Distributed curriculum leadership in action: a Hong Kong case study

Abstract

This study is designed to investigate the impact of school-based curriculum development teams on teacher development within the tradition of school-based curriculum development in a primary school in Hong Kong. Teacher interviews were used to evaluate the extent that teacher engagement in curriculum decision making processes within two school based curriculum development teams has led to teacher professional development which were triangulated with the video taped meetings and tryout lessons. Qualitative evidence has revealed positively that participating teachers have developed themselves professionally through the process of planning, experimenting and reflecting (PER model) upon curriculum practice and innovation under certain conditions. However, the complexity of the structures and processes that were established for involving teachers in curriculum decision making processes needs further empirical and theoretical work. This paper reports findings relating to how distributed leadership operated and how personal styles of the consultants mediated the interactional patterns and therefore discourses in the Mathematics and Chinese development teams in the second action cycle of the innovation project.

Key Words: distributed leadership, school-based models of curriculum development, curriculum change, teacher development

Context of Change

Decentralization of curriculum decision making has been one of the key debates in the broad discussion of the appropriate change strategies to enhance school improvement, teacher development and pupil learning for the past several decades (Skilbeck, 1984; Fullan, 2001; Hopkins, 2001). The urge for decentralization has been a result of the failure of the use of the central agencies in designing and planning new curriculums for implementation in schools as well as the call for more democratic participation of the professional teachers in school and curriculum decision making processes in 60s and 70s in the developed countries such as USA and Australia (e.g. Australian Education Union, 2004). Decentralization means moving decisions about what to teach more relevantly, how to teach more effectively and how to assess more accurately closer to where learning takes place in order to meet the diverse needs of pupils in mixed ability classrooms due to the introduction of compulsory education for all in the 70s. Therefore, it also means changing the traditional roles of the teachers from curriculum users to curriculum developers, taking up more responsibilities in making curriculum decisions for pupil learning (Stenhouse, 1975; Marsh, 1997;

Ovens, 1999; Wallace, Nesbit & Miller, 1999; Harris, 2003). This movement of involving and engaging teachers in a wider range of curriculum responsibilities has been taken up formally by the Llewellyn report in 1982 and more systematically by various education reports in Hong Kong. However, the pattern and the level of involvement and commitment by teachers in the participation have yet to be well defined and elaborated with the empirical data about what works and what does not work in the Hong Kong situations (Law & Galton, 2004). The establishment of a curriculum coordinator at a senior level in the primary schools in 2002 has shown the determination of the Government in terms of the policy orientations and investment of resources. However, its efficiency and effects upon teacher development and pupil learning remains largely unanswered empirically.

The current project has adopted a different approach about teacher leadership which is understood as a shared phenomenon and responsibility to be realized collectively in school settings (*The Ten School Leadership Propositions*, retrieved on 3 October 2005). The development project and its preliminary findings reported here have followed this new tradition and predicated its theoretical assumptions upon a professional definition of curriculum leadership, regarding teacher participation as necessary processes of enhancing the transformational

experiences for the professional development of teachers and therefore enhancement of student learning. The following are the key characteristics of an effective leadership development programme, which form the design principles and approaches of the current project and which echo the concept of learning centered leadership within the school based curriculum development tradition (Henderson and Hawthorne, 1995; Harris, 2003, p. 75; MacBeath & Moos, 2004).

- The development activities should be school based and problem solving in nature, with a focus on enhancing student learning;

- The development activities should be collaborative and the model of power hierarchy should be mediated to an extent that social interaction would emerge; each member should assume an equal but full professional status in curriculum decision making processes in the learning centered community;

- The social interaction in the development activities should be open and reflective in nature;

- The development activities should be formulated and organized in an enquiry mode of planning, implementing and reflecting upon actions which should be subjected to critical scrutiny;

- The development activities should be continuous and form a spiral and cyclical models of operation to engineer and sustain a culture of

change and life long learning;

Curriculum decision making therefore is not the sole responsibility of a few key personnel appointed by the school authority but a process (or a phenomenon) to be shared equally among all teachers in the school (Elliott, 1991; Ball & Cohen, 1996; McLaughlin & Talbert, 2001; Shulman & Sherin, 2004). Every teacher should be responsible and is able to be responsible for making their own curriculum decisions for their pupils in their own classrooms. By taking up this responsibility, participation creates opportunities for school improvement, teacher development and enhancement of pupil learning (Hiebert, Gallimore & Stigler, 2003).

School aims and recent challenges

The school was established in 1975, and belongs to a religious missionary in Hong Kong. The total number of teachers is forty two, eight of them with a master's degree in education and other school subjects. The school has around seven hundred primary pupils from the local community. To respond to the challenges from the decreasing number of children in the district area, and the demands from the curriculum reforms endorsed by the Government in 2001, the school authority has been purposely mounting an increasingly number of

curriculum innovations in order to gain good reputation among parents in the community, and to prepare for the external school review by the Government inspectorate. The school head has initiated a number of changes in recent years and provided strong leadership in administration and other aspects of improvement policies and measures. These measures include partnership schemes with the Education and Manpower Bureau, peer observation of teaching, teacher appraisal scheme, collaborative lesson preparations, school self-evaluation exercises and application for external funding for development projects such as the one reported here.

The Curriculum Leadership Development Project

The project title is "Accelerating School Based Curriculum Development" which has started in September 2004 and is financially supported by Hong Kong Quality Education Fund. Its goals stated in the project proposal are:

- to develop teachers' abilities and skills in strategic planning and development, and using evaluation for school improvement;

- to enhance the effectiveness of school self evaluation in the school; and

- to develop a quality culture for school self evaluation for school improvement. (Shatin Tsung Tsin School, 2003)

Formation of curriculum development teams

Three curriculum development teams were formed on a key subject basis, namely Chinese language, English language and Mathematics, which comprise over half of the curriculum time in the Hong Kong primary schools. The selection of team leaders was seen critical because the project aimed at experimenting a form of distributed leadership which has been claimed to enhance authentic professional dialogues among team members. However, the traditional roles played by the subject panels in the current school hierarchy should also be taken into our planning consideration. Therefore, concessions were made. In the first action cycle of the innovation project, the development teams continued to have their panel heads as their team leaders, while in the second cycle, teachers who demonstrated commitment and positive attitudes towards curriculum reforms and school-based innovations were deliberately chosen to take up the role of the team leaders so that a flattened hierarchy was reconstructed in each team. This arrangement had two advantages. First, the subject based approach in the formation of a curriculum development team is intended to control the subject content of the interactions among members in team work activities so as to maximize the positive effects of the shared subject identity and working experiences among team members (Schon, 1983; MacBeath, 2004). The second one was to eliminate the

potentially negative influence of any hierarchical structure and power relationship among team members so as to create a conducive team work environment for the emergence of professional dialogues among members and therefore to nurture a culture of shared and distributed curriculum leadership among team members (Carr & Kemmis, 1986; Fullan, 1993; Black & Atkin, 1996; Putnam & Borko, 2000). The latter advantage was thought to give confidence to the teachers to initiate and lead activities in pedagogical changes in schools. These two factors were essential because they allowed the development of a common but open educational language and strengthening of the shared but democratic identity among a group of professional teachers to concentrate on problem solving an identified pedagogical issue collectively (Day, 1993).
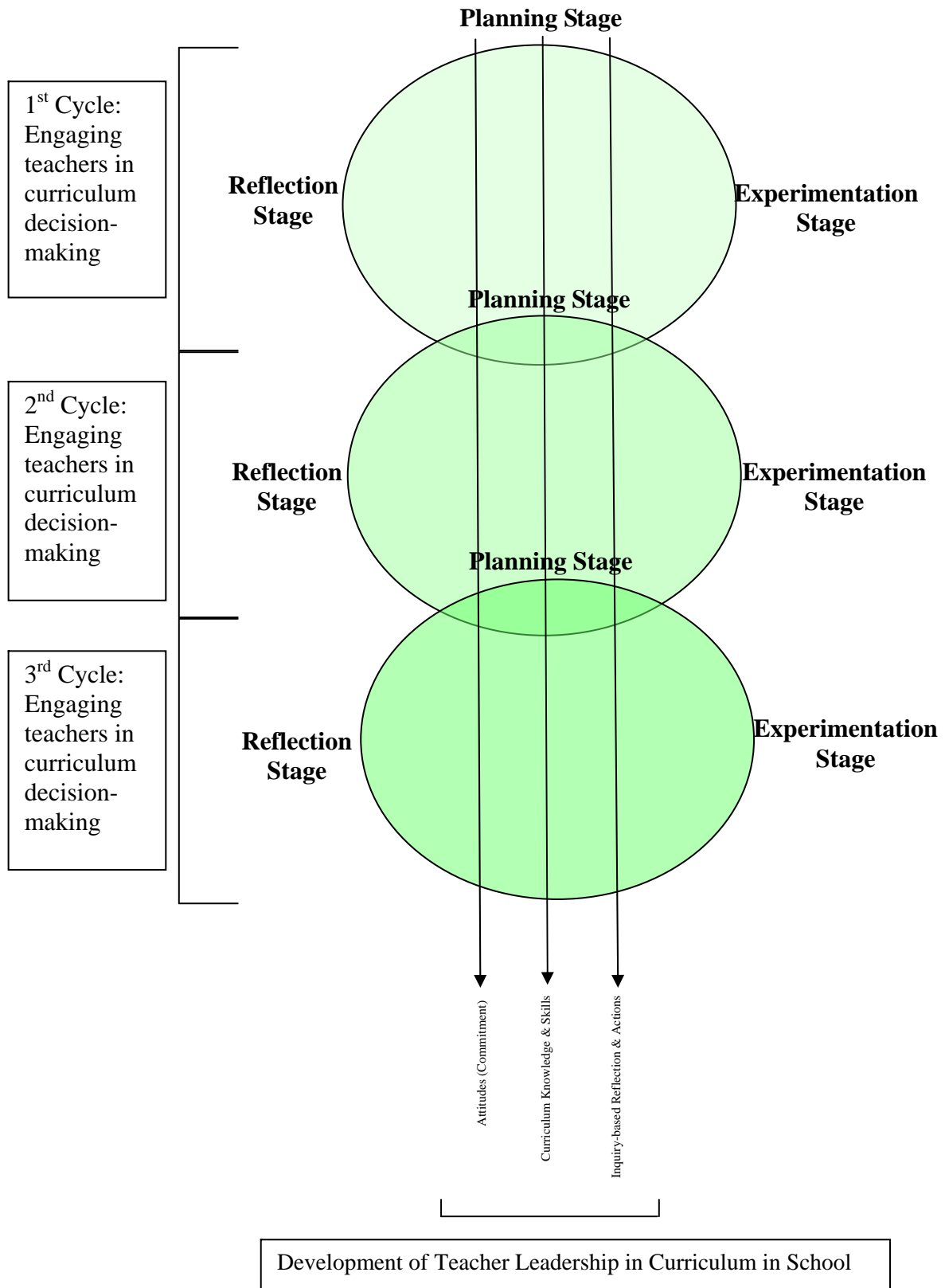
Planning, Experimentation and Reflection Model of Change (PER)

The innovation pattern adopted the PER model, in which the team reviewed, planned and designed a lesson or a unit of learning in collaborative meetings to begin with. Then, the team assigned teachers to try out the planned innovation lesson and then in step three, the team conducted a reflection meeting.

This model of change is used in the first action cycle and repeated in the second action cycle in a spirally continuous structure (see Figure 1) (Law

& Wan, 2005). This organization has several advantages. First, it creates opportunities for collaboration and team work. Second, it locates changes on pedagogy based on the teaching subject. Third, it adopts a problem solving and critical approach. Fourth, the change becomes an open venture and therefore school knowledge is taken as a matter of possibilities and opens for challenge, rather than a group of definitive subjects merely imposed from external agents to the professional deliberation at school sites. The key elements of the development process here are teacher engagement in systematic inquiry and classroom experimentation (Macpherson, Aspland, Brooker & Elliott, 1999; Frost & Durrant, 2002, 2003; Harris, 2004).

Figure 1: Re-conceptualizing School-based Models of Developing Teacher Curriculum Leadership for Life Long Education

Planning Stage

1st Cycle: Engaging teachers in curriculum decision-making

Reflection Stage

Experimentation Stage

Planning Stage

2nd Cycle: Engaging teachers in curriculum decision-making

Reflection Stage

Experimentation Stage

Planning Stage

3rd Cycle: Engaging teachers in curriculum decision-making

Reflection Stage

Experimentation Stage

Attitudes (Commitment)

Curriculum Knowledge & Skills

Inquiry-based Reflection & Actions

Development of Teacher Leadership in Curriculum in School

Methodology and Data Collection

A mixed method approach was adopted to ensure that a wide range of direct experiences with the innovation was collected and the effects of the innovation could be understood from various perspectives of the participants in the project (Teddle & Tashakkori, 2003). Interviewing the key participating teachers, video taping of the planning and reflection meetings, and video taping of all tryout lessons were conducted. All teachers were interviewed by the project leader in April (i.e. before the tryout of the innovation) and July 2005 (i.e. after the tryout of the innovation). This paper will report only the findings in relation to how distributed leadership operates and how the consultants serve as mediators of the interactional patterns in the development teams from the structured interviews taken before the tryout lessons and after the reflection meeting of the Mathematics and Chinese curriculum development teams in the second action cycle of the project together.

Structured interviews before the tryout lessons and after the reflection meetings were conducted to elicit views and data from both the participating teachers in the teams who experienced the tryout lessons. The key teachers such as the team leader, the panel head and the tryout teachers in the two teams were interviewed individually to ensure privacy and confidentiality and questions were adjusted to match their roles in the

teams. Four participating teachers in each team were interviewed. Teacher questions focused on the following aspects of their experiences about the innovation:

- their understanding of the project objectives, processes and outcomes;

- their experiences and observations about the tryout lessons they implemented or observed; and

- their evaluation of the innovations

Findings and Analyses

The organization of the data and findings will adopt a more naturalistic approach to allow some emerging themes from the data to form the major categories of the topic headings below, though they all focus on curriculum leadership development among teachers in the two development teams. The report here focuses on findings relating to distributed leadership and the roles of the consultants.

Did the distributed leadership work?

The project has attempted to manipulate the leadership style by rotating the team leaders from the panel heads in the first cycle to the committed teachers in the second cycle. Therefore, it was hoped that a new

conception of leadership which is shared and participatory so as to allow more genuine professional and open ended dialogues in team interactions on pedagogical issues and to develop teacher leadership in school-based curriculum development. In such a reconstructed situation, the power relationship between followers and leaders becomes blurred.

The teacher interviews showed some evidence of change regarding this leadership style and pointed to the positive effects of this intervention.

Both the team leaders of the Mathematics and Chinese teams regarded themselves as facilitators liaising work with the external consultant, coordinating meetings, searching discussion materials, motivating colleagues to participate, preparing PowerPoint as learning materials to support teaching and collecting documents as part of her administrative duties.

> *"I am a so and so leader, how to contact the consultant, organize meeting, concerned about whether I can motivate colleagues to attend meetings,,, whether we can compromise,,, but colleagues collaborated well…more easily than I expected…"*
> (Mathematics Team: Teacher F interview, literal translation no.13)

They were also very conscious about the changing style of leadership and expressed their agreement with the new style of appointing chairs for the curriculum development teams.

> *"Once we sat down together, we did not have the idea about who was leader, or panel head, or tryout teachers, our roles were loose, we felt relaxed because we were not tryout teachers, panel head and I talked quite freely, not aware of our formal roles, we enjoyed our conversations."*
> (Mathematics Team: Teacher F interview, literal translation no.8)

The Mathematics team leader Teacher F saw her role in this way:

> *"This time I was an observer, last time I was the tryout teacher.. because now you are an observer you watched and saw more how the tryout teachers handled teaching, are they correct or is there room for improvement, this is learning."*
> (Mathematics Team: Teacher F interview, literal translation no.5)

The perceptions of the team leaders themselves matched with the perceptions of the other members who had worked with them in the second action cycle of the project. The following observations were from the Chinese team members:

> *"Teacher A is responsible for coordination...she had lesson plan and package...tell us what the problems are....tell us what to attend to...*
> *She could not tell us what is the idea about the project but support us in planning lesson...learning materials etc."*
> (Chinese Team: Teacher B interview, literal translation no.44)

> *"...guide us in the meeting... in fact the PowerPoint and the module idea were her ideas... she used them before and this time they adapted them for use in each class..."*
> (Chinese Team: Teacher C interview, literal translation no.45)

> *"She is quick and efficient... talk to members...."*
> (Chinese Team: Teacher C interview, literal translation no.45)

The role of the team leaders was seen by their curriculum development team members as a supporter and facilitator of the curriculum making

process, rather than a traditional leader who assumes a more directive role. However, it seems to have more evidence to believe that the leader of the Mathematics team was more effective than the Chinese team. One of the tryout teachers from the Mathematics team expressed her observation in the following way.

> *"She leads us to think... she thinks of many issues... lead us to ask the consultant ... and give us a summary... what to attend to... a good supporter...support us to design a curriculum...but her leadership role is not strong...I feel we are equal, share work, every one can be a team leader...the leader helps collecting information... chair meetings."*
> (Mathematics Team: Teacher H interview, literal translation no.21)

This observation was triangulated with the video taped meetings in both teams and the team leader of the Mathematics group tended to be more articulate and willing to pose questions to the meetings while the leader of the Chinese team tended to be less willing to lead discussions. Then this leads us to look at the new roles played by the original leaders (panel heads) of both teams and see how they contrast with the new team leaders.

The panel heads of the Chinese and Mathematics subjects departments were not given a specific role to play in this second cycle of the innovation. However, both continued to assert a varying degree of influences on the curriculum making processes. While the panel head of the Mathematics team was more resilient and reluctant to assert herself,

the Chinese panel head dominated the directions and contents of the professional discourse in most planning and reflection meetings. He was unwilling to surrender his traditional status in the school hierarchy, asserting influence in the deliberation of the innovation.

> *"...I am coordinator and facilitator... and locate where the focus is... what to do in different levels...where the problems... where to do a bit more..."*
> (Chinese Team: Teacher E interview, literal translation no.22)

> *"I reminded the teacher not to be able to criticize the ancient people from our modern perspectives; we should appreciate from their own values system; I would suggest materials should be downloaded by the pupils themselves; not by the teacher."*
> (Chinese Team: Teacher E interview, literal translation no.22)

Judging from his use of a language of control and demand, he assumed a dominant role in the curriculum decision making processes and deliberately downgraded the role of the team leader as solely a liaison person with the consultant from outside and a facilitator to discuss design issues with the other members. His assertion of power was also observed in the video taped planning and reflection meetings when he made criticisms severely on the linkages between the studies of a historically tragic figure, Poet Wat, who had committed suicide and the modern way of viewing the value of life, which was what the tryout teachers wanted to experiment in the tryout lesson. He assumed a leadership role in making decisions about subject content.

> *"[My role is] To provide knowledge background for the topic."*
>   (Chinese Team: Teacher E interview, literal translation no.22)

> *"There is a division between panel and consultant: panel responsible for content; consultant for pedagogy…"*
>   (Chinese Team: Teacher E interview, literal translation no.22)

Members' reactions to the leadership styles of the two traditional panel heads differed. The members in the Chinese team developed a sense of negative feelings towards his overt assertiveness in leadership.

> *"He was busy… or he gave us pressure because we based our teaching on our pupils…but he insisted on subject content…quite serious about content…but we based on pupil ability to design… and this is great difference…"*
>   (Chinese Team: Teacher C interview, literal translation no.45)

They would prefer having their discussions without him, though they acknowledged his positional power in line of accountability.

However, the members in the two development teams acknowledged the facilitating role deliberately played by their former panel heads and had a stronger sense of team spirit being developed among the members.

> *"I feel the panel head was not a panel head anymore. I feel she is a member of the team… we share work…we are equal…we all can solve problems…she gives us views and ideas when we are short of…"*
>   (Mathematics Team: Teacher H interview, literal translation no.21)

One member in the Mathematics team even felt she was acting on behalf of the curriculum development team to put the plan into action.

> *"I feel I am acting out the collective decisions...I am an actor... I am implementing our ideas and decisions..."*
>   (Mathematics Team: Teacher H interview, literal translation no.26)

This feeling of a shared community is found in the Chinese team as well. The members in general felt the working spirit was collaborative. Despite the somewhat authority of the panel head, they had not any feeling of being directed in a way that distanced themselves from their own expectations and wishes. One team member even felt he was implementing their collective decisions.

> *"I think we work together and methods and roles are similar; just coordinating, we look at what we have, talked about features of each class to help each teacher, give some ideas, to construct something."*
>   (Chinese Team: Teacher B interview, literal translation no.42)

> *"...like an implementer... other wants me to teach this thing... then I could adjust accordingly to my class features... to revise the lesson plan..."*
>   (Chinese Team: Teacher B interview, literal translation no.43)

The teacher thinking here has been undergoing some form of changes apparently, from a style of leadership which was assertive and dominant because of the ascribed status of the leaders (subject panel heads), to a form of leadership which was much collaborative and allowed some room for personal professional expression. While the members still appreciated the specialist knowledge of the panel head, they nevertheless would venture and explore alternative areas beyond the traditions.

In the video taped meetings and reflections in both teams, the interactions were illustrative about the effects of the social dimension of the interaction between members of the teams. Maintaining the social cohesion among members in the team is essential as this is the way to enhance team work and spirit. Its achievement is long term for each member of the teams. Therefore, teachers tended to be less critical and reflective and comments were mild in tone. Even the panel heads and the team leaders played a rather secondary role in terms of leadership in professional domains. However once the discussion in professional matters was initiated by the consultant from outside the school context, the dialogues and interactions became much focused on pedagogical efficiency and conceptual clarity of the learning target. The role of the consultant seems to offer professional and academic leadership in action to the teachers in the teams. This point will be revisited in greater detail in the section on the role of the consultant below.

In general terms, the adoption of a form of distributed leadership in the Mathematics curriculum development team has encouraged the emergence of a community of professional learners with a focus of formulating a task to achieve pedagogical innovation in action in classroom settings, while the professional leadership was less salient in the Chinese team because of the leadership styles of both the consultant

and the dominating influence of the traditional leadership in the curriculum decision making processes. Changing roles have allowed changing perceptions about traditional practices and thus give room for change in beliefs and practice. Deliberation of a leadership style based on the collective responsibility of each individual member in curriculum decision making in this way enhances personal and professional learning in a public manner and therefore prepare teachers to assume leadership roles of various domains in the school-based curriculum development in a collective fashion. This is also true in a team whose collaboration and professional leadership had been mediated by the traditional form of power and influence of the panel head and the didactic style of the consultant, as it is the case with the Chinese development team.

The following table summarizes the different leadership patterns and their mediating effects of the key players of the two development teams.

Table 2: Characteristics of leadership styles

	Chinese Team	Mathematics Team
Leadership style	Distributed	Distributed
Mediating factors	Dominated by assertive panel head; Didactic consultant	Less assertive panel head; Facilitating consultant
Effects	Less team spirit Developing resentment within the team	Stronger team spirit Developing collaborative pattern
Discourse style	Closed and informative; less interactive; Less expressive	Open and exploratory; more interactive; full of stories; expressive

Participation style	Less interactive; less active	More interactive; active
Teacher learning	Less effective professionally	More effective professionally

It should be noted from the interviews of the Chinese team members that they were actively participating in the development process despite the continuous attempts by the panel head to dominate the agenda and subsequent discussions in the meetings.

What did the consultant contribute to the implementation of the curriculum innovation?

The formation of the curriculum development teams and the organization of the various types of support, in particular the professional support, are essential to the successful implementation of the curriculum change. One of the key considerations is how professional input could be solicited from outside the school and how this type of input could be effectively integrated with the needs of the school based reforms and the professional needs of the teachers. Partnership with the university faculties in education has been considered one of the key factors in the successful implementation of the educational reforms (Sherrill, 1999: p. 57; Brabeck, Walsh & Latta, 2003) when the style of collaboration fits well with the professional needs of the school-based innovation, being taken in a developmental perspective, rather than in an ad hoc and unsustainable manner. The current project has also emphasized the needs of collaboration with the professionals from university faculties and each

subject team had been assigned an expert in the field to provide professional support and advice on pedagogical innovations. The appointed experts worked with the curriculum development teams, joined the collaborative lesson preparation meetings, observed tryout lessons, attended the reflection meetings, and provided advice and feedback on the focus of the pedagogical innovations. The functions and practice of having an appropriate consultant from outside the school environment to work with the school based curriculum development team or projects have not been well documented in many school improvement or curriculum development project reports with close-up evidence about how their functions have been realized in practice and in some cases how their effectiveness could have been mediated by other micro-political factors within each of the development team and the professional style of the consultants themselves.

The consultants appointed for the two curriculum development teams had been working with each of the teams in the first action cycle and developed some form of mutual understanding with the participating teachers. Both team members found them useful, appreciated their professional inputs in the discussions before and after the tryout lessons, and enjoyed the opportunities to think about the pedagogical issues and explored possible alternatives for future.

> *"...we unconsciously use didactic methods...because it is the quickest, looks more effective, but this time Mr. Wong (the consultant) told us that we do not know how to use some questions to stimulate thinking, this makes me feel I should not only ask yes or no questions, so simple and factual questions, but we learned this in training but once we walked into classrooms we forget."*
>   (Mathematics Team: Teacher G interview, literal translation no.32)

> *"...before meeting he led us to think.. weaknesses of the pupils...*
> *give instructions on lesson plans...after observation give*
> *views...and lead us what we could do in future... he is*
> *knowledgeable about the curriculum..."*
>   (Chinese Team: Teacher A interview, literal translation no.22)

> *"...cut text...how to read books...what happened in Shanghai...suggest pupils buy a book of Tang poems and recite one each week... the pupils will know many poems..."*
>   (Chinese Team: Teacher A interview, literal translation no.22)

However, the effectiveness of the two consultants upon the curriculum deliberation in the two teams seems to have differed in quite a number of dimensions. Below we shall present each case separately with some common framework such as the emerging collaboration models and models of personality or professional style.

The consultant for the Chinese team seems to have taken a confrontational model and presented his views in direct contrast with the team members. Whether he was conscious about this or not needs some further investigation. Conflicting views were recorded in the following interview.

"...he does not understand us yet... like we want a lesson to teach pupils about festivals in China... but he thought a lesson is not enough.. he possibly wanted us to use a whole module... we had only one meeting... last meeting we had some initial idea about the topic for the tryout lesson... and how to develop... design instructional plan successful... we are busy very busy..."

(Chinese Team: Teacher A interview, literal translation no.5)

The conflicting views might have been handled smoothly in the planning meeting by the team leader or in discussion to arrive at consensus. Unfortunately this was not what should have been done to solve the problem. The conflicts seemed to have been left untouched and each teacher took their own views to action in the tryout lesson.

"... we had many mistakes because we were not well prepared...we had not any consensus...the consultant suddenly arrived...we did not have the guidelines but suddenly Phoebe (teaching assistant) gave us many guidelines; we need time to digest; we did not follow the guideline; ...we could have only one lesson... we also had some internal arguments... the consultant then gave some suggestions... asked us to give him the plan by email; he was suggesting we need not think by ourselves but can use website materials developed by other schools; many schools are doing the same thing with different topics; we could download them and teach them in our classes; we did not have any conclusion and we followed that up later."

(Chinese Team: Teacher C interview, literal translation no.58)

The style of the consultant's professional input and his relationship with the team has been salient and explicit in the video taped planning and reflection meetings. The video taped planning meeting shows some agreement with the teacher observations about the relationship between the consultant and and the curriculum development team. The consultant

had given much professional input on pedagogical principles and practices in relation to the Chinese curriculum in the planning meeting as well as in the reflection meetings after the tryout lessons. He tended to dominate the discourse which was closed to discussion, rather than open to more alternatives and seek for possibilities from the perspectives of the participating teachers. The observations given by the teachers were also congruent with the discussion contents in the planning meeting that the focus of the meeting was not on the instructional design or the innovative aspect of the tryout lessons, but on general issues with curriculum and teaching in the primary schools in Hong Kong. In the reflection meeting, little reflection on the tryout lessons by the teachers was recorded and the comments were solely from the observations of the consultant. The reflection meeting therefore failed to create opportunities for the teachers to share experiences and seek improvements from their practical experiences of trying out the innovation.

But the contribution of the consultants in the Mathematics team moved much further. The consultant not only served as a mentor for some members but a mediator between colleagues in a school in case of embarrassments such as peer observation. The following two quotations from the teacher interviews demonstrate the socio-political functions of the consultant in the implementation of a curriculum innovation.

"We colleagues did peer observation, but because we were colleagues, we tend to be lenient and more accommodating.. but Mr. Wong is an outsider, he does not have our tradition, he is able to observe many problems that we are so used to..."
(Mathematics Team: Teacher G interview, literal translation no.32)

"... Mr. Wong gave us many good ideas... his role is a mentor, not a higher authority, he is thinking with you, his attitude is good."
(Mathematics Team: Teacher G interview, literal translation no.35)

In the case of the panel head, the contribution of the consultant led her to reflect deeply about her own traditional practice in classroom teaching and indicated deep learning from her participation in the curriculum decision making process.

"...to look at the same topic and how to teach from a different angle, learned very much... particularly learned from Mr. Wong, the consultant, discovered that what we thought and practiced may not be correct... using different angles would see different things...discovered what pupils think is different from what we think they know in mind..."
(Mathematics Team: Teacher I interview, literal translation no.42)

The video tapes of the planning and reflection meetings were used to triangulate the various roles played by the consultant in the various stages of the innovation project. He was a facilitator to lead discussions and initiated topics for discussions of great pedagogical significance in both the planning and reflection meetings. Below is a selection of the questions the consultant used to stimulate professional reflection among the team members in the video taped meetings.

In the planning meetings:

- He emphasized the conceptual issues with teaching the concept of "fraction", and the meeting should focus on how the concept of fraction could be taught with clarity and accuracy; he reiterated teachers are not short of methods but the questions remain whether the methods used are related closely with learning the target concepts in mathematics; and

- He used communication skills such as clarification, probing, asking for explanations and concrete examples, and seeking alternatives; he challenged the traditional practices of the team members.

In the reflection meeting:

- He pointed out the conceptual problems for the younger learners in the tryout learning sessions when a generic issue with fraction is contextualized with the use of paper, shapes, and folding as the main elements in learning the concept;

- He moved the focus of the discussion from blaming the inability of the pupils to the inability of the teachers to clarify for their pupils the various key properties of the concept of fraction; and

- He also pointed out the transition from one activity to another one should be linked up strongly in conceptual terms or the pupils would not be able to appreciate the values and linkages between activities.

The following is a literal transcription of a series of leading and probing questions he had posed to the meeting to stimulate reflections among members and indeed readdressed the learning issue with pupils:

> *"...the teacher did give two examples to pupils... one using square and one circle ... pupils are still unable to conceptualize the issue or generalize the principles... from one example, (restricting to the use of square and circle only) and then move to something general... the pupils may not understand how this task is related to the second task or the task of colouring... the problem is with transition ... how to give more background information to support learning... it is the flow or the transition from one task to the second task which matters..."*

The contribution of the consultant in the mathematics curriculum development team is twofold: offering professional and academic inputs concerning pedagogical issues on the topic that the teachers wanted to explore, as well as leading the team to reflect upon personal pedagogical experiences and practices. He facilitated discussions in an open but professional manner, allowing expressions of views, highlighting key pedagogical concerns such as linkages between learning activities and learning sessions, stretching members' understanding of the underlying issues with deep learning, and moving the focus of the discussion from accusation of pupil inability to reconsideration about the appropriateness of the selection of pedagogical strategies in relation to the achievement of

the content knowledge by pupils. He demonstrated in practice a form of professional leadership to the team.

In summary, we have two contrastive models of professional inputs from the two consultants with similar backgrounds. We shall call the former one being exemplified by the consultant for the Chinese team as a restricted model of professionality while the latter one for the Mathematics team as an extended model of professionality (Holye, 1969). The following table is to summarize their characteristics and potential effects upon curriculum deliberation.

Table 3: Models of Professional Style of Consultants

	Models of Professionality	
Domains of contributions	Restricted	Extended
Input	Personal instructional experience	Instructional alternatives
Role	informative	exploratory
Discourse style	closed	open
Collaboration	One-way; didactic	negotiable
Social cohesion	diffused	converged
leadership	Ascribed; power-coercive	Re-educative; social interactive

Discussion

Both the first and second action cycles adopted the same model (see figure one). Its emphasis was on how and under what conditions teacher leadership in curriculum development could be enhanced within a school

based approach to the initiation, development and implementation of the innovation. The organization of the project, the establishment of the curriculum development teams and the innovation patterns (PER model), have created opportunities for teacher engagement in peer collaboration activities, open and reflective professional interactions, and innovation oriented pedagogical practices. Did this project work? Discussions below will focus on leadership style, and teacher development.

Which type of leadership is more effective? We put this question in a comparative manner, not because we want to compare different forms of leadership, which is valuable though, but to open up an issue for future exploration. In the findings, it is clear to us that the rotation of leadership or a form of distributed leadership to be shared by all members worked well with the teachers and the culture in the Mathematics team particularly while the effectiveness of this leadership was mediated by the assertiveness of the traditional role of the panel head and the didactic style of the consultant in the Chinese team. However, the participating teachers enjoyed openly the participatory form of interactions without the fear of any directives from any persons with a hierarchical power or authority. They enjoyed a form of interactions which had little implications on what to follow and how to follow. The shifting of the roles of the members allowed each member to emancipate and decenter

themselves from their own traditional beliefs, practices and roles which have been so well framed and used to that allowed little room for reflection and contemplation about possibilities. This style of leadership encourages and supports teacher learning and development of teacher leadership in general (MacBeath & Moos, 2004). It is interesting to note that the leadership style of the consultant in the Mathematics team offers a role of professional leadership for other members to imitate. He was described and much appreciated as a facilitator, a leader with academic and professional inputs which stimulated deep thinking about theories, practices and alternatives.

Much of the evidence from the teacher interviews shows the level of professional awareness is increasing and their understanding of the aims and targets of the curriculum innovation is increasingly sharpened. In other words, the impact of the innovation upon teacher development in various domains of knowledge and experience has taken a developmental direction from some uncertain state of mind to a greater level of certainty (Sergiovanni, 2001). It is particularly useful to see that teachers in the interviews openly talked to the interviewers in a confessional tone, showing awareness of inadequacy and indicating the need for more improvement. This is important because it is the very feature of a learning community, authentically reflective and critical about one's practices and

beliefs (Miles, Ekholm & Vandenberghe, 1987; Henderson & Hawthorne, 1995; Harris & Lambert, 2003).

Conclusion

Leadership studies in education have been focused mainly on a positional and hierarchical basis to an extent that teachers in schools were considered peripheral in making pedagogical decisions. Recent studies on curriculum leadership have moved away from this model of organizational leadership to a model which has been trying to recapture the essence of the professional role of teachers in making curriculum decisions within the tradition of school-based curriculum development. Teacher leadership in curriculum decision making in schools is a new phenomenon in both international and local literature, and its practice has been in its embryonic stage. How this concept and practice could be institutionalized within the infrastructure of the current school ethos still need substantial theoretical and experimental work. This report of the second action cycle of a curriculum leadership development project here in Hong Kong has demonstrated the complexity of the key structures, i.e., the establishment of curriculum development teams and processes, i.e., the 3-stage PER model of teacher planning, implementation and reflection of curriculum practice that the case school has created in response to the challenges from the educational and curriculum reforms.

These structures and processes have yet to find their home within the traditions and the cultures of the school in the study. However, the experience has proved that engaging teachers in curriculum decision making processes does enhance development of professional knowledge and skills among teachers in curriculum development specifically. But how the concept of teacher leadership in curriculum decision making could be put into practice more effectively in schools, and how the structures and processes could be institutionalized in schools on a wider scale remains an important issue to be explored and investigated in both theoretical and empirical studies by the collaboration between the researchers in university faculties and the teachers in schools. The goal of teacher leadership in curriculum decision making should receive policy priority and its successful achievement needs resource and professional support from the Government and other stakeholders of the education enterprise.

References

Australian Education Union (2004) Educational Leadership and Teaching for the Twenty First Century: Project Discussion Paper. Available online at: http://www.aeufederal.org.au/Debates/elat21pap.pdf.

Ball, D. L., & Cohen, D. K. (1996) Reform by the book: What is — or might be — the role of curriculum materials in teacher learning and instructional reform? *Educational Researcher, 25(9),* 6-8, 14.

Black, P., & Atkin, M. (1996) *Changing the Subject. Innovations in Science, Mathematics and Technology Education* (London, Routledge in association with OECD).

Brabeck, M.M., Walsh, M.E., & Latta, R. (2003) *Meeting at the Hyphen:*

Schools-universities-communities-professions in Collaboration for Student Achievement and Well Being (Chicago, National Society for the Study of Education).

Carr, W., & Kemmis, S. (1986)   *Becoming Critical: Education, Knowledge and Action Research* (London, Falmer).

Day, C. (1993) Reflection: a necessary but not sufficient condition for professional development. *British Educational Research Journal, 19(1),* 83-93.

Elliott, J. (1991) *Action Research for Educational Change* (Buckingham, Open University Press).

Frost, D., & Durrant, J. (2002).   *Teacher-led Development Work: Guidance and Support* (London, David Fulton).

Frost, D., & Durrant, J. (2003) Teacher leadership: rationale, strategy and impact. *School Leadership & Management, 23(2):* 173-186.

Fullan, M. (1993) *Change Forces: Probing the Depths of Educational Reform* (London, Falmer).

Fullan, M. (2001) *Leading in a Culture of Change* (San Francisco, Jossey-Bass).

Harris, A., & Lambert, L. (2003)   *Building Leadership Capacity for School Improvement* (Milton Keynes, Open University Press)

Harris, A. (2003) Teacher leadership and school Improvement. In A. Harris, C. Day, D. Hopkins, M. Hadfield, A. Hargreaves, & C. Chapman (eds.)   *Effective Leadership for School Improvement* (London, Routledge/Falmer).

Harris, A. (2004)   Distributed leadership and school improvement: Leading or misleading? *Educational Management Administration & Leadership, 32(4),* 11-24.

Henderson, J.G., & Hawthorne, R.D. (1995) *Transformative Curriculum Leadership* (New York, Teachers College Press)

Hiebert, J., Gallimore, R., & Stigler, J. W. (2003) The new heroes of teaching. *Education Week, 23(10),* 56.

Holye, E. (1969) *The Role of the Teacher*. London: Routledge & K. Paul.

Hopkins, D. (2001) *School Improvement for Real* (London, Falmer)

King, M. B., & Newmann, F. M. (2000) Will teacher learning advance school goals? *Phi Delta Kappan. 81(8),* 576-580.

Law, E., & Galton, M. (2004) Impact of a school based curriculum project on teachers and students: A Hong Kong case study. *Curriculum Perspectives, 24(3),* 43-58.

Law, E.H.F., & Wan, S.W.Y. (2005) *Developing Curriculum Leadership in a Primary School: A Hong Kong Case Study.* Proceedings of the International Conference on Education: Redesigning Pedagogy: research, policy, practice, Singapore: Nanyang University National Institute of Education, 30 May-1 June 2005.

MacBeath, J. (2004) Putting the self back into self-evaluation. *Improving Schools, 7,* 87-91.

MacBeath, J., & Moos, L. (2004) *Democratic Learning: The Challenge to School Effectiveness* (London / New York, Routledge/Falmer)

Macpherson, I., Aspland, T., Brooker, R., & Elliott, B. (1999) (eds.) *Places and Spaces for Teachers in Curriculum Leadership* (Deakin West, ACT , Australian Curriculum Studies Association).

Marsh, C. (1997). *Key Concepts for Understanding Curriculum* (London, The Falmer Press).

McLaughlin, M., & Talbert, J. (2001) *Professional Communities and the Work of High School Teaching* (Chicago, University of Chicago Press).

Miles, M., Ekholm, M., & Vandenberghe, R. (1987) *Lasting School Improvement: Exploring the Process of Institutionalization* (Leuven, ACCO).

Ovens, P. (1999) Can teachers be developed? *Journal of In-service Educaiton, 25(2),* 275-305.

Putnam, R.T., & Borko, H. (2000) What do new views of knowledge and thinking have to say about research on teacher learning? *Educational Researcher*, *29(1)*: 4-15.

Schon, D. (1983) *The Reflective Practitioner.* London: Temple Smith.

Sergiovanni, T. (2001) *Leadership: What's in it for Schools* (London, Routledge Falmer)

Shatin Tsung Tsin School (2003) *Quality Education Fund (7th Call for Application) Proposal of "Accelerating School Based Curriculum Development"* (Hong Kong, Shatin Tsung Tsin School).

Sherrill, J. A. (1999) Preparing Teachers for Leadership Roles in the 21st Century. *Theory into Practice, 38(1),* 56-61.

Shulman, L., & Sherin, M.G. (2004) Fostering communities of teachers as learners: Disciplinary perspectives. *Journal of Curriculum Studies, 36(2),* 135-140.

Skilbeck, M. (1984) *School-based Curriculum Development* (London, Harper & Row).

Stenhouse, L. (1975) *An Introduction to Curriculum Research and Development* (London, Heinemann)

Teddle, C., & Tashakkori, A. (2003) Major issues and controversies in the use of mixed methods in the social and behavioral sciences. In A. Tashakkori & C. Teddle (eds.) *Handbook of Mixed Methods in Social & Behavioral Research* (Thousand Oaks, CA , Sage).

The Ten School Leadership Propositions. Retrieved on 3 October 2005 http://www.ncsl.org.uk/the_college/college_publications/college-publications-ldf-framework.cfm .

Wallace, J. D., Nesbit, C. R., & Miller, A. C. S. (1999). Six leadership

models for professional development in science and mathematics. *Journal of Science Teacher Education, 10(4),* 247-268.