Teachers' responses to curriculum policy implementation: colonial constraints for curriculum reform

Jacqueline Kin-Sang Chan

Abstract   A new approach to curriculum and implementation in a new era normally requires schools and teachers to take more responsibility for student learning. This might present a challenge at any time, particularly when teachers have been used to more directives and less professional approaches to curriculum implementation. In order to meet such a challenge, a new approach to curriculum policy, namely "soft" policy, was used by policy-makers to implement curriculum reform. With the provision of substantial resources, it was expected by the policy-makers that schools and teachers would have better opportunities to develop themselves professionally and manage the new changes effectively. However, such a view misread the situation because the historical trend and present situation of teachers' professional development were overlooked. This paper uses case studies of schools and teachers involved in the current reforms to show how teachers and schools implemented the reform process. The cases demonstrate how reforms were understood at the local level and the extent to which it could be claimed that implementation had taken place.

Keywords   Curriculum policy and implementation · Teachers' response ·
Colonial constraints

1 Introduction

Recently, a widespread tendency towards change and reform in education has occurred throughout the world (e.g., Fullan 2007; Miles 2005; Sarason 2005). Hong Kong is no exception (e.g., Chan 2006, 2007; Kennedy et al. 2006). Since 2001, the school curriculum in Hong Kong has undergone a major change (Curriculum Development Council 2001). The change was initiated by a major government document on school curriculum, i.e., the "Learning to Learn" reform (Curriculum Development Council 2001). The curriculum shift was provoked by the government of the Hong Kong Special Administrative Region (HKSAR) pursuing

J. K.-S. Chan (✉)
Hong Kong Institute of Education, Tai Po, Hong Kong
e-mail: jaclo@ied.edu.hk

policies to align education with the needs of a knowledge-based economy. To accommodate this shift, teachers were encouraged more than ever before to take an active role in teaching and learning in order to deal with the new policies. This has in fact posed great challenges for the work of teachers and schools in Hong Kong because reform requires a change not only in teachers' roles but also in teachers' and schools' accountability for their performances.

2 Curriculum policy implementation and teachers' professional development

Policy implementation has the characteristic of being context specific, and depends on the people within the context, known as "significant actors," who provide support for the policy change. In general, it is evident that there is not a direct relationship between policy "inputs" and programme "outputs" (McLaughlin 2005). Recently, researchers have searched for ways of revealing how decisions can be coordinated among the different tiers of the decision-making process. For example, Emad and Roth (2009) endeavored to illustrate how the notion of boundary objects works in connecting the process of implementation from policy-makers and end-users. In particular, the interplay of multilevel systems has constituted an interesting area when policy implementation has become decentralized (Cini 2001; Putnam 1988; Torenvlied and Akkerman 2004). Since the last decade, curriculum policy implementation has become a decentralized process in South East Asia because of globalization and the quest for better quality education (e.g., Tang 2003; Weng 2003). However, the newly implemented curriculum policy is contradictory to the traditional centralized approach adopted in these South East Asia countries, where overall government interference has been significant through means of state control and interference in terms of the nature of school curriculum (Morris and Sweeting 1995). A traditional approach can be further explained by a five-stage process through which superordinate and subordinate groups operate together with major activities such as input of new ideas, dissemination, persuasion of participants, communication, and decision-making (Marsh 1991). How curriculum innovations can be substantiated instead of rhetorical is critical (e.g., Fullan 2007; McLaughlin 2005). According to models of curriculum implementation, as referred to by Snyder et al. (1992), the "mutual adaptation approach" usually works better than the "fidelity approach" in the literature of change, as adjustments and negotiations are allowed by curriculum developers and those who actually utilize the curriculum in schools or classrooms. It is particularly important that a teacher's involvement and participation are assumed to be active in the process of mutual adaptation. In this respect, teacher's professional development is key to successful curriculum implementation. One aspect of viewing the classroom teacher as a professional is the substance of knowledge that a teacher has acquired for teaching and learning (Grossman and Schoenfeld 2005; Shulman 1987). Bransford et al. (2005) further substantiated this line of thought within their framework of understanding teaching and learning by highlighting three major areas, namely, "knowledge of learners," "conceptions of curriculum contents and goals," and "understanding of teaching." There are other lines of research for linking teachers as implementers in work contexts: conditions of work such as the learning community; and the organizational and the cultural change for facilitating the outcomes of implementers and school effectiveness (e.g., Nias 2005; Sergiovanni 2005). Apart from these considerations, there is a group of researchers studying teachers' beliefs and conceptions relating to teaching and learning that have an important impact on teacher professional development (Calderhead 1996; Kagan 1992; Pajares 1992; Richardson 1996). In the traditional model, where the teacher's role has been subordinate within the school context, there was less opportunity for the teacher to pursue professional development. However, in the era of change, where emphasis is placed on fewer

top-down interventions, on more school-based curriculum innovations, on reinvestment of human capital and provision of resources for enhancing teachers' initiatives, and on professional development, teacher's professional development and participation in curriculum implementation are expected to be different from in the traditional approach.

3 Historical trend: curriculum policy during the colonial period and its influence on teachers

During the colonial period from 1842 to 1997, the government of Hong Kong exercised restrictive control on educational matters, although it did not intend to do so at the very beginning. In early colonial rule, interference from the British government in local educational affairs was minimal, for the local people were mainly Chinese (Sweeting 2004). The "positive nonintervention" policy of Hong Kong's colonial government in relation to education did not last. No sooner had the Hong Kong Government become aware of the political changes taking place around it (i.e., The People's Republic of China and Taiwan), government input in education became explicit. As Morris and Scott (2005) noted, "there has never been any question that ultimate control over policy should remain firmly in the hands of the government" (p. 85). The government directly influenced the curriculum by keeping controversial political issues out of it (Morris 1996). In order to avoid teachers playing a key role in the indoctrination of students' political beliefs, the colonial government adopted a "hard" policy approach to the school curriculum in the colonial period (Chan et al. 2008). There are quite a number of examples which illustrate that the Hong Kong Government had adopted strict rules for the classroom that were backed up by laws. For example, in 1971, the government strictly prohibited activities and teaching materials relating to political issues from being used in schools. This prohibition was enforced through the laws of the Hong Kong colony (Hong Kong Government 1971, p. 23):

> 92. (1) No instruction may be given by any school except in accordance with a syllabus approved by the Director. (repealed L.N. 268 of 1990; Hong Kong Special Administrative Region Government 1998).

To put in place the education regulations as laid down by the government, schools had to follow and use the prescribed syllabus and textbooks approved by the Education Department. The strict rules imposed by the colonial government at that time are attributed to the government's intention to "react to the perceived threats from Communist forces" (Sweeting 1995, p. 60) by legislating acts against political influences from communist China within the public sector, especially in education. The standardization of the school curriculum was further enhanced by the use of textbooks recommended by the Curriculum Development Council and also by the use of syllabuses of public examinations adopted in the school system. In this regard, teacher participation in the school curriculum was marginalized, and the teachers' expected role in the school curriculum was assumed to be somewhat technical. Working under a highly controlled education system and curriculum restrictions, teachers in Hong Kong could rarely pursue professional development.

4 New curriculum policy and priorities in Hong Kong

There are significant differences highlighted in curriculum policy and implementation in the colonial and postcolonial periods of education in Hong Kong. The following discussions will

focus on three aspects, namely the orientation of the curriculum policy, the implementation strategies, and the culture for implementation. Unlike the situation during the colonial period, recent curriculum reform in the postcolonial period does not essentially relate to political aspects, but rather relates to economic advancement of society through developing human capital. The orientation and characteristics of the curriculum policy during the colonial period are vividly described by Kennedy (2005, p. 101):

> This usually means that the curriculum is based on traditional academic disciplines, usually focused on the preparation of students headed for higher education often in the context of limited places, little control can be exerted by teachers, parents or students so the emphasis is on central control and examinations are the key selection mechanisms. Thus the pre-1997 curriculum could be defined as: traditional, elitist, competitive, exam-dominated, and bureaucratic.

In the new era, recent curriculum reform in Hong Kong reflects the intention of the government to enable the growth of the economy in society through the building of human capital. The shift is partly due to the financial turmoil since the turn of the century in Asia, and partly because of globalization issues in the world. Building upon the global trend in education, the orientation in the new curriculum has called for a new teaching and learning model. For example, the concept of a "one-size-fits-all" approach to school knowledge is found to be poorly adapted to individual needs and to the knowledge of society at large (OECD 2006). The orientation and characteristics of the current reforms in Hong Kong can be further explained by Kennedy and Lee (2008, p. 30), such that the unique needs of the knowledge economy are linked to the "new growth theory" in economics:

> The key element of "new growth theory" is its assumption that economic growth is fuelled not so much by investment in machinery and equipment as by the new ideas and innovative processes that people apply to business and industry. "Ideas-generated growth" requires investment in people who are creative, innovative and problem solving and who can apply these attributes to increasing efficiency and enhancing technological development. The "knowledge economy" is driven by "knowledge workers" equipped with very specific skills and attributes.

Just as "new growth theory" requires a different curriculum, a revised teaching and learning model and an alternative assessment practice for the new learning, the newly adopted large-scale curriculum requires nurturing of students' generic skills and cross-disciplinary knowledge, nurturing of attributes such as project learning, language competency, information and technology skills, and nurturing of moral and civic attitudes through various key learning areas. As the new curriculum and learning are rather complex and cannot be attained merely through top-down instructions, teachers are, therefore, assigned new active roles in working out the curriculum through professional collaborations and individual expertise. It was assumed by the policy-makers that teachers would become active professionals by renewing a teacher's role through the adoption of various government strategies such as guidelines, recommendations, and the use of school-based curriculum development. Accordingly, the "Learning to Learn" policy document sets an ideal for the future development of the Hong Kong school curriculum, with the expectation that teachers would acquire new roles in the reform. In particular, the following roles were assigned to teachers, as highlighted in the reform document (Curriculum Development Council 2002, Booklet 11, p. 2):

> Specific roles of teachers in helping to create a climate conducive to educational and social development are:

- To strengthen the development of generic skills and in particular, critical thinking, creativity and communication skills through the learning and teaching of Key Learning Areas (KLAs).
- To use appropriate teaching and assessment strategies to motivate students in learning.
- To listen to students and help them to improve their learning by making use of appropriate learning and teaching resources in support of the curriculum change.
- To develop a personal plan of professional development and life-long learning in order to keep abreast of the latest developments and changes.
- To collaborate with fellow teachers or external supporting agents in lesson preparation and the trying out of strategies that have a positive impact on learning.
- To collaborate with community workers to bring about 'life-wide learning' amongst students.
- To be reflective in daily practices and ready to discuss issues, knowledge and experience with other teachers.
- To communicate with parents in order to explain the curriculum and learning policy and seek their support and assistance to enhance student learning.
- To help parents understand the purposes of assessment and the strengths and weaknesses of their children and to help them to see that marks and ranking in class do not necessarily reveal much about the learning and progress of their children.

Teachers' professional roles were expected to be influential factors in helping the government to attain the goals of innovation in the "Learning to Learn" reform. The reform approach presents a strong contrast to that of the colonial period, in which teachers were not consulted or given any professional autonomy for implementation of the school curriculum.

Moreover, teachers are now working in a far more complex system of change that demands a high level of teacher performance and student output. Their professional development is hindered by the busy work schedule induced by government policies on quality education and assessment. The first policy is an approach to quality education by using quality-assurance inspection strategies to measure the effectiveness of schools, or education, in Hong Kong at large (Tse 2002). The quality assurance (QA) framework was adopted in 1997 to evaluate the effectiveness of schools (Education Bureau 2007a). The QA framework was further adapted as the School Development and Accountability (SDA) framework for implementation in all schools. To implement the SDA framework, schools must prepare for their own school self-evaluations (SSE) and validation by the external school review (ESR) through ESR reports (Education Bureau 2007b). To conduct an ESR, 29 performance indicators are used by the ESR team to assess schools' performances in four domains, i.e., management and organization, learning and teaching, student support and school ethos, and student performance, through various means of information collection, e.g., observations, discussions and interviews, scrutiny of students' work, and inspections of school documents (Education Department 2002). Although there have been heated debates about the adoption and implementation of the quality education approach by the government (Mok and Chan 2002; Tse 2002), schools and teachers must comply with the regulations and rules set out by the policy, and they must produce numerous documents for inspection by the ESR team.

The second policy is the adoption of a new assessment system: a new Territory-wide System Assessment (TSA) implemented in schools to assist the new curriculum changes (Chan et al. 2006). The TSA is administered by the central government and is intended

Table 1 Summary of teachers' backgrounds in the study

School	Teachers interviewed	Teachers' teaching subjects and functional roles in schools
School S	Miss Au	Department head, subject teacher of English and religious studies
	Miss Chan	Subject teacher of Chinese, physical education, and mathematics
School T	Miss Yu	Department head, subject teacher of Chinese
	Miss Cheung	Department head, subject teacher of English
School L	Mr. Leung	School librarian, department head, and subject teacher of mathematics
	Miss Chow	Subject teacher of English and visual art
School P	Mr. Ho	Subject teacher of general studies, Chinese, and computer studies
	Miss Cheung	Subject teacher of Chinese

to assess students' learning profiles at their key learning stages, i.e., primary 3 and 6, and secondary 3, so that early measures of intervention may be provided by schools to students whose learning has lagged behind. The above measures were adopted to improve students' learning through teachers' proactive and professional efforts and through quality teaching in schools. By measuring students' achievements through TSA and by comparing students' results between schools through normative statistics presentations, there has been evidence of a pressing need for local schools to improve their students' performance. The above policies eventually exerted pressure on schools, especially those with enrolment of students who were underachievers with little family support for their learning. Since the new curriculum reform has been in place, schoolteachers have had to shift their roles dramatically, from the passive role of technical implementer to that of active curriculum maker. Furthermore, teachers have had to fulfill the multiple roles of being active curriculum makers, gatekeepers of student academic achievements, and ensuring overall school effectiveness. It is this dilemma that schools and teachers have been struggling with in their daily work since the implementation of curriculum reform.

5 Methodology

The aim of this study was to investigate how policy implementation processes were conceptualized and activated from local perspectives. In essence, the study used individual schools and teachers as cases to describe and analyze how the traditional and recent trends of curriculum policy and implementation influenced the way teachers and schools went about the reform process.

A qualitative approach was adopted. Four local primary schools were included. Firstly, relevant school documents relating to the case-study schools were reviewed. These documents included school plans, internal school self-evaluations, ESR reports, and items about school development reported in newspapers. Secondly, semistructured interviews were conducted by the researchers within the school context. From each participating school, two front-line teachers participated in individual semistructured interviews, comprising a total of eight interviews for this study. The interviews were based on an interview guide, and each interview lasted approximately 45–60 min. The interview data were transcribed, and the transcriptions were sent to the interviewees for checking and confirmation. Finally the transcribed data were coded and analyzed (Table 1).

6 Findings

As Hong Kong teachers were expected to be technical implementers in the past, teachers felt confused with their new roles as independent professionals, as assigned by the current curriculum reform. Working under the new direction of curriculum reform, teachers tended to focus on meeting the external requirements of the new education system, i.e., complying with all the indicators and standards set out by the government, and presenting a good public school image in terms of student achievement and school effectiveness. The ways in which teachers came to understand the new curriculum and their new roles expected by the government were presented in the following themes:

- The nature of curriculum implementation was not decentralized, and school innovations were controlled by government allocations of funding resources.

From the school documents, e.g., school plans or ESR reports, etc., it was found that the curriculum innovations adopted in the case-study schools matched very well with the major changes suggested in the government documents (school documents, schools S, T, L, and P). For example, the innovations adopted included reading schemes for improving language teaching and learning (school documents, schools S and T), and the development of school-based curriculum (school documents, schools S, T, and P) which matched the "four key tasks" mentioned in the key curriculum documents, i.e., moral and civic education, reading to learn, project learning, and using information technology (Curriculum Development Council 2001). Although the case-study schools were given opportunities to choose their own school-based curriculum, the result was that they usually chose the innovations emphasized in the government documents (school documents, schools S, T, L, and P). Moreover, teachers viewed the innovations as government-directed instructions:

> Firstly we have to follow the instructions from the central government about curriculum innovations. Whenever there is something new from the EMB (Education & Manpower Bureau), we have to implement the change in our school. (Miss Au, school S, interview)

According to the teachers, extra funds allocated to their schools by the Education Bureau must be used for trying out new innovations that were in alignment with the central documents. Extra funding was therefore perceived as a central policy used to encourage local schools to innovate and move towards the major goals of centralized reform.

- Teachers relied on the professional help of external experts in mastering the new teaching techniques.

Although there were numerous government documents available for each school's reference, teachers did not know how to put these materials into practice. To the teachers, these documents were abstract and high-flown. In order to put these innovations into real practice, teachers felt that concrete examples or real cases were needed.

> I think that "Learning to Learn" (government reform document) is too abstract to be put into real practice. Although there are some examples given in the Curriculum Guides, there are still a lot of gaps to be filled in by the teachers if they are to be adopted. (Miss Cheung, school T, interview)

Very often, schools sought external assistance to serve as coaches in their first trials of the innovative reforms (school documents, schools S and T). In general, this external help included external subject expertise, such as native speakers of English and Putonghua (Mandarin), for creating a suitable language context in the classrooms.

> We have employed two Putonghua (Mandarin) teaching assistants since last year. They
> are native speakers (Putonghua/Mandarin) and usually co-teach with the Chinese lan-
> guage teachers. They also help us to organize interest groups for students learning
> Putonghua. (Miss Yu, school T, interview)

Teachers found the centralized organized seminars and workshops to be fairly acceptable
for aiding their understanding of the reform initiatives. Compared with reading the numerous
government reform documents, teachers preferred to attend these seminars and workshops
in order to gain rapid understanding of the centralized theme from the officials in a rela-
tively short period of time. To further aid them in the issue of real implementation, it was a
trend for schoolteachers to use services from the school–university partnership. The teach-
ers perceived that the partnership scheme provided them with opportunities for in-service
professional development.

> Last year we had tutors from the local university to help out. They discussed with us
> about the most difficult parts of mathematics teaching that we have come across. After
> the discussion, we worked together (on the problems), prepared lessons, observed each
> other's lessons and then discussed. (Mr. Leung, school L, interview)

Coaches for implementing school innovations could also be government officers who
provided on-site, school-based support. Teachers perceived that the support of coaches was
fairly useful for helping them to adapt to the innovations in their own specific school contexts.

> Last year the EMB (Education and Manpower Bureau) officials helped us to launch the
> new initiative of "project learning" in our school. They introduced an expert in "project
> learning" to co-work with us. During that period they came regularly to observe our
> work and students' progress. (Miss Yu, school T, interview)

It was found that curriculum reform in its documentary form was not easily comprehended
by teachers and that the teachers did not have ideas on how to implement the curriculum
reforms. With the resources allocated, schools perceived that it would be quicker to put the
reforms into practice by seeking external help (school documents, schools L and T). How-
ever, if the external agents played a leading role in guiding teachers throughout the entire
implementation, teachers' professional roles would remain those of technical implementers.

- Teachers strove to achieve innovations that matched as closely as possible with what the
  government wanted.

For the curriculum innovations that took place in the 1990s, teachers did not really con-
cern themselves with the targets and aims of the government-led reforms, because teachers
and schools were relatively free to adopt a proposed innovation or not (Tang 1995). How-
ever, into the 21st century, teachers and schools felt the need to take on the innovations in
their entirety, because schools had to be accountable for teacher and student performances
that might closely relate to the effectiveness of curriculum implementation in their schools.
When speaking about the innovations, teachers felt that the real concern was to know what
the government really wanted:

> The most difficult time was the 1st year (of school innovation) because we did not
> know what they (the Education Bureau) wanted. Also, because it (the innovation) has
> not been put into practice before, we have been facing a lot of difficulties throughout
> the process. (Mr. Ho, school P, interview)

Administrators and teachers were keen to learn more about the government's expectations for curriculum reform because it would clarify their work regarding the instructions or requirements as set out by the government. As teachers were uncertain about what would be required of individual schools, they preferred observing what other schools had done rather than opening themselves up to external agents, especially government officers:

> I feel that sharing school practices is a good way (to facilitate change). If it is a seed project (government supported scheme with on-site support from the central officers), it will attract people like government officers to come and visit us. In this way, our workloads would definitely be increased, because we have to do a lot of planning and preparation work for their visits. Therefore, I think it would be more practical if we could visit other schools to get some ideas about how others implement the innovations. (Miss Yu, school T, interview)

- Teachers' top priorities were students' achievements in the examinations.

Although the policy of adopting textbooks and teaching materials in classrooms had been replaced by teachers' flexible use of recommended textbooks or self-designed teaching materials, teachers preferred choosing from available textbooks with a close link to the centrally administered TSA:

> The TSA is accountable for our choice of textbook. The content of the TSA is quite different from what we have taught in classrooms. It (TSA) focuses on reading and writing. Our previously adopted textbooks seem to be problematic in this way—they provide less chance for student writing. Now we have adopted a new textbook that perfectly matches the required format of the TSA—it provides lots of exercises for students in reading and writing. (Miss Au, school S, interview)

The TSA has greatly changed the teacher's life in the classroom. In the past, teachers did not pay much attention to the attainment tests delivered by the government because there would not be any impact or penalty given to individual schools. The fact that the TSA has received a lot of attention from schools and teachers does not reflect the stated aim of reform that purportedly placed less emphasis on examinations and drills.

> In the old days of adopting attainment tests, students in their early years of primary schooling actually learned at their normal pace without much examination burdens. Since the introduction of the TSA, primary 3 and 6 students have to take centralized TSA examinations. I have found that many schools have changed their teaching modes starting from primary 1, i.e., more drills in the classroom teaching and learning, so that students will be able to tackle the TSA. (Mr. Ho, school P, interview)

As long as teachers felt that they had a significant role in helping students to attain good TSA results, they would continue to drill their students in the classrooms.

- Conforming to curriculum reform is a survival tool.

On the one hand, teachers welcomed the resources and support allocated by the government. On the other hand, they felt negatively towards the resources allocated because the application of the resources would imply more work and burden. Although teachers were reluctant to receive the resources and support, they had to accept these resources since the schools they were serving had to take on the innovations suggested by the central reform. In order to survive, teachers had to use these resources and supports to continue implementing innovations in their schools. The dilemma was that, the more allocated funds that teachers received, the more effort they had to expend.

To a certain extent, teachers are burdened. Maybe they feel that the work is necessary, yet they also feel that the work is extra to them. We would like to ask, 'Why do we have to work so hard in addition to our normal teaching?' (Miss Au, school S, interview)

For survival purposes, teachers believed that their efforts in reforming their school's curriculum would be significant to ensure the school's survival.

As teachers, we have tried our best to reform the school curriculum. The main purpose is survival. (Mr. Leung, school L, interview)

The survival of the school means that the school would escape from the fate of closure. In view of the decreasing birth rate and the decline in student enrolments, schools with diminishing class sizes are facing the possibility of school closure (field notes of schools S and T revealed that the class size of these schools is actually diminishing). In order to attract parents and to secure student enrolments, schools started to promote themselves as innovative and, therefore, able to provide better learning environments for students. Moreover, a track record of reforms in an individual school enhances the presentation of a good school profile for the ESR team's inspection and thus a release of favorable school information to the public (school documents, schools P, S, and T). In general, teachers did not feel that they had autonomy and a professional role in reforming the school curriculum, but that they worked simply for the sake of survival:

We take on these reforms simply because of survival. Recently our school has started up a lot of reforms and projects aimed at avoiding school closure. Actually our school has gone through the closure experience before (with a successful appeal), and we found that we could manage to survive if we could accomplish these reforms nicely. This is the evidence (survival by implementing reforms) of our school's continued survival. Therefore, we have to keep working on reforms, both in depth and breadth, and search for more ways to improve our curriculum. That is why we take on so many new projects while simultaneously maintaining the existing ones. (Mr. Leung, school L, interview)

7 Discussion

Firstly, teachers' responses to recent curriculum reform and implemented policies do not reflect a positive view of teachers vis-a-vis educational and school change as a whole. Despite additional resources being allocated to schools to encourage implementation, teachers generally felt negative about the extra work and burden brought about by the reforms. Indeed, recent curriculum reform promotes an ideal form of teaching, learning, and assessment that can hardly be rejected by schools and teachers. However, as Hargreaves et al. (2001) put it, "in reality, the new orthodoxy of educational reform represents what we call a "karaoke curriculum." The literal meaning of the new curriculum orthodoxy is—an empty box. Behind the broad advocacy for high standards, deeper learning, and more rigorous assessment, all kinds of meanings and interpretations are possible. The devil, as they say, is in the details, and the details of the particular approaches being taken to standards-based reform in many places are indeed devilish" (p. 3). On the one hand, teachers could not reject the overwhelming goal of curriculum reform, but on the other hand, they felt the push and pressure behind the policy.

Secondly, from the data findings, schools and teacher practices mainly followed the guidelines of the government policy, although there might be other possible routes of programme curricula for implementing the policy. The phenomena reflected that schools and teachers

were generally passive in their implementation. One speculation is that the colonial constraints, as highlighted in the previous section on "Historical trend: curriculum policy during the colonial period and its influence on teachers," have a lingering impact on teacher development. Teachers who were used to textbook teaching, and an academic-oriented and examination-oriented curriculum, could not easily give up their practices. Therefore, generally teacher's professional development could not be enhanced in the postcolonial period despite the government's will toward promoting teachers' autonomy and professional development. Apart from the standard excuses that "educational change is easier said than done" (Fullan 2007; Fink and Stoll 2005) and that curriculum reforms, in normal circumstances, remain rhetorical, there are various factors mediating the change contexts such as the accountability roles of the schools and teachers, the newly implemented policy for school review and quality assurance, the new assessment system (Territory-wide System Assessment), the policy on school closure due to downsizing, the gradual decline of the birth rate and insufficient student enrolment, etc. All these can be included in the "core concepts of complexity theory, such as "non-linearity," "unpredictability," "interaction or correlation," "auto-catalysts," "the edge of chaos," "social attractors," "butterfly effects," and "a complex adaptive system" (Fullan 2003, pp. 22–23) that contributed to the complexity of the current reforms and the constraints of schools and teachers. Given the differences in social and political environments of the colonial and postcolonial periods, it is quite unfair, and impossible, to compare the two systems and their different impacts on teacher development. It is, however, noted that various factors and multiple challenges arising from different historical periods of society have their influential impacts on teachers' professional development and these should be taken into consideration by the policy-makers.

Thirdly, the findings of this study revealed a major difference in the implementation strategies adopted during the colonial and postcolonial periods. Morris (1996, pp. 120–121) argued that the Hong Kong school curriculum before 1997 was a centralized one, characterized by the use of power or authority of some agents over others. This strategy had exerted a negative impact on actual curriculum implementation; i.e., the level of implementation was low or there was resistance to its adoption because users often had no sense of ownership of curriculum revisions and had little intrinsic motivation to change. The strategies used by the colonial Hong Kong Government were described by Morris (1996, p. 121) as having "involved the provision of low cost resources, decision making dominated by super-ordinate groups, and linkages which are primarily designed to communicate the nature of official policies."

The strategy used during the postcolonial period is, however, intended to be a decentralized one that allows schools to make their own decisions. Instead of using low-cost resources as in the colonial period, a rich and substantial pool of resources are allocated to schools for the provision of substantial support during implementation. The resources and support provided are significantly different from the previous government's top-down policy, as stated in the government document (Curriculum Development Council 2001). In fact, the provision of resources and support by the government was recognized by the teachers in this study. By and large, teachers in government and government-subsidized schools could benefit from this new policy. Despite this, it is interesting to note in this study that, when more abundant resources were allocated to schools and teachers, the morale of the teachers declined. Fullan (2003) comments on the rise in students' scores but decline in the morale of teachers and principals, might help to explain the situation: "I believe that the reason for this is (a) the basic working conditions of teachers did not change to enable them to become fully engaged, and (b) the literacy and numeracy strategies, per se, were not actually aimed at altering this more fundamental situation" (p. 3). It is thus clear here that successful policy

implementation does not wholly rely on the kind of strategy used but rather upon relevant strategies that go well with the deep-rooted factors existing at individual, organizational, and system levels.

Finally, the results of the study revealed that teachers in the study have been working under great pressure. Many of them have been anxious about their work, particularly relating to the TSA results achieved by their students each year and the inspections by the quality assurance team. Under the new quality education policy, schools would be accountable for student achievements and school performances in the prevailing "managerialism" culture where parents, government officials, and the public are important stakeholders whose comments on school performance and cost-effectiveness are significant. The situation has become worse as schools are facing downsizing and are being threatened by mandated closure because of the decreases in the birth rate and student enrolment in recent years. A derivation from this rather pessimistic picture of a teacher's life and work is that teachers are caught in the situation of chasing after prescribed indicators while real concern for teaching and learning is much neglected.

It may be too simplistic to draw the conclusion that the quality assurance approach and the many measures of "managerialism" and "accountability" should shoulder the blame for teacher's stress and the alteration in teachers' professional practices. However, it must be considered that there is evidence to support that the policies adopted by the government on curriculum reforms have posed a significant challenge to teachers' professional development.

8 Conclusions

The study has shown how the current curriculum policy implemented by the government of Hong Kong has launched curriculum reform and has redefined teachers' work in local schools. Compared with that of the colonial period, the current strategy seems to be more decentralized. However, this is not how it is perceived by schoolteachers. Teachers are heavily burdened by implementing the various innovations adopted in their schools, and the policy seems to have resulted in increased frustration for teachers. It is time for the policy-makers to consider the various conditions and contexts that the schools and teachers are now facing and to reconsider how the current curriculum policies can be better fitted into school and classroom reality so as to safeguard the successful implementation of the policies.

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