

From Differentiation to Diversity: Reforming Secondary Technical Education in Postcolonial Hong Kong

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Abstract

During Hong Kong's colonial period, secondary technical education to a large extent mirrored that of the British tripartite school system. However, after 156 years of colonial administration in Hong Kong, the Special Administrative Region (SAR) government carried out a revamp of education, in particular, secondary technical education. In view of the handover of Hong Kong's sovereignty to China, one could ask: Was it for political reasons that the SAR government reformed technical education, or was the reform more pragmatically oriented and geared to local needs? This study therefore aimed to determine which of these motives lay behind the changes made to secondary technical education in Hong Kong and the characteristics of such changes. This study revealed that it was because of the need to meet the socio-economic needs of Hong Kong that the existing secondary technical curriculum had to be reformed. In redefining the paradigm of technical education in the New Senior Secondary curriculum, Applied Learning was introduced as an integral part of the school curriculum and offered to all schools without any differentiation. There is no evidence to suggest that the introduction of Applied Learning was a reaction on the part of the SAR government against the colonial legacy.

Keywords: secondary technical education, Applied Learning, decolonisation, reactionary, pragmatic

1 Introduction

During Hong Kong's colonial period, secondary technical education in the colony largely mirrored secondary technical education in Britain's tripartite school system. However, in the 1960s, Britain's tripartite school system was criticised for creating a disparity in education opportunities for young people by segregating them at the age of 11 into three types of schools: Grammar, technical and modern. The subsequent abolition of Britain's tripartite

school system in the 1960s might have made it difficult for the Hong Kong colonial government to continue to use the British model of school education in Hong Kong. At the same time, there were calls for secondary technical education to be made more relevant to Hong Kong society. For example, in the 1960s, the Director of Education, Peter Donohue, in an attempt to solve the problem of the gap between the primary school leaving age and the legal working age, introduced experimental government modern schools to Hong Kong. Likewise, in the late 1960s, the idea of establishing three-year prevocational schools in Hong Kong came from the adviser of the International Labour Organization, Ian Grant, who perceived that it could help to solve the problem of widespread youth delinquency. In addition, in the 1970s, it was due to economic considerations that there was curriculum differentiation by school types. This was revealed in the annual summary of the Education Department (1974), which stated that the immense influx of refugees from China and the rapid development of the manufacturing industry had generated demand for more school places and skills training for youth. At that time, not only did the industrial sector urge the government to provide an adequate supply of skilled and semi-skilled workers and apprentices for industry, but religious bodies also regarded secondary technical education as a viable avenue for underprivileged students to enhance their employability. Therefore, under these circumstances, prevocational schools were retained. In fact, before the 1960s and as far back as the Burney (1935), there had been attempts to relate education in Hong Kong more closely to local needs. Hence, the colonial government, while making reference to the British practice in technical education, continually modified the format of secondary technical education in order to meet local needs (Lau & Kan, 2011). All this shows the pragmatic orientation of the colonial government in its consideration of the format of secondary technical education.

After the handover of the sovereignty of Hong Kong to the People Republic of China (P.R.C.) in 1997, Hong Kong's technical education underwent a major overhaul, and the question is whether it was for the same local needs

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that the SAR government reformed secondary technical education, or whether the reform was politically motivated. It is worth noting that in 1997, unlike decolonised states that became independent, Hong Kong became the Special Administrative Region (SAR) of the P.R.C. Hence, the ways in which the P.R.C. perceived colonialism might have directly influenced the policy of the SAR government in regard to Hong Kong's colonial legacy. It should be noted that for its part, the P.R.C. never acknowledged the colonial status of Hong Kong. For example, in 1972, when the P.R.C. became a member of the United Nations, the P.R.C.'s representative immediately requested the removal of Hong Kong and Macau from a list of territories supervised by a UN 'special committee on colonialism' on the grounds that they were part of China (Miners, 1991). Therefore, it is possible that due to political considerations, the Hong Kong SAR government wished to eliminate all traces of the colonial legacy so as to signify the end of the colonial era, and the education system was an important item on that agenda. In view of the uniqueness of Hong Kong in the decolonisation literature, it is worth exploring the reasons why the SAR government reformed secondary technical education and, at the same time, identifying the way in which it was reformed. In order to position this study in an investigative framework, the following section reviews the two approaches to educational reform in decolonised countries: Reactionary and pragmatic.

2 Decolonisation and Education

It should be noted that decolonisation took place at different times and in different forms; for example, the practice during the 1950s and 1960s differed from that in the 1980s and 1990s. Bray (1994) notes that during the latter period decolonisation had the following characteristics: "More lead time, common integration with the original mother country, fewer military conflicts and lower nationalist sentiment" (p. 38). Regarding educational reform in decolonised countries, there have been basically two approaches: A reactionary approach and a pragmatic approach. The reactionary approach involves the newly-sovereign state doing away with the obviously colonial parts of the existing curriculum and implementing a series of educational reforms that reflect more strongly the country's specific culture and social conditions. Morrissey (1990), Altbach (1992), and Bray (1997) all hold the view that decolonised states would reform the curricula for the sake of removing the colonial legacy and to portray the emergent nations and their rulers in a new light. This approach was more politically than educationally motivated. Bray illustrates this approach in the case in southern Nigeria during post WWII decolonisation.

...The new leaders had to adopt *educational* policies which were self-evidently different from those of their colonial predecessors. This included responsiveness to popular demand for expansion at all levels of the education system and replacement of at least the most glaring parts of the colonial curriculum. (Bray, 1997, p. 110)

According to this school of thought, the reform of secondary technical education in post colonial Hong Kong was politically driven. In replacing the old colonial curriculum with a new one, the emergent SAR government aimed to portray itself in a different and better light. The other approach, a pragmatic approach (Bray, 1994; Morris, Kan, & Morris, 2000; Thomas & Postlethwaite, 1983), involves the new government taking into account the socio-economic needs of society vis-à-vis the existing curriculum in determining the extent to which the curriculum needs to be reformed. In regard to the influence of socio-economic forces in explaining curriculum changes, Skilbeck (1991) states that the curriculum either is, or can be made, directly responsive to forces and trends in the economy. In other words, the reform of the curriculum is part of a wider strategy of economic restructuring and development. For example, Morris (1995) points out that in Hong Kong in the 1950s and 1960s, when factory workers were needed in the manufacturing industry, "the curriculum of schools, especially its hidden curriculum, was well suited to prepare students with these skills [a basic level of literacy and numeration... diligent, dextrous, punctual and obedient]" (p. 129). However, the economy increasingly came to rely on intellectual services, and this led to "growing concerns on the part of employers over students' ability to use English and Putonghua and... computer studies, accounting, commerce and business studies... and the teaching method which encourage competencies such as problem solving and co-operative learning" (Morris, 1995, pp. 129-130). Hence, according to this view, the government had to reform the school curriculum in accordance with the socio-economic needs. With a view to exploring whether the reasons behind the reforms made in secondary technical education in Hong Kong arose from political or from pragmatic needs, the following section first analyses Hong Kong's economic situation and the education reform carried out, particularly in secondary technical education, shortly after the Handover.

3 Hong Kong after the Handover: Economic Restructuring and Education Reform

In regard to Hong Kong's decolonisation, the following two characteristics should be noted. First, after the signing

of the Sino-British Joint Declaration in 1984, a 13-year transition period began. The long time span of the transition allowed changes that had been planned by the colonial government, including the revision of curricula, to be implemented before the handover of sovereignty. Second, in 1997, Hong Kong became not an independent state, but a Special Administrative Region (SAR) of the P.R.C. Therefore, during the transition period, both the outgoing British administration and the incoming SAR government aimed at a smooth and trouble free transition prior to 1997. In this respect, any changes to be made, such as those to the education system, had to be gradual rather than drastic in order to minimise any threat to the stability of Hong Kong. The Basic Law of the SAR guaranteed that Hong Kong's economic and social systems would not change for 50 years after 1997; in the words of the new SAR government, "the first government of the Hong Kong SAR has not embarked on a radical course of decolonisation in an attempt to excise vestiges of the colonial past" (Morris et al., 2000, p. 244). In addition, before the Handover, Hong Kong had already been a highly successful free market economy, and the concern of the first SAR government was very much on identifying ways in which Hong Kong's prosperity and stability could be continued. However, shortly after the Handover, the tsunami of the Asian financial crisis and the massive speculative attacks against the Hong Kong dollar nearly toppled the local economy, signalling seismic changes on the socio-economic horizon in subsequent years. At that time, Hong Kong also faced the imminent challenges of economic globalization, accelerating progress and increasing outsourcing of labour in intensive manufacturing that had begun in the late 1980s (Sung, 2002). In this context, after the Handover, the Hong Kong government envisaged a process of economic restructuring (Hong Kong SAR Government, 2003), which was in response to the worst economic recession that Hong Kong had experienced since the mid 1960s. At a time of economic setback, Hong Kong, as elsewhere, "increasingly placed education at the centre of the policy agenda as questions were asked about the system's efficiency/value for money and the suitability of schooling in preparing students for the labour market" (Morris et al., 2000, p. 246).

In order to enhance Hong Kong's competitiveness in a knowledge-based, service centred and globalised economy, in 2000, the government launched comprehensive education reforms and tried to galvanise support from the public (Cheng, 2002). The Chief Executive of the Hong Kong SAR, Tung Chee Hwa, said in his 2000 Policy Address that "educational reform is critical in order to meet the expectations of social development and of the community resulting from scientific, technological and economic change" (Tung, 2000, para. 63). This situation required

students to be flexible, communicative and prepared to learn and solve problems (Cheng, 2004; Farrell & Fenwick, 2007). Cheng (2007), commenting on the demands from socio-economic needs that prompted reforms in the education system, observed that economic structural changes significantly affected skills formation in schools and pathways to employment. The new service economy required skills of interaction, problem solving, risk taking and innovation. It was against this background that the education reform initiated shortly after the Handover was aimed at equipping students with different generic skills, such as communication skills, critical thinking skills, creativity, collaboration skills, IT skills, numeracy skills, problem solving skills, self management skills and study skills (CDC, 1999). It should be noted that these skills, in one way or the other, were also objectives of the newly revised secondary technical education in the post Handover period. Therefore, in the revised secondary education system, it was necessary to consider how these generic skills could be merged with vocational experience in a structured curriculum.

In fact, as far back as March 1997, shortly before the Handover, the colonial government had made strenuous efforts to revitalise secondary technical education by reviewing prevocational and secondary technical education. The government attempted to revise traditional technical subjects like Design and Technology and recommended to provide new resources for upgrading equipments and facilities. However, the Review of Prevocational and Secondary Technical Education in 1997 did not suggest altering curriculum differentiation by school types (grammar, technical and prevocational), which meant that technical subjects remained a limited provision to a small number of schools. This differentiation had long been criticised for engendering inferior esteem of secondary technical and prevocational schools as technical education was perceived as second class education (Lau & Kan, 2011). Hence, this Review was unlikely to achieve the aims of senior secondary education laid down by the Education Commission in 2000, which emphasized a holistic learning experience for all students.¹ As the curriculum differentiation by school types was unlikely to gain the support of parents and students, the Education Commission emphasized that "future senior secondary education should provide choices, flexibility and holistic experiences including vocational experiences to students, regardless of their school" (Education Commission, 2000a,

¹ The latest statistics that classified secondary schools into grammar, technical and prevocational were in the 2000/2001 academic year. The three types of school are numbered 440, 19 and 27 respectively. See Key Statistics for Secondary Education (April 2000) by Education and Manpower Bureau.

p. 28). To achieve this, in 2003, Applied Learning (the name was formally adopted in 2007; before that, it was called Career-oriented Curriculum) was introduced into the school curriculum in all types of schools as a pilot scheme, including in many former secondary technical schools and prevocational schools. This mode of education was embedded in the new academic structure for senior secondary education, aimed at catering to students with different educational needs (EMB, 2004b). The above policy shows that the government aimed at reforming secondary technical education in order to meet the pressing needs of parents, students and the society at large. Before analysing the changes made in secondary technical education and the reasons behind such changes, it is deemed necessary to review the worldwide trends in secondary technical education and determine the extent to which these worldwide trends were manifested in the reform of Hong Kong's secondary technical education after the Handover.

4 Worldwide Trends in Secondary Technical Education

Over the last 30 years, there have been three prominent issues in the development of secondary technical education worldwide: The balance between technical education and general education; the diversification of the curriculum to cater for different abilities; and the articulation of pathways to tertiary education and career development.

Balancing secondary level general and technical education has created serious concerns for educational planning agendas worldwide (Asian Development Bank, 2004; Bray, 1990; Tilak, 2003). While international agencies agree that the inclusion of technical education is a crucial aspect of educational planning universally, it is generally believed that technical education should be a kind of education for all (UNESCO, 2002; World Bank, 2005). The UNESCO report (2002) entitled 'technical and vocational education and training for the twenty first century' explicitly recommended a broad technical education base facilitating horizontal and vertical articulation within the education system and between schools and the world of work (UNESCO, 2002, p. 10). The report highlighted the need to provide appropriate integration of technical and general education at all levels (UNESCO, 2002, p. 9).

Asian experiences have shown that a balance between general and technical education can contribute to economic growth (Gropello, 2006; Tilak, 2003) and that general skills and attributes have become more important in rapidly changing economies (Tilak, 2003). In short, a trend can be identified during the past three decades of a shift

towards a tighter articulation between technical and general education.

Technical education traditionally assumed a focus on specific trades and apprenticeships as a terminal pathway for those students with lower academic learning ability. The situation has changed over the past two decades, with reports demonstrating how amid the strengthening of the linkage between general and technical education, efforts have been put into broadening the pathways to tertiary education and professional qualifications. The OECD (1994) study suggested, firstly, avoiding making secondary technical education a residual or terminal pathway and, secondly, providing institutional bridges between secondary technical education and tertiary education. Delors (1996) focused on the tracking of technical education, and suggested the diversification of study courses to accommodate a wide range of intellectual abilities and interests, recognizing that dividing pupils into different tracks could provide alternatives to prevent feelings of failure.

Several reports from international agencies and experts have put forward convergent views on recent trends towards a broader and diversified curriculum, aimed at catering for pupils of different abilities (Benavot, 2006). The OECD (1994) suggested providing institutional bridges between secondary technical education and tertiary education, designing technical programmes for less successful pupils as safety net programmes, and articulating the programmes for later technical training. Green, Wolf, and Leney (2000), based on a report submitted to the European Commission entitled 'convergences and divergences in European education and training systems,' scrutinized the education and training systems in European Union member states. They found that recently, the distinction between academic and technical tracks had become blurred. Technical courses had become increasingly less occupationally specific. The shift from specific to more generic technical courses encouraged young people to avoid overly early specialization. Also, the blurring of technical and academic boundaries increased flexibility for students to enter different pathways to future careers or studies.

This review portrays a common trend internationally: More effort is being put into linking secondary technical education with general education and articulating technical education with tertiary education or vocational qualifications. The following sections analyse the changes made in secondary technical education and the reasons behind such changes.

5 Paradigm Shift of Secondary Technical Education in the Education Reform

The reform of secondary technical education was part of the comprehensive education reform commencing in the early twenty-first century. It helped to break the shackles of limited provision of secondary technical education. For instance, in 2005, fewer than 20 schools (3.9%) offered a significant technical curriculum (Hill, 2005), accounting for less than 5% of the total number of Form 4-7 (grade 10-13) students (Tsang, 2004). Thus, secondary technical education was perceived as a peripheral provision. However, following a 1999 proposal for comprehensive curriculum reform, a paradigm shift from specialization to diversity of learning was foreseeable (Kennedy, Fok, & Chan, 2006). Table 1 shows the important official documents related to curriculum reform in general and secondary technical education in particular.

Education reform also signalled the ending of specialization and curriculum differentiation. The consultation document entitled ‘a holistic review of the Hong Kong school curriculum proposed reform’ proposed “the substitution of specialization/streaming with holistic approaches, while allowing for some specialized studies (e.g., vocational studies, science, technology, humanities, art) at senior secondary level to cater for different interests and potentials of students” (CDC, 1999, p. 3).

The subsequent government document entitled ‘learning for life, learning through life: Reforms proposals for the education system in Hong Kong’ (Education Commission, 2000b) sparked a top-level overhaul of Hong Kong’s education system, aimed at redefining “the role and

functions of education in the new environment” (Education Commission, 2000b, p. 27). The document clearly stated “the direction of curriculum reform is towards avoiding streaming and promoting choice” (Education Commission, 2000b, p. 9). Another significant point signifying a new paradigm was “the new interpretation of vocational education as broadening skills and knowledge” (Education Commission, 2000b, p. 89). The official documents envisioned the future secondary technical curriculum as having pivotal principles of diversity, flexibility and broad foundations. Overall, the document emphasized three main aims of the new school curriculum: First, to enable a balanced and comprehensive learning experience of academic, vocational and other education to prepare students for employment and further studies; second, to provide students with a diversity of choices; and third, to nurture in students a desire for learning, and independent and critical thinking.

Thus, the curriculum reform proposed in ‘learning to learn’ (CDC, 2001) encompassed a holistic review to cope with the general directions of the education reform -- To provide education for students to attain all-round development and life-long learning. In previous consultations, the secondary education curriculum had been criticized as too academic, narrowing pathways for students. It was expected that through curriculum innovation, students could be encouraged to learn as a result of providing them with diverse learning opportunities (moral, intellectual, physical, social and aesthetic, and career-related experiences) (CDC, 2001). As the Chief Curriculum Development Officer (Life-wide Learning and Library) Yip Yam Wing explained, “career related experience means more than work placements and this is a recognised

Table 1 Official Documents of Education Reform Related to Secondary Technical Education (1999-2006)

Year	Name of Document	Related Issues
1999	A holistic review of the Hong Kong school curriculum proposed reform	To terminate the practice of streaming into prevocational, technical and grammar schools.
2000	Learning for life, learning through life: reforms proposals for education system in Hong Kong	To avoid premature streaming.
2001	Learning to learn: Life-long learning and whole-person development	To advocate diverse learning opportunities (moral, intellectual, physical, social and aesthetic, and career-related experiences).
2003	Review of the academic structure of senior secondary education	To propose a 3-year academic structure for senior secondary education.
2005	Reforming the academic structure for secondary education and higher education-actions for investigating in the future	To state the aims and implementation plan of Career-oriented Studies.
2006	Action for the future- further consultation on career-oriented studies and the new senior secondary academic structure for special schools	To review the difficulties and contentious issues in the pilot scheme.

worldwide trend” (Yip, 2004, p. 1). Therefore in the educational reform, among the eight Key Learning Areas (KLAs) introduced in 2000, Technology Education was included as one of the KLAs. According to the Education and Manpower Bureau (EMB) “the history of Technology Education could be backtracked to the development of the Junior Technical Schools in 1930s, a number of technical subjects in the late 1950s, the prevocational schools and related subjects in the late 1960s, the computing subjects in 1980s, the New Technical Curriculum in 1997, and the Technology Education key learning area in 2000” (<http://www.edb.gov.hk/en/curriculum-development/kla/technology-edu/index.html>). It should be noted, however, that Technology Education cannot be fully implemented in schools. For example, in the junior level (grade 7-9), amongst the 14 areas of learning, only very few schools can offer automobile technology, catering services, design fundamentals, electronics and electricity, fashion design, etc as schools neither have the expertise nor the facilities to teach these subjects. In the senior level (grade 10-12), the five areas of learning, namely, Business, Accounting and Financial Studies (BAFS), Health Management and Social Health, Technology and Living, Design and Applied Technology and Information and Communication Technology are all academically inclined and hence difficult to meet the needs of those academically less able students. Therefore Applied Learning is designed to fill the gap.

It was in this context that, at the senior secondary level, a new curriculum named Career-oriented Curriculum (renamed Applied Learning in 2007) was introduced as a pilot scheme from the 2003/04 academic year to provide a learning platform for students to explore career aspirations in professional or vocational areas. Officially, the Career-oriented Curriculum was described as a curriculum designed for students with interests and inclinations in areas other than those provided by the existing examination subjects. It was aimed at “providing students with the opportunities to explore their orientation for life-long learning and career aspirations in specific areas” (EMB, 2004a, p. 4). The EMB stated: “The Career-oriented Curriculum complements rather than duplicates the New Senior Secondary subjects by offering studies with stronger elements of applied learning linked to broad professional and vocational fields” (EMB, 2006, p. 5). According to the government, “the contents of each Applied Learning course are drawn from a particular professional or vocational field which students can easily access in their daily life, for example, healthcare, hospitality services and performing arts” (EDB, 2008). The Career-oriented Curriculum was a preparation for the implementation of Applied Learning in the three-year New Senior Secondary curriculum.

From the 2003/04 academic year onwards, an Applied Learning pilot scheme was conducted with six

cohorts to gain experience and feedback so as to enhance the effectiveness of the implementation plan. In the consultation paper of the EMB in 2004, named ‘reforming the academic structure for secondary education and higher education-actions for investing in the future,’ there were three objectives of Applied Learning: “(1) to expand the range of opportunities for students; (2) to enhance students’ employability; and (3) to prepare students for further vocational education and training. The major strength of Applied Learning was its appropriateness for students who learnt better through practical application” (EMB, 2004b, p. 52). Hence, it is evident that the changes made to secondary technical education arose from pragmatic considerations and were geared towards redefining the paradigm of technical education in the new senior secondary curriculum. We found no evidence that the SAR government introduced a new form of secondary technical education as a means to distance itself from the colonial education legacy.

6 From Traditional Technical Education to a New Paradigm of Secondary Technical Education

In replacing traditional technical education with Applied Learning, one wonders whether it aimed at removing the colonial education legacy or meeting the local needs. With a view to shedding light on the reasons behind the introduction of Applied Learning, it is necessary to analyse the differences between traditional technical education and Applied Learning. Traditional secondary technical education had lost its appeal to parents and young people by the end of the twentieth century because the technical content was unable to cope with the rapid advancement of technology and change of economic structure. According to S. M. Tsui, the then Senior Assistant Director of Education, who had been the Principal of the Hong Kong Technical Teachers’ College (1985-90 on tenure),

Technical education in Hong Kong changed along with economic development. In the 1970s and 1980s, the curriculum of secondary technical schools and prevocational schools coped with the labour intensive production and prosperous manufacturing industry. Students who had learnt practical skills in Metalwork, Woodwork and Technical Drawing could have their employability in industry. Therefore, parents considered that technical education could actually help their children to find jobs. But in the 1990s, as many factories moved to Mainland China, intensive labour production declined. Graduates possessed practical skills no longer guaranteed jobs. Thus, education should be reformed to cope with the new social and

economic situations. (Tsui, personal communication, October 21, 2007)

Therefore, Applied Learning differed significantly from traditional technical education with respect to its aims, target group, delivery, scope, learning, assessment and pathways. Table 2 shows how the fundamental directions of traditional technical education and Applied Learning were distinct. The major difference consisted of the distinction between the ideology of specialization and diversity. In the following sections, three special areas of Applied Learning are discussed: the diversity of learning contexts, flexibility of delivery and curriculum framework design. This analysis helps to illuminate the ways in which the design of Applied Learning was geared to redefining the paradigm of secondary technical education and making it appealing to parents and students.

The diversity of Applied Learning implied a holistic diversification of the content of learning, design, delivery and assessment, and learning experiences of students (Wardlaw, 2008). The traditional technical curriculum emphasized specialization in terms of educational institutions, subjects, content of curriculum and assessment. Students were streamed through allocation mechanisms such as Secondary School Places Allocation (SSPA) into secondary grammar, secondary technical or prevocational schools. Transfer routes between grammar, technical and prevocational schools were rare as the latter two offered specific technical or pre-vocational subjects. The scope of the curriculum of traditional technical education was subject based; however, choices of technical subjects in secondary technical and prevocational schools were limited because of constraints stemming from individual schools' facilities and human resources. For example, only

a limited number of prevocational schools provided textile or automobile repairing courses. The delivery of Applied Learning was more diverse and flexible in terms of course providers, and a new way of enhancing the collaboration between secondary schools and post secondary educational institutions, specifically the Hong Kong Institute of Vocational Education (IVE), which was an amalgamation of the former technical colleges and seven technical institutes in 1999.

Secondary technical education and vocational training had been separated in the education system since the 1960s. The former gradually became an integral part of general education and was delivered specifically through secondary technical schools and prevocational schools. The latter was delivered by technical colleges and technical institutes at the post-secondary level (Waters, 1982). The role differentiation between secondary technical schools and technical institutes was distinct, and collaboration was unlikely. Therefore, for traditional technical education, technical subject options in individual schools were limited as it was difficult for a school to offer a wide range of technical subjects. However, Applied Learning emphasized the provision of diversified learning opportunities. It was neither subject-based nor solely provided by an individual school. Instead, it was course-based according to learning areas. Students were offered options from a variety of courses within six learning areas to enable them to fulfil their aspirations and interests. In addition, the role of schools as the sole course providers changed to meet the aim of diversity of courses. IVE and other post-secondary educational institutions and professional bodies became the partners of secondary schools in providing Applied Learning courses. Once boundaries between secondary schools and post secondary institutions had been broken

Table 2 Comparison between Traditional Technical Curriculum and Applied Learning

Characteristics	Traditional Technical Curriculum	Applied Learning
Aim	Specialization for different aptitudes and interests	Diversity of learning experiences and choices
Target Group	Specialized schools/Technical or Commercial stream students	All schools/ Full spectrum of students
Delivery	School teachers	Mainly course providers, e.g. Vocational Training Council, Caritas
Scope	Subject based (e.g. Technical Drawing, Metalwork, Typing, etc.)	Cross disciplinary, course based according to learning areas
Learning	Emphasis on subject knowledge and practical skills	Greater emphasis on flexible competencies, generic skills and self-directed learning
Assessment	Public Examination (Hong Kong Certificate of Education Examination)	Continuous assessment with internal and external assurance mechanism
Pathway	Narrowed pathways for sixth form education and technical institutes	Smoother pathways for the non-university bound students linking to Institutes of Vocational Education and sub-degree courses

down, curriculum choices and flexibility of delivery were likely to be achieved.

Applied Learning additionally differed from traditional technical education in its cross-disciplinary approach and standard curriculum framework. The former Chief Curriculum Development Officer (Applied Learning), Howard Sou (in tenure until 2008) remarked that the learning platform of Applied Learning aimed to address the basic educational issue, that is, the diversified needs of students, through providing students of different aptitudes and interests with a wide range of diversified and challenging courses. These cross-discipline courses could widen students' knowledge through study outside the classroom. Further, Applied Learning was to be a new educational ideology, providing a diversified, broad curriculum catering to individual interests (H. Sou, personal communication, December 19, 2007).

Besides the cross-disciplinary curriculum, there was a standard curriculum framework for all areas of studies. Table 3 shows that the curriculum framework of Applied Learning was similar to that of other key learning areas, in which generic skills, values and attitudes, and knowledge and competencies are equally emphasised.

It was proposed in the Curriculum Framework of Applied Learning that the six vocational fields of applied science, business, management and law, creative studies, engineering and production, Media and Communication and Service would provide the learning context and serve as the learning platform for the development of pupil's generic skills and values, and career related competencies. In fact, Applied Learning was not intended to develop practical skills for future careers; Instead, it was geared towards promoting awareness and understanding of related professions and industries. At the beginning of the twenty-first century, generic capabilities were valued over specific skills in the workplace (Carnoy, 1999; Cheng, 2004; Cheng & Yip, 2006), and thus, the curriculum framework of Applied Learning reflected a paradigm shift from a narrow and specific orientation of tradition technical education to a broader, flexible and competency-based orientation that served to meet the diversified needs of students.

Table 3 Curriculum Framework of Applied Learning

Life-long learning for future studies and/or work	
Foundation Skills	Thinking Skills
Interpersonal & Personal Skills	Values & Attitudes
Career-related Competencies	
Six Vocational Fields as Learning Contexts (Applied Science, Business, Management and Law, Creative Studies, Engineering and Production, Media and Communication and Services)	

Source: Sou, (2008).

This analysis shows the paradigm shift of secondary technical education in terms of a new curriculum -- Applied Learning -- Which was aimed at rectifying the undesirable situation created by traditional technical education, such as early specialisation/streaming in the grammar, technical and prevocational school curriculum. As the Curriculum Development Council (1999) stated.

In a knowledge-based society, 'vocational education' should have a new meaning. In formulating our education system, we should not, as far as possible, confine our students prematurely to specialized and narrow-based knowledge or skills as this would not help them lay a broad foundation for future employment. (p. 89)

In other words, Applied Learning served as a transitional learning platform for students pursuing their life-long learning in career or further studies through self-directed learning in different learning areas. Hence, it is due to educational reasons and socio-economic changes that Applied Learning was introduced to replace traditional technical education. To a large extent, the format of Applied Learning is in line with the worldwide trend in terms of diversification of curriculum and articulation of pathways to tertiary education and career development.

7 Development of a Pilot Scheme for Applied Learning (2003-2008)

Before the implementation of Applied Learning in 2009, the government developed a pilot scheme for Applied Learning. Through analysing this pilot scheme, we can better understand whether the introduction of Applied Learning is politically or pragmatically oriented.

In the first three cohorts (2003-05, 2004-06 and 2005-07), the classification of areas of learning was not clear; for example, Performance Arts and Media and Arts were similar, and Information Technology and Engineering more or less belonged to the science discipline. However, as Table 4 shows, beginning with the 2006 cohort, the classification of areas of learning became stable. Moreover, the grouping of different industries into similar areas of learning helped to distinguish between the six areas of learning.

In addition, the courses were designed to suit the interests of students and to be relevant to their careers. With regards to course providers, the Education Bureau intended to diversify the sources, so that each institution would use its own strengths in designing Applied Learning courses, as in the case of the Chinese University, which had long provided university level Chinese medicine

courses. This would help ensure availability of human resources and quality of curriculum design. Furthermore, most of the providers were members of The Federation for Continuing Education in Tertiary Institutions. As such, they had palpable assurance policies and procedures and rich experience in designing study pathways, for example associate degree and higher diploma programmes. Another point worth noting was the engagement of professional bodies like the Hong Kong Institute of Accredited Accounting Technicians Limited (HKIAAT) and corporations like the Hong Kong Aircraft Engineering Company (HKAECO) in providing the courses. Although these provided only one type of Applied Learning course in the pilot scheme, their engagement as course providers demonstrated that Applied Learning could serve as a platform for collaboration between the education and industry sectors. Experience from other countries indicated that this was an effective way to achieve a smooth transition from school to work (OECD, 2000).

The mode of delivery and assessment of Applied Learning were more diversified and flexible so as to suit schools and individual needs. The Education Bureau proposed three modes of delivery of Applied Learning courses according to the place of delivery and teaching staff (Table 5).

The flexibility of the Applied Learning delivery mode meant that schools could choose specific modes of delivery for each Applied Learning course. For example, students might go to the course provider site according to normal

school timetables, or take courses on site during school holidays. In addition, schools could also collaborate with course providers on course delivery. For example, for the 2008-10 cohort, Aviation Studies was delivered jointly by various parties. The Hong Kong University School of Professional and Continuing Education (HKU SPACE) prepared the teaching materials, and The Hong Kong Aircraft Engineering Company (HKAECO) provided a training course for teachers. The course, which included theory and practical learning, with visits and field work organized by the HKAECO, was mainly conducted in schools or course provider sites. According to the consultation conducted by the education authority in 2006 and 2009, there was a tendency for schools to choose course provider sites as their mode of delivery, perhaps due to administrative convenience and financial consideration. Furthermore, the Applied Learning courses differed from the Hong Kong Certificate of Education Examination (HKCEE) subjects in that examination skills were not stressed, and there were various forms of continuing assessment to suit the nature of the courses; for example, Aviation Studies students could carry out site visits. In addition, various kinds of assessment including written test, writing exercise, log book progress report, group presentation and workshop practice fulfilled continuing assessment aims.

Concerning accreditation, the pilot Applied Learning scheme was gradually recognised by tertiary institutions and employers, thus facilitating smoother transition to

Table 4 Classification of Areas of Learning of Pilot Applied Learning

Cohort	2003-05	2004-06	2005-07	2006-08	2007-09	2008-10
Areas of Learning	Arts and Media			Media and Communication		
	Business			Business, Management and Law		
	Design			Creative Studies		
	Engineering					
	Food Production and Management			Engineering and Production		
	Information Technology					
	Services			Services		
		Leisure, Tourism and Hospitality				
		Performing Arts		Applied Science		
No of Areas of Learning	7	9			6	

Table 5 Modes of Applied Learning Courses in Schools

Mode 1	Courses take place at the venues of course providers and are taught by the staff of course providers.
Mode 2	Courses take place mainly in schools and are mainly taught by the staff of course providers.
Mode 3	Course providers make arrangements (e.g. provide teaching materials, questionnaires) to entrust other institutions, including schools, to conduct the courses on their behalf, but remain responsible for internal quality assurance of course delivery and assessment.

further studies and employment. As the assessment of the courses of Applied Learning differed from that of HKCEE level subjects, which depended on public examination, a quality assurance mechanism conducted by the Curriculum Development Institute (CDI) of the Education Bureau, the Hong Kong Examinations and Assessment Authority and the Hong Kong Council for Accreditation of Academic and Vocational Qualifications (HKCAAVQ) had been developed to secure accreditation for Applied Learning courses. It was expected that a quality-assured Applied Learning course should meet three requirements: First, the Applied Learning course should have been developed according to the curriculum aims; second, the curriculum should be delivered as planned; and third, the learning outcomes of students should meet the set standards (EDB, 2008). The Education Bureau stressed the advantages of Applied Learning for students, and the fact that quality-assured Applied Learning courses could gain one certificate from the Hong Kong Examinations and Assessment Authority and other certificates issued by course providers. All these certificates could help students to pursue further study and employment. In the press release of the Education Bureau entitled Wide recognition for Applied Learning pilot courses on July 25, 2008, it stated that the qualifications of Applied Learning courses were accepted by the Federation for Continuing Education in Tertiary Institutions and the Civil Service Bureau (CSB) for admission to Form 6 (grade 12) or tertiary education such as pre-associate degree and diploma courses offered by course providers, and for civil service appointments. The above discussion of the course content, course providers, modes of delivery, assessment, qualifications and accreditation of the pilot Applied Learning scheme shows that the SAR government intended to redefine the paradigm of secondary technical education and ensure that the curriculum was designed in such a way to make it appealing to parents, students, schools and the intended course providers. It can be said that Applied Learning is a career oriented curriculum which is designed to meet the needs of a variety of students including those who are not academically inclined. It is difficult to argue that the pilot scheme aimed at removing the colonial education legacy. The former Chief Curriculum Development Officer (Applied Learning), Howard Sou stressed that “in planning the curriculum of Applied Learning, we refer to overseas experiences such as reports of the OECD and UNESCO and our own needs. Applied Learning in any sense, is not technical education. Instead, it is a novel educational ideology to cater for students’ needs by providing diversified learning opportunities” (H. Sou, personal communication, December 19, 2007). Applied Learning was a new paradigm of technical education and an integral part of the new senior secondary curriculum. However, it should be noted that notwithstanding the good

intention of the EDB in designing the Applied Learning curriculum, the number of candidates sat for the first Diploma of Secondary Education (DSE) Examination in 2012 was only 6.8% and in 2013, it was 6.5% (HKEAA, 2012, 2013). The unpopularity of Applied Learning reflects students do not find the career oriented nature of Applied Learning appealing. Nevertheless, Applied Learning has provided an alternative avenue for those less academically oriented students. In the long run, the EDB has to review the aims and structure of Applied Learning and its place in the school curriculum.

8 Conclusion

During the colonial period in Hong Kong, secondary technical education was first modelled on that of the British tripartite school system, was later modified in the 1960s, and finally, was reviewed before the Handover. All these developments show that during the colonial administration secondary technical education had already been on the reform agenda. After the Handover, the reform of secondary technical education initiated by the departing colonial government, together with socio-economic needs and society’s concerns about the educational equality of technical education, provided the context within which the first SAR government operated. Therefore, the fundamental change in secondary technical education envisaged by the new government was basically a legacy of the colonial government rather than a reaction against and removal of the colonial legacy. We argue that it was for pragmatic reasons that Applied Learning was introduced. Socio-economic needs prompted the government to rectify the inadequacy of the traditional secondary technical education and as a result, the government had to redefine the paradigm of technical education and make it appealing to parents, students and schools alike. There is no evidence to suggest that the Education Bureau had to replace the traditional secondary technical education with Applied Learning merely for political reasons. In addition, it would be difficult to argue that the Education Bureau spent more than 10 years on redefining and refining the curriculum of Applied Learning before its implementation in 2009 as an integral part of the new senior secondary curriculum simply as a reaction against the colonial legacy. Therefore, we argue, the introduction of Applied Learning was at the same time a pragmatically oriented initiative and a continuation of the reforms in secondary technical education initiated before the Handover. Thus, the approach to educational reform in decolonised countries described by Morrissey (1990), Altbach (1992) and Bray (1997), whereby for the sake of removing the colonial legacy, decolonised states would reform the curricula to portray the emergent nations

and their rulers in a new light, has not been the approach in the case of Hong Kong's secondary technical education.

Rather, the pragmatic approach to educational reform has been the case in Hong Kong. We argue that in reforming secondary technical education, the new SAR government evaluated the existing curriculum in the light of Hong Kong's knowledge-based service centred and globalized economy and preferences of parents and students in order to determine the extent to which it needed to be reformed. In redefining the paradigm of secondary technical education, this study shows that the government referred to the recommendations made by international organisations and individual scholars, especially in the following aspects: First, an articulation between technical education and general education; second, a broad and diversified technical curriculum; and third, a broadening of the pathways to work and tertiary education. As a result, Applied Learning reflected a paradigm shift from specialisation to diversity in learning, course delivery, and curriculum framework design.

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