the leader to build a reservoir of insights and intuitions, which can be called upon when confronted with ambiguity, complexity, and dilemmas.

Aims of the Study

This research adapts Pisapia's (2009) study of the strategic thinking capabilities of leaders in the United States and development of the Strategic Thinking Questionnaire (STQ) to the educational context of Hong Kong (Pisapia *et al.*, 2009). This research seeks to determine if there is a relationship between the cognitive capabilities of educational leaders in Hong Kong and their success. The study was guided by three research questions:

1. What are the relationships among the three cognitive capabilities for strategic leadership in Hong Kong schools?
2. Is there a relationship between Hong Kong school leaders understanding of system dynamics and their use of these cognitive capabilities?
3. Is there a relationship between Hong Kong school leaders' use of these cognitive capabilities and their effectiveness?

Methodology

This study adapted the *Strategic Thinking Questionnaire (STQ)* developed in the U.S. context by Pisapia (2009) to that in Hong Kong. The STQ was developed to measure the three cognitive capabilities that strengthen strategic thinking: systems thinking, reframing, and reflection. Systems' thinking, in this study, refers to the leader's ability to see systems holistically by understanding the properties, forces, patterns, and interrelationships that shape the behaviors of the systems, which provides options for actions. Reframing refers to the leader's ability to switch attention across multiple perspectives, frames, mental models, and paradigms in order to generate new insights and options for actions. Reflecting means the ability to weave logical and rational thinking through perceptions, experience, and information to make judgments as to what has happened and, to create intuitive principles that guide future actions. Systems dynamics, in this study, refers to the participants understanding of systems' properties identified from general systems theory.

A sample of about 180 primary schools, 180 secondary schools and 20 special schools in Hong Kong were randomly selected and invited to take part in the study.

Three leaders in administrative positions from each of the schools, including the Principal (or the Head) and two of their Vice-principals (or Deputy Heads), were invited to respond to the Chinese version of the STQ. In total, 635 respondents returned the questionnaires, which accounted to about 55.4% return rate. The reliability coefficients for the subscales were as follows: Systems Thinking (0.77), Reflecting (0.76), Reframing (0.69), and Perceived Leadership Effectiveness (0.93).

Results and Discussion

By adapting Pisapia's study (2009) of the strategic thinking capabilities of leaders in the United States and developing the Chinese version of the Strategic Thinking Questionnaire (STQ) (Pisapia *et al.,* 2009) attempts were made to determine if there is a relationship between the cognitive capabilities of educational leaders in Hong Kong and their success. Based on empirical data collected from educational leaders randomly selected in Hong Kong, the major statistical findings among the variables in the research framework are as follows:

1. The study shows that (a) the three strategic thinking capabilities were positively associated; (b) there is a significant correlation between Systems Thinking and Reflecting, with a coefficient of 0.50; while (c) other associations are only weak.
2. Hong Kong school leaders with strong understanding of system dynamics make greater use of the three strategic thinking capabilities (systems thinking, reframing and reflecting) than those who have weaker knowledge. The finding indicates that knowledge of system dynamics and the practice of the three strategic thinking capabilities are highly associated and both will reinforce to each other.
3. Reflecting and reframing had no significant effects on perceived leader effectiveness. However, systems thinking had positive and significant effects on leader effectiveness in schools. That is, the practice of systems thinking is a strong predictor of leadership success and it matches previous propositions (Senge, 1990) and research (Pisapia, 2009). It might be concluded that systems thinking is a crucial determinant of success in leadership and organizational learning.

The study of cognitive capabilities of leaders is in its infancy. Therefore, it is difficult to accurately assess the true impact of strategic thinking to leader success. The current study tends to support earlier work by Pisapia (2009) and Pang and Pisapia (in press) that improving strategic thinking capabilities can enhance a leader's effectiveness. Three major impressions of the way the leader processes information were gleaned from the statistical analyses presented in the findings section of this paper. First, the use of strategic thinking capabilities significantly (directly and indirectly) distinguish between more and less successful leaders. Second, there was a cumulative impact of the use of the three capabilities, which formed the strategic thinking construct. The strength of the relationship between strategic thinking and leader success increased as leaders used the three cognitive processes in tandem. However, systems thinking explained most of the variance of the impact of strategic thinking on leader success. Based on the findings, we conclude that successful leaders use the three strategic thinking capabilities

differently than less successful leaders. Furthermore, systems thinking presented greater explanatory power than reflection and reframing.

Conclusion

Hong Kong, like many societies, has experienced a pervasive and influential transformation of its education system. Surrounded as they are by such a vast number of technological, economic, cultural, political, and social changes, occurring at ever-increasing speeds, it is no longer enough for educational leaders to think linearly and simply to react to them (Lam & Pang, 2003; Senge, 1990; Pisapia, 2009; Pang & Pisapia, in press). Hong Kong educational leaders are required to handle change more strategically than before and are required to think strategically in coping with the challenges arisen from an increasingly complex environment (Mintzberg, 1994; Hooijberg, Hunt & Dodge, 1997; Gamage & Pang, 2006). As far as educational leaders are concerned, their ability to deal with change lies entirely in how they think and how they help their members prepare themselves for continuous professional development (Pang, 2006).

These findings are promising because they add to earlier findings in the USA and Hong Kong context, which indicate that aspiring leaders would increase their chances of success by developing their strategic mental capabilities. Similarly, colleges and universities should take note of these results and begin to introduce the capabilities of systems thinking, reflection, and reframing into their classes for aspiring leaders. Practically, school districts can be confident that their screening and hiring protocols should also benefit from information provided by the STQ. Finally, individuals currently in leadership positions should assess themselves and build a professional growth plan that prioritizes the development of school leaders.

A few limitations should draw readers' attention. First, this study was conducted on a sample of principals from Hong Kong; the results cannot be generalized beyond that education system. Furthermore, the instrument was administered in Chinese, while the original instrument was developed in English. Therefore, one caution must be exercised in attempting to use results obtained on the Chinese administration to the original instrument, which was developed and field tested in English. Language translation and cultural issues may impact the results. Additionally, the instrument was administered to principals. Results may not be generalized to professions other than that of school principal even though the instrument may have been designed for other purposes.

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