CONCEPTUALIZING CRITICAL THINKING IN HONG KONG: THE DECOUPLING OF POLICY AND PRACTICE IN THE NEW SENIOR SECONDARY CURRICULUM REFORM

Eunice Chow
Master of Arts Paper
International Education Policy Analysis
Graduate School of Education
Stanford University
July 2015
INTERNATIONAL EDUCATION POLICY ANALYSIS

Conceptualizing Critical Thinking in Hong Kong: The Decoupling of Policy and Practice in the New Senior Secondary Curriculum Reform

Eunice Chow

July 2015

A Master of Arts Paper in partial fulfillment of the requirements for the degree of Master of Arts

Approvals:

ICE/IEPA Master’s Program Director: ______________________________
Christine Min Wotipka, Ph.D., date

Advisor: ______________________________
Francisco O. Ramirez, Ph.D., date
Acknowledgements

This work would not have been possible without the essential guidance and support of many individuals.

I wish to sincerely thank:

    My advisor, Francisco O. Ramirez, for his invaluable insight and constructive feedback on my thesis, for his mentorship and guidance throughout the year, and for his witty sense of humor;

    Christine Min Wotipka, program director, for making this entire research process possible through her continual support and for making this program what it is through her close care and constant guidance;

    Soyoung Park, for her warm support – both academically and emotionally – throughout the many stages of the research process, for her extensive and crucial feedback on every single step along the way, for her faithfulness in going above and beyond her role as the teaching assistant of our section;

    and the Stanford University ICE/IEPA/IEAPA program cohort for the privilege of working with such an intellectually and personally inspiring group of individuals, for their sisu spirit, for their genuine camaraderie and the various times of both encouragement and commiseration, for being colleagues whom I am confident will make a lasting and meaningful impact in the field of education.

_____________
In addition, I am especially grateful to Professor Bob Adamson for his generous and extremely useful advice on my research; to Ms. Cindy Chiu for her indispensable help in the collection of data; and to the teacher interviewees of this study for their responses and time.

I share the credit of my work with my family and close friends. In particular, I wish to thank my parents and sister for their unconditional love; for supporting me in this journey to pursue a life-work in education; and for continually believing in my abilities and passion. I also wish to thank Yang Wong for his steadfast love and care; for always believing in the best for and in me; and for keeping the main things the main things.

Lastly – but having always been first – I owe everything to my God. Thank you for life abundant; for your Word; for amazing and unconditional love, for taking and multiplying the meagre offerings of my work; and for your unchanging and unchangeable story of love and justice. Soli Deo gloria.
Abstract

Critical thinking is a term increasingly incorporated into educational policy around the world as a primary curriculum reform objective. Despite shifts in policy, however, often the mechanisms for ensuring the implementation of policy in practice are decoupled. Hong Kong is among one of the many educational systems that has recently undergone a drastic curriculum reform in which critical thinking has been defined as a key skill. This paper investigates how critical thinking is conceptualized on different levels of curriculum – from intended to resourced to implemented – in the secondary school subject, Liberal Studies, against the backdrop of the New Senior Secondary Curriculum (NSSC) reform. Employing textual analyses and interviews, I investigate whether and why gaps exist in the conceptualization of critical thinking at these three curricular levels in order to understand the process of decoupling from policy to practice. The findings of the study suggest that critical thinking is conceptualized fairly nebulously from policy to practice, leading to decoupling between the two. These findings highlight a need for Hong Kong educational authorities to provide a clearer definition of critical thinking, as well as stronger programmatic support for teachers, in order to best sustain alignment in this curriculum reform.

Keywords: critical thinking education; Liberal Studies; New Senior Secondary Curriculum; curriculum reform; neo-institutionalism; decoupling; Hong Kong
Introduction

In an era of increasing political tumult and activism\(^1\), Hong Kong has instituted major educational reforms. Most recently, the 2009 New Senior Secondary Curriculum (NSSC) reform was proposed and implemented with the policy goals, among others, of addressing critical thinking and the value of ‘learning to learn’ (Curriculum Development Council, 2000). In addition to substantial structural changes, in which the ‘3+3+4’ system (i.e. three years of junior secondary, three years of senior secondary, then four years of tertiary education) replaced the old ‘5+2+3’ model based on the British education system, the reform also poses significant changes to the curriculum. On a curricular level, it includes a significant change in content (Adamson et al., 2010), such as the introduction of a set of four compulsory subjects along with a new Liberal Studies core subject (Deng, 2009). Since school curriculum reform has long been used by policymakers as a tool to shape beliefs, to form national identity, and to politicize or depoliticize people groups (Hughes & Stone, 1999), now is a crucial time to re-investigate the potential interactions between Hong Kong’s educational reform and the formation of critical thought in Hong Kong students.

At the core of this increased emphasis on critical thinking is the new Liberal Studies subject. This course was designed specifically to increase student participation and to bolster an issue-inquiry and cross-curricular learning approach (Deng, 2009), in contrast to the previous

\(^1\) Ever since Hong Kong’s return to Chinese sovereignty in 1997, Hong Kong has undergone a period of various tumultuous changes. Hong Kong is well-known in educational literature for the de-politicization that has been implemented throughout its curricular past, intentionally outlined in policy documents for the purpose of maintaining a stable environment suited for economic growth (Fairbrother, 2003). Furthermore, the Hong Kong people have been oft described as politically indifferent. However, with the transition into the second decade of Chinese rule, Hong Kong has been seeing an increasing discontent amongst its citizens. Political protests – including the annual 1 July marches and the 2014 Hong Kong "Umbrella Revolution," which was of great interest to the international media – have become increasingly frequent and intense in nature over the past few years.
model of learning oft-criticized for its focus on rote content memorization. In policy documents and curriculum guides around the Liberal Studies subject, the term ‘critical thinking’ is mentioned with great frequency and introduced as a key objective (Stapleton, 2011). However, the term is also one that is used across multiple disciplines and hence continues to be inconsistently defined and debated. Moreover, the cultural backdrop against which Hong Kong’s educational reform takes place has traditionally been seen as relatively collectivist and discouraging of individualistic thought, which further complicates the expression of critical thinking in this current reform.

Adopting the frameworks of neo-institutional theory along with curriculum decision-making and adaptation models (Adamson & Davison, 2003; Meyer & Rowan, 1977; Remillard, 2005), I investigate how critical thinking is conceptualized on different levels of curriculum: from the intended curriculum, as reflected through policy; to the resourced curriculum, as represented by textbook resources; to the implemented curriculum, as exemplified by the actual teaching of educators (Adamson & Davison, 2003). In exploring curricular shifts in policy documents, textbooks, and teacher interviews, I examine how neo-institutional theory and curriculum theories may explain the decision-making process in curriculum reform. Although there have been past studies that investigate the role of critical thinking in the Hong Kong education system, as well as past studies that address potential gaps between policy and practice in curriculum reform, my study specifically seeks to understand how the conceptualization of critical thinking, as a policy-directed priority, translates through different levels of curriculum. In this way, my study informs the impact of Hong Kong’s NSS curriculum reform in shaping critical thinking, and consequently its potential impact on issues as civic education, nation-
building, and political identity – issues particularly pertinent against the backdrop of increasing political activity in modern-day Hong Kong.

**Hong Kong’s Educational System and Current Reform**

Hong Kong was ceded to Britain after China’s defeat in the first Opium War at the end of the 19th century. Prior to the NSSC reform, Hong Kong’s education system was largely based on, and thus resembled, that of the United Kingdom. Although Hong Kong returned to Chinese sovereignty in 1997, it was returned under the “one country, two systems” arrangement in which Hong Kong upholds its own autonomy over all areas other than military defense and diplomatic relationships. For example, Hong Kong maintains its own educational system governed by its own Education Bureau (EDB) without direct ties to Beijing’s Ministry of Education. Thus, Hong Kong’s education system remains largely unique from that of the rest of China, and has its own “history, structure, and reform trajectory” (The Organisation for Economic Co-operation and Development, 2010).

Hong Kong thus retains the power to initiate educational reforms independent of China, such as the current series of changes, which represents a major shift from the previous system. That system had been seen as overly examination-oriented, too focused on rote-learning, and as one that did not stress classroom discussions and group work adequately (Fung & Howe, 2014). The NSSC reform originated from a comprehensive review of the educational system immediately after the handover, between 1997 to 2000, in part as a response to these shortcomings. The review culminated in an educational reform document titled “Learning For Life, Learning Through Life: Reform Proposals for the Education System in Hong Kong”, which proposed a more holistic-person teaching approach and underscored the importance of learning to learn (W. Chan, 2010).
Prior to this reform, secondary education comprised the first three years after primary school (Form 1 to 3), while “Senior Secondary” comprised the next two years (Form 4 and 5) and led to the Hong Kong Certificate of Education Examination, which determined whether candidates could apply for a place in Form 6. Form 6 and 7 culminated in the Hong Kong Advanced Level Examination and served as the entrance examination to major universities. The new academic structure – sometimes termed the “334” New Academic Structure – includes 3 years of Junior Secondary education, 3 years of Senior Secondary education, and 4 years of higher education (W. Chan, 2010). Senior secondary culminates in the Hong Kong Diploma of Secondary Education Examinations (HKDSE), which determines entrance into higher education institutions. The system shifted from having to sit for two public examinations to only one public examination after 12 years of primary and secondary education, which would ostensibly ease pressure on students.

In addition to structural changes, the curriculum and assessment framework also underwent several key changes. Firstly, the curriculum now includes 3 main parts: Core subjects, Elective subjects, and Other Learning Experiences (OLE). The mandatory core subjects are Chinese Language, English Language, Mathematics, and the new Liberal Studies. The OLE component emphasizes learning experiences outside of the classroom, and eight Key Learning Areas (KLA) have been identified for the purpose of organizing the school curriculum towards a balanced study (W. Chan, 2010; Curriculum Development Council, 2000). As outlined by the Education Bureau policy documents, nine types of generic skills are identified for development through teaching in the different subjects and KLAs: collaboration skills, communication skills, creativity, information technology skills, numeracy skills, problem solving skills, self-management skills, study skills, and again – most pertinently to this study – critical thinking.
skills (Curriculum Development Council, 2000). Figure 1 is a visualization by the Hong Kong Education Bureau of the aforementioned curricular elements.

Liberal Studies and Critical Thinking

As mentioned, under these Senior Secondary curriculum changes, a new interdisciplinary and mandatory subject combining learning topics from the social sciences and the humanities was designed. Liberal Studies was introduced with the explicit aim of “enhancing [students’] social, national, and global awareness as well as developing their multi-perspective and critical thinking skills” (Education Bureau & Hong Kong Examinations and Assessment Authority, 2014). The objective of this new subject is to replace teacher-centric instruction and rote memorization with active student participation and social interaction (C. Chan & Bray, 2014); and, as Deng identifies, to ‘develop problem-solving and critical thinking capacities’ (2009:688). In an attempt to respond to an excessive focus on high-stakes, one-off examinations as the sole means of assessment, an innovative school-based assessment (SBA) component was also introduced in addition to written examinations. The SBA was held to be a more accurate indicator of students’ actual learning due to its more long-term nature, and was expected to more reliably test students’ thinking abilities as opposed to memorized content knowledge (C. Chan & Bray, 2014).

Considering the traditional Chinese learning culture against which this critical thinking takes place makes the introduction of Liberal Studies all the more worthy of closer examination. The traditional Chinese culture is highly collectivist in nature, which may inhibit students from arguing their true viewpoint in a reasoned manner if it does not conform to the dominant viewpoint held by others. Additionally, Confucian values are also a deep and integral part of
Chinese culture. The key Confucian belief of self-effacement, which holds that individuals maintain humility and one’s position within one’s rank, may likewise prevent students from drawing constructive feedback from peers (Fung & Howe, 2014). Such a cultural context for learning must be kept in mind for this study of critical thinking in the Hong Kong education system.

**Critical Thinking: Varied Definitions and Perspectives**

Scholars have long recognized the importance of critical thinking, but the attention on critical thinking reached its peak in the 1980s and 1990s, when the potential absence of critical thinking skills in students arose in general discussions on curriculum (Stapleton, 2011). In recent years, this rising emphasis on the importance and desirability of critical thinking skills seems to be prevalent in educational systems around the world (Lai, 2011; Stapleton, 2011). For example, in the United States, the Common Core State Standards identify critical thinking as a skill “vital for college and employment” (Lai, 2011:4). In a similar vein, the Singaporean Ministry of Education’s vision statement explicitly mentions encouraging curiosity and critical thinking as a goal. Likewise, the stated aim from the “Values, Aims, and Purposes” section of United Kingdom’s National Curriculum document expresses that the curriculum should enable pupils to think creatively and critically (Stapleton, 2011).

However, what is critical thinking? Although this concept has been widely identified as an important skill in many educational systems (Innabi & El Sheikh, 2007; Lai, 2011), the definition – and thus, the instruction – of critical thinking remains somewhat elusive and notably lacks consensus. Contributing to the confusion is the fact that the concept of critical thinking has its roots in a number of different disciplines, each characterizing the term differently. Lai (2011) notes that the literature on critical thinking draws primarily from the academic fields of
philosophy, psychology, and education – all of which have different approaches to defining critical thinking (Lai, 2011). For example, the philosophical perspective focuses on the qualities of an ideal critical thinker and emphasizes the rules of logic (Lewis & Smith, 1993), while the psychological perspective focuses on the actual cognitive processes and observable behaviors of individuals (Sternberg, 1986). The approach to critical thinking from the field of education emphasizes critical thinking’s pedagogical and instructional implications, gleaned from observations on student learning and the classroom.

Despite the differences in definitions between these three approaches, there are also areas of agreement. Researchers generally agree that critical thinking involves a certain set of specific abilities, which commonly involve the capacities, among others, to use deductive and inductive reasoning; to analyze evidence; and to problem solve (Facione, 1990; Paul, 1992). In addition, researchers also generally agree on the need to capture one’s propensity and desire to apply said abilities – distinct from the abilities themselves – within the definition of critical thinking. These habits of mind came to be termed as critical thinking dispositions, and commonly include attitudes such as, among others, open-mindedness; the desire to be informed; and respect for others’ viewpoints (Ennis, 1991; Facione, 1990). Ennis is one such educational researcher, specializing in the philosophy of education, who has generated substantial literature on the dual-dimensionality of abilities and dispositions in critical thinking. Thus, his taxonomy is oft-cited and widely adopted. Ennis (1991) specifically defines critical thinking as “reasonable reflective thinking that is focused on deciding what to believe or do” (1991:6) and classifies critical thinking into 16 abilities and 12 dispositions. See table 1 for a full description of his defined abilities and dispositions (Ennis, 1991).

[Table 1 about here]
Since Ennis’ taxonomy is one that is widely applied in the understanding of the critical thinking process (Fung & Howe, 2014; Innabi & El Sheikh, 2007), I adopt it in this study as a representative lens for the conceptualization of critical thinking.

**Critical Thinking in Curriculum and Instruction**

Ennis has also written extensively on the controversial question of whether critical thinking is domain-specific and should thus be taught in the context of a specific subject, or whether critical thinking can in fact be generalized across different contexts and should thus be taught in a generic way. In a 1989 article, Ennis outlines three instructional approaches held by theorists regarding the domain-specificity of critical thinking: the “general” approach, the “infusion” approach, the “immersion” approach, and a “mixed” approach consisting of a combination of these approaches. Ennis defines the “general” approach as the view that critical thinking should be taught separately; the “infusion” approach as the view that critical thinking principles should “be infused in instruction in existing subject-matter areas” and made explicit; and the “immersion” approach as the view that critical thinking principles should result naturally from a student’s immersion in a subject matter without being made explicit (1989:7).

While Ennis does not unequivocally conclude any approach as superior over another, it is clear that the outcomes of this discussion on subject-specificity has a strong bearing on how critical thinking instruction is incorporated into Hong Kong’s curriculum reform. The design of the interdisciplinary Liberal Studies subject seems to reflect the view that the formation of critical thinking skills is not subject-specific. Hence, whether one learning approach lends itself better than another to the effective teaching of critical thinking likewise informs whether the current format of Liberal Studies is optimal for a consistent understanding of the term across curricular levels.
Critical Thinking and Hong Kong

Since critical thinking has been outlined by NSSC reform policy documents as a primary objective of the new interdisciplinary Liberal Studies subject and as a necessary “generic skill”, it is important to understand whether the above dimensions of critical thinking manifest themselves in Hong Kong’s curriculum and educational context. At present, there is evidence that seems to suggest otherwise. A study conducted by Stapleton (2011) surveyed 72 high school teachers and found that despite the frequency of the term “critical thinking” in policy documents, teachers in Hong Kong held a “disturbingly narrow” (2011:21) conception of critical thinking. For example, one teacher assumed that critical thinking simply meant having multiple viewpoints, while some science and math teachers did not believe their subjects involved much critical thought. This finding suggests that a more precise definition is needed in policy documents.

In a rare classroom exploratory study, Mok (1999) investigated the teaching of critical thinking through English classes in Hong Kong as a result of a government-issued syllabus highlighting the importance of students’ critical thinking through the English language. She found that teachers neglected to create the “space of learning” for the students’ writing, mainly due to a “product-centered culture” which overshadowed elements of writing as self-expression and originality (Mok, 2009). However, a more current look at critical thinking in the context of Hong Kong’s recent major educational restructuring offers a hopeful perspective: that collaborative group-work, when adequately directed by the teacher, indeed has constructive effects on students’ academic achievements in the context of critical-thinking skills (Fung & Howe, 2014). This study shows that when there is alignment between policy and practice in the conceptualization of critical thinking, effective learning of the skill does occur. My study will
attempt to build on this work by further examining the conceptualization of critical thinking in Hong Kong through the different levels of the NSS curriculum.

**Curriculum Reform: Gaps between Policy and Practice**

In investigating whether these NSSC reform goals in critical thinking have been adapted into implementation specifically, it is also helpful to explore more broadly the pattern of curriculum reform through the lens of shifts in policy and practice. Rapidly changing educational demands result in changes proposed to educational policies that may not always translate to implementation in practice, as demonstrated by many studies investigating this topic.

Extant literature establishes the importance of investigating how curriculum reform plays out in practice. Although research on these mechanisms is scant, especially in the context of Asia, a handful of studies have affirmed the importance of the teachers’ and school leaders’ perspectives on implementing new curricula. For example, beliefs regarding the effectiveness of curriculum reform could influence a teacher’s implementation of reform policy (Charalambous & Philippou, 2010). In investigating teachers’ affective responses towards mathematics curriculum reform, Charalambous & Philippou (2010) found empirical support suggesting that teachers’ beliefs about the efficacy of the curriculum reform affects their tasks and impact.

Examples of gaps between policy and practice in curriculum shifts also provide a helpful lens for understanding why such gaps might occur. For instance, gaps between policy and practice have been found to arise from the government neglecting to consider all localized needs, as was the case with Singapore’s state reform of Chinese schools after World War II. The government’s attempts to reform curriculum in Chinese schools into a centralized one that was shared by all indigenous communities and favorable to overall nation-building failed to translate to implementation in practice because the authorities found it difficult to generate a truly local
curriculum due to, for example, the lack of a “strong indigenous intellectual tradition” from original curricular material of the local communities (Wong, 2006). In the end, due to a difference in the conceptualization of nationalism between the centralized government level and the localized community level, the government was forced to incorporate Chinese schools into the state education system.

Similarly, in their review of educational reform in East Asia, Cravens & Hallinger (2012) also affirm the importance of taking into account local context, especially in balancing the roles and needs of different stakeholders involved in the decision-making process of reform implementation. Often – a finding salient even to studies conducted in Asia – the contents of curriculum may change, but core mechanisms remain the same (Kantamara, Hallinger, & Jatiket, 2006). As such, decoupling can occur when the process of localizing a reform is not thoroughly considered, leading to conceptualizations of policy initiatives that differ on the practice level. These, and many other studies, show that it is rare for educational reform to truly change a system fundamentally in practice.

In summary, although the theme of critical thinking has been a common thread in numerous studies exploring its definition and implications on education, research exploring the conceptualization of critical thinking in the environment of Hong Kong’s recent NSSC reform has been scant. Further, despite a handful of studies investigating the effectiveness of teaching critical thinking in Hong Kong, there is limited literature on the overall success of improving critical thinking as a curriculum reform objective across the different levels of the curriculum decision-making process. Building upon the aforementioned extant literature, my research addresses this gap by exploring how critical thinking is conceptualized across the different curricular levels of the New Senior Secondary reform; and in doing so, investigates whether
decoupling may have occurred between the intended policy and implemented practice.

**Conceptual Framework**

In the following section, I outline my conceptual framework and its application to investigating the mechanisms of the NSSC reform in Hong Kong. I explore the conceptualization of critical thinking in the different categories of curriculum, through the lens of curriculum models and the decoupling argument central to neo-institutional theory, in order to understand the NSSC reform.

*Neo-institutional Theory and Decoupling*

Neo-institutional theory maintains that institutional environments profoundly affect the development of formal structures. These formal structures are legitimized in the institutional environment, which organizations then incorporate in order to gain legitimacy, leading to an “institutional isomorphism” (DiMaggio & Powell, 1983). Meyer & Rowan (1977) assert that in the process of gaining legitimacy, these “institutional myths” are often adopted only ostensibly and prominently displayed to ensure organizational survival. However, said formal structures may in actuality obstruct the organization’s technical competitiveness and efficiency; so in reality, organizations may decouple practice from these legitimizing structures. Considered through the lens of neo-institutional theory, I argue that while the NSSC reform and its policy objectives may have been adopted largely as a reflection of this institutional isomorphism in order to maintain the educational system’s status quo, decoupling potentially occurs between policy objectives and how teachers perceive them to look like in practice, as well as between policy objectives and textbook resources. Decoupling may occur between the institutionalized structural changes that emerged from the reform and the technical core due to opposing demands from a complex, multilayered environment (Coburn, 2004).
Although NSSC reform policy objectives clearly outline the teaching of essential “generic skills” of which critical thinking is one, Hong Kong’s education system has traditionally been one entrenched in a more teacher-centric, rote-learning approach. At the same time, Hong Kong’s culture is collectivist in nature and does not typically encourage individual, dissenting, nor critical opinions. Based on the decoupling argument, I maintain that Hong Kong’s curriculum reform would include policies and objectives that align with the institutionally isomorphic norm of increasing critical thinking skills, but in practice this alignment might not occur. While neo-institutional theory is useful for explaining the driving force behind certain nations’ goals for curriculum reform, a closer examination of the transmission of change from the institutionalized level to implementation – or the failure thereof – requires a theoretical lens at the curricular level.

**Curriculum Decision-making and Adaptation**

Curriculum does not sit in a vacuum. Policy guidelines are adopted by publishers and implemented into textbook resources, while resources are adopted by teachers as a tool for implementation in the classroom, such that intended curriculum and implemented curriculum may become very different things.

Adamson & Davison (2003) adopt a particularly useful categorization from Marsh and Willis (2007) in order to illustrate the various levels of the curriculum decision-making process. They argue that curriculum innovation is interactive and complex, and understanding the process necessitates different levels of curriculum. To begin with, there is the level of intended curriculum, which involves policy-making by governmental bodies and produces policy documents. Following is the resourced curriculum, which involves the design of learning resources by commercial textbook writers, embodied by learning materials such as textbooks.
Following that is the implemented curriculum in which teachers plan lessons and engage in the actual teaching of the curriculum. Figure 2, adapted from Adamson & Davison (2003, adapted from Johnson 1989) illustrates the above key steps. The scope of this present study focuses on the intended, to resourced, to implemented levels of curriculum of the NSSC reform.

[Figure 2 about here]

In view of these different curriculum categories, some curriculum theorists additionally take the perspective that since curriculum exists as a dynamic interchange between teacher and curriculum, the teacher becomes an active designer of curriculum, rather than merely a direct implementer (Remillard, 2005). Past theorists have found that often times, the process of policy implementation is one of *mutual adaptation* in that it requires adaptation of the design to particular local situations; and active participation from the teacher greatly shapes the curriculum. This view holds that a tension exists between adapting curriculum to meet the needs of students while maintaining the integrity of the curriculum reform goals. Since the classroom is a complex environment, teachers balance a myriad of decisions between maintaining intended curriculum lessons, engaging students in learning, and achieving outcomes (Drake & Sherin, 2006). As such, this curriculum adaptation model offers a theoretical view of the granular mechanisms through which decoupling between policy and practice may occur. Curriculum adaptation may occur from the intended to the resourced, then from the resourced to the implemented level – leading to differences in the way that policy objectives, such as the teaching of critical thinking, are conceptualized on different levels of curriculum. If so, these disconnects in the adaptation between levels of curriculum serve as examples of decoupling. When applied to the NSSC reform, this model helps us better understand the mechanisms through which top-
down policy objectives translate to ground-level practice, along with the potential risks of decoupling occurring.

In summary, I put forth that the NSSC reform in Hong Kong reflects the global educational isomorphism explained by neo-institutional theory and that while such changes may be reflected on a policy level, it is unclear to what extent policy is transmitted through to different curricular levels and whether decoupling has occurred in this process.

Given this conceptual framework, my research attempts to address the following question: How is critical thinking conceptualized on the intended, resourced, and implemented levels of the NSS curriculum of Hong Kong?

a. What are the differences and similarities in the conceptualization of critical thinking across the three different curriculum levels?

b. What are potential reasons for why decoupling may occur between these three different curriculum levels?

Methods

Research Design and Strategy of Inquiry

I employed a qualitative research approach, specifically through a case study design, in order to investigate my research questions. I triangulated three sources of data in my strategy of inquiry: publicly available policy documents, textbooks, and teacher interviews. By analyzing the policy documents, I attempted to understand government policy and the intended objectives of the reform. The textbooks provided a view into the curriculum’s resourced level. Lastly, since a major component of my research question centers on how critical thinking is conceptualized on the implemented level of curriculum, an essential element of the study is to understand the
implementation of top-down reform policies as it is enacted in the classroom. However, since direct classroom observations of teaching acts were not possible in this study, I relied on first-hand interview data with teachers in order to attempt to understand their perceptions on the practical implementation of this reform, as well as to understand their conceptualization of critical thinking. The interviews aimed to reveal, from the practitioners’ perspective, how the reform is enacted and perceived. After all three sources of data were collected, I conducted a textual analysis to identify relevant themes and topics, using both an inductive and deductive coding method (Emerson et al., 1995).

Data Collection and Analysis

The NSSC policy documents were collected from the publicly available website of the Education Bureau of the Hong Kong Government, and were purposefully sampled to include all curriculum documents regarding the New Senior Secondary Curriculum. These documents include the Curriculum Development Council publications of Curriculum Guides, specifically the 12 booklets under the “Senior Secondary Curriculum Guide, The Future is Now: from Vision to Realisation”; as well as the “Liberal Studies: Curriculum and Assessment Guide (Secondary 4-6)”. These documents are written in English, so no translations were necessary (see table 3a for additional detail on the policy documents sampling).

In order to investigate how the reform and critical thinking teaching is manifested in the new senior secondary resourced curriculum, I examined the conceptualization of critical thinking specifically in Liberal Studies textbooks under the NSSC. My sample consisted of three Liberal Studies textbooks (see table 3b) which are currently used to teach Liberal Studies. The textbooks were specifically selected for its language of publication in English, and were all published between the years 2010 to 2013, after the implementation of the NSSC. The textbooks range in
length from 128 to 250 pages. These textbooks were acquired from overseas in their hard-copy form through a local publisher, the Hong Kong Educational Publishing Company, and were published as a part of a Liberal Studies series, written in accordance with the Liberal Studies Curriculum and Assessment Guide (Secondary 4-6). The textbook series, in accordance with the curriculum guide, contains six modules in total, ranging from topics as “Personal Development and Interpersonal Relationships”, to “Hong Kong Today”, to “Energy Technology and the Environment.” I used purposeful theoretical sampling to select my textbooks, which all came from modules entitled “Globalization” and “Modern China,” since critical thinking may be especially emphasized in those subject areas.

In addition, two teachers of Liberal Studies were interviewed regarding their first-hand experiences with the new curriculum. The interviews were conducted in English. The interviews were semi-structured (Interview Protocol, in Appendix B), and included open-ended questions about the curriculum reform and how critical thinking is being taught and assessed by exams. My sampling was purposeful in that I intentionally selected senior secondary school teachers who teach Liberal Studies to understand their perceptions of the reform and how critical thinking is conceptualized. Since the interviews were conducted in English, the interviewees were also selected based on the criteria of English ability, which was assessed on a self-reporting basis. My sampling criteria of secondary school teachers who specifically teach the subject of Liberal Studies and who speak English fluently refers to a small subgroup of the overall teacher population in Hong Kong. Pseudonyms were assigned for both interviewees.
The first of these interviews, with Carly So², was conducted in person; while the second interview, with Sarah Hu, was conducted online. At the time of the interview, Carly had taught for a total of six years at the same school, but had recently retired six months prior. She started her career teaching physics, computer studies and math, then transitioned to teaching Liberal Studies in her second year. She had the unique perspective of following through with the same cohort of students throughout Senior Secondary, from Form 4 to Form 6, for their Liberal Studies education. Sarah is a more experienced teacher and had taught for 18 years at the time of the interview at a high-achieving girls’ school. Each interview lasted no more than two hours in total and was recorded using an electronic recorder. Finally, I transcribed both interviews verbatim.

The interview transcripts and textbooks were then analyzed and coded using the qualitative analysis software, NVivo. The coding scheme consisted of both external codes, or codes generated before a deep examination of the text, and internal codes, or codes that emerged after the first pass of coding. External codes, such as “Definition of Critical Thinking – Abilities” were based on pre-identified themes that I gleaned from reviewing past literature, and included skills that comprise critical thinking. For example, I utilized Ennis’ (1981) sub-categories as external codes towards my data (see table 4 for a sample of these codes and a chart I used to organize my codes). Each transcript was coded in multiple passes, and all categories of codes were applied accordingly. Internal codes, such as “Obstacles to Critical Thinking” or “Examination Structure”, were generated during first and second passes through the data. I

² Names are pseudonyms
applied the same coding scheme across the three different sources of interview transcripts, textbooks, and text documents.

As a Hong Kong citizen, I undoubtedly bring my own interpretive lens and researcher subjectivity into the analysis process. However, I worked systematically in order to reflect on my subjectivity and manage biases (Peshkin, 1991). I created concrete definitions for each code to be consistently applied to all three data sources in order to avoid imprinting my own experiences on the coding and analysis of my data.

**Intended Curriculum: Policy Conceptualization of Critical Thinking**

Proceeding with the findings below, I first utilize Ennis’s conceptualization of critical thinking (1991) as a representative lens in order to provide a definition for and to inform my study. As aforementioned, Ennis’ conception of critical thinking involves 12 *dispositions* and 16 *abilities* of the ideal critical thinker; table 1 covers his taxonomy in additional detail.

[Table 1 about here]

To begin, I first examine the conceptualization of critical thinking on the intended level of curriculum, embodied by the policy documents. As covered, Liberal Studies is a compulsory subject of the New Senior Secondary reform with explicit curriculum aims to develop critical thinking, and this is duly reflected in the policy documents. The Liberal Studies Curriculum and Assessment Guide developed by the Hong Kong Education Bureau states that a primary objective of Liberal Studies is “to develop in students a range of skills for life-long learning, including critical thinking skills, creativity, problem-solving skills, communication skills and information technology skills” (Curriculum Development Council & The Hong Kong Examinations and Assessment Authority, 2007). In multiple documents related to the NSSC
reform, critical thinking is listed as a “Learning Goal” and a key “Generic Skill.” However, despite the apparent importance and prominence of this skill, the term “critical thinking” only appears in curriculum guides as a mere stand-alone term, with scarce additional clarification. The term “critical thinking” appears as both a “Curriculum Aim” and a “Broad Learning Outcome” of Senior Secondary Liberal Studies. Under section “1.4 Curriculum Aims”, one among six total aims is specifically to help develop in students the skill of critical thinking. Moreover, under “1.5 Broad Learning Outcomes”, it states that by the end of the course, students should be able to “identify the values underlying different views and judgments on personal and social issues, and apply critical thinking skills [emphasis added], creativity and different perspectives in making decisions and judgments on issues and problems at both personal and social levels” (Curriculum Development Council & The Hong Kong Examinations and Assessment Authority, 2007). In total, the term critical thinking appears more than 15 other times throughout the document.

However, despite its apparent importance, there is little mention in policy documents of the actual definition or meaning of critical thinking and the pedagogical approaches for teaching this skill. Whenever the term is mentioned, it is almost never accompanied by a clear definition. The only instances that allude to the meaning of the term are when critical thinking is listed alongside other desirable outcomes, suggesting that it is a concept synonymous or similar to these other outcomes. For example, page 23 details the “Area Objective” in a particular unit within Liberal Studies as one that enables students to “apply critical thinking and adopt multiple perspectives in making decisions and judgments regarding social issues and problems” (Curriculum Development Council & The Hong Kong Examinations and Assessment Authority, 2007). This seems to suggest that critical thinking involves adopting multiple perspectives – and in fact, as we will explore, textbooks and teachers do echo this conceptualization – but a richer
and clearer definition is sorely lacking. In this intended level of curriculum, critical thinking is conceptualized in a rather narrow and generalized fashion, suggesting that there is much room for educators utilizing the guide as a resource to self-interpret, and potentially misinterpret, this important goal of the Liberal Studies subject.

**Resourced Curriculum: Textbooks’ Conceptualization of Critical Thinking**

As a tool developed by publishers in accordance with the government curriculum guides and presumably a key resource for educators in the classroom, textbooks represent the resourced level of curriculum. Throughout the analyzed textbooks, the term critical thinking is very rarely mentioned, yet the presentation of content information, exercises and activities posed to the reader seems to be an intentional attempt at incorporating critical thinking skills. For example, the textbooks feature a small activity section titled “Different Views and Perspectives” in which a discussion question is posed and two students are pictured arguing “for” and “against” perspectives (see figure 3).

[Figure 3 about here]

These “for” and “against” perspectives encourage readers to consider multiple perspectives of complex, controversial issues. There are also sections titled “Stations,” which ask broad discussion questions (such as, “How was the global economic order established?”) and then present several different external data sources involving graphs and charts for students to draw from in answering the question. The examples present throughout the book suggest that the critical thinking skills one might utilize and acquire from the textbooks can best be conceptualized as ‘considering different perspectives’ and ‘taking a stance’, as well as ‘validating the credibility of the basis for one’s stance’.
However, while the above attempts are present, the language of the textbook – especially in the presentation of content – does not itself serve as an exemplary model of critical thinking. The writing found in the textbook is fairly broad and general overall, and does not seem to model nor incorporate the process of critical thinking in the development of perspectives. When presenting certain types of information as factual, the textbook at times does not adequately provide ample evidence to support a claim. For example, a paragraph on International Political Developments from page 24 of *New Horizon Liberal Studies: Globalization, Book 1 – Second Edition* reads:

> In the mid-19th century, European countries expanded their overseas colonies extensively and exploited resources in Asia and Africa. Unexpectedly, their moves stimulated global exchanges, laying a foundation for globalization. After the mid-20th century, although the colonies in Asia and Africa had declared independence, they still had interactions with their host countries. For example, the British Commonwealth and cooperation mechanisms such as the cooperative agreements between France and her former African colonies encouraged cross-regional cooperation.

The claim that European countries exploited resources in Asia and Africa begs additional details and support as to which countries specifically, through which mechanisms, treaties, or operations, etc. but these are not addressed. The text fails to adequately support the claims made and does not model the critical thinking processes students are expected to engage in.

In addition, when attempting to present multiple perspectives of an issue, these perspectives are often limited to “for” and “against” stances in response to a certain question, which does not truly highlight the myriad of nuances often inherent in a controversial issue. Although this undeniably exhibits intentional attempts at portraying critical thinking, the binary nature of the illustrated perspectives on a controversial issue suggests that the textbooks conceptualize critical thinking in a narrow manner. If textbooks serve as tools and models to impart critical thinking skills, yet do not themselves demonstrate a strong process for logically
inferring and communicating an argument, then it may likewise be difficult for students utilizing these textbooks to truly understand and apply these skills as well.

**Implemented Curriculum: Teachers’ Conceptualization of Critical Thinking**

In attempting to investigate how critical thinking is conceptualized on the implementation level through the perspective of the teachers, two interviews were conducted with former and current teachers of the Liberal Studies subject. Both interviews yielded significant findings on the teachers’ conceptualization of critical thinking at the implemented level of curriculum, as well as on teacher perceptions of the reform. Although both teachers perceived critical thinking to be an important skill set to teach, their conceptions and organization of critical thinking differed slightly from the one identified by Ennis (1991), as well as from one another. This finding suggests an inconsistency in the teachers’ understanding of the definition of critical thinking, suggesting that decoupling may exist between the intended policy objective of Liberal Studies to promote critical thinking and the practical teaching of it. The interviews revealed that the definitions of critical thinking held by the two teachers differed from Ennis’ academic definition and were more simplistic and narrow in comparison. However, although the teachers did not specifically define and disaggregate critical thinking into the same categories and terms as Ennis did, their given definitions did broadly fit within Ennis’ expanded taxonomy, while emphasizing certain abilities more heavily. Without explicitly defining critical thinking in the same terms and sub-categories, it seems that the teachers’ conceptualization of critical thinking covered all 4 of the abilities sub-groups (clarification, basis, inference, supposition & integration) and 3 of the 12 dispositional qualities identified by Ennis (withholding judgment, taking account of the whole situation, and developing one’s own stance).
Sarah’s communication of her understanding of critical thinking seemed especially uncertain, as it was punctuated by lengthy pauses and hesitation in tone. In addition, her communication of her conceptions of critical thinking seemed to mostly fall under the dispositional quality of “to withhold judgement when evidence and reasons are insufficient” (Ennis, 1991:8). For example, Sarah provided such conceptions of critical thinking when asked what behaviors demonstrate critical thinking: “[the students] would be, uh, they would be reluctant to very quickly take a stance. Yes. That would show that they start to think a bit more on those sides and do not want to make a hasty judgment.” Here, Sarah expresses the view that carefully considering multiple viewpoints and not hastily coming to one’s own conclusion is integral to critical thinking.

While Sarah’s definition of critical thinking mostly involved withholding judgment before sufficient evidence is found, Carly described critical thinking as “logically [presenting] some ideas that they might have…or some evidence that they’ve come across before to support their ideas.” This could be classified under the abilities sub-grouping of “inference,” since it requires a logical deduction of an argument from evidence (Ennis, 1991). Both interviewees made specific mentions of how critical thinking is not a skill that can be explicitly taught, despite being an explicitly stated objective of the Liberal Studies subject.

However, although their understanding of the term (as communicated through the interviews) may be slightly and understandably less complete when compared to Ennis’ (1991) more complex taxonomy, rather than suggesting inadequacy on the part of the educator, this finding should instead cause reflection on the mechanisms of support provided to teachers for the difficult undertaking of teaching critical thinking when understanding around the term is still potentially nebulous; on the processes needed to communicate a clearer definition of the Liberal
Studies’ objective from the intended policy level; and on potential incidences of decoupling throughout this process.

Although both teachers have a general understanding of critical thinking, it is clear that this conceptualization is still nascent. Consistent with Stapleton’s (2011) survey of attitudes towards critical thinking in Hong Kong teachers, the conception of critical thinking among educators seems generally to be limited to “having diverse viewpoints” (2011:21). The educators show a varying degree of understanding of critical thinking, but the differences in teacher understanding already indicate that perhaps across the board, the secondary school system is in need of a consistent, unified definition. The fact that the definition of critical thinking may still be imprecise to both textbook publishers and educators is alarming, and suggests that the government should provide more consistent and helpful resources in clarifying the definition and teaching of critical thinking in order to avoid decoupling. Without a standardized conceptualization of critical thinking on each level of curriculum, it is possible for various meanings and pedagogical approaches to exist for the teaching of critical thinking in Liberal Studies.

**Critical Thought, Explicitly Taught?**

In terms of the teaching of critical thinking and how it fits into the curriculum, both teachers conveyed the belief that critical thinking is not a skill that can be explicitly taught. For example, when Sarah was asked whether she believed critical thinking is an important skill to teach in the classroom, she responded that while it is important to acquire the skill, she does not explicitly teach it. She explains, “I do not go into the classroom and say, ‘today I am going to teach critical thinking’. So it’s just kind of through doing other stuff that this mode of thinking gets into them” [emphasis added].” This type of perspective on how critical thinking is taught
aptly exemplifies Ennis’ description of an immersion mode of critical thinking instruction, in which students are deeply immersed in a subject-matter but critical thinking principles are not made explicit (Ennis, 1989).

Sarah further proceeded to elaborate on an example of an activity she may utilize in the classroom to facilitate this learning. She described presenting a debatable issue to the class, such as, “should same-sex marriage be legalized?” or “should organ trading be legalized?”, and asking the class whether they agree or disagree. She would then ask the students to discuss these issues and ask them to stand on one side of the classroom if they agree with the prompt, and another side if they disagree. Through the description of this sample lesson, it seems that Sarah’s conceptualization of critical thinking in this case can best fit within the category of ‘considering different perspectives’ and ‘taking a stance’. More notably, this description additionally reflects Sarah’s belief that critical thinking abilities will be naturally developed in the process of content knowledge attainment, as opposed to directly taught.

Carly also expressed the similar view that critical thinking does not need to be explicitly taught nor explicitly incorporated into its own subject. For example, she detailed:

I mean for myself, I always tell [the students] – I never took Liberal Studies – in my time I didn’t have Liberal Studies topic. But still, I can think critically. Why? So... basically, it’s taught through – I would say that, for example, I was a science student, so...in my science education, I was taught how to think critically, base things on facts, evidence, experiments, and things like that. And actually, that built a very solid ground for critical thinking for me. I could apply that – I could transfer that skill set to when I’m reading the newspapers and stuff…

This again reflects the immersion approach of teaching critical thinking as outlined by Ennis (1989), wherein critical thinking is a skill that is acquired through becoming immersed in a thought-provoking subject matter – in this case, Carly gives the example of the science subject. In addition, her response reflects the belief that the transfer of critical thinking dispositions and
abilities can take place from one subject area to outside domains, even without explicit instruction that focuses on transfer.

Again, although there is no consensus in the literature on whether any of the three approaches to critical thinking instruction is most effective among the general, infusion, immersion, or mixed approaches, Sarah and Carly’s interviews demonstrate the seemingly well-established belief that the teacher’s role is not to explicitly teach the material nor critical thinking, but to facilitate this learning in their students. In fact, Carly unequivocally stated: “A Liberal Studies teacher actually is more of a facilitator position… it has been emphasized all along, you don’t teach them material. You facilitate their learning. So.. I’m not supposed to give [the students] the answers.” Notably, Carly’s answer seems to express a firm understanding of her own role as a teacher in the Liberal Studies curriculum. It seems to reveal a clear understanding of the curricular shift from a teacher-centric approach to a more student-centric approach, as outlined in policy objectives, and to reveal a desire to move away from rote memorization of content knowledge. In at least this aspect of pedagogy, it seems that both teachers’ perspectives are aligned with the overall spirit conveyed in the policy objectives of the NSSC reform, although it cannot be concluded whether this belief is a result of reform policy objectives, or whether it is merely a perspective gleaned from the teachers’ own teaching experiences.

**Low Levels of Support Usage of Government Resources and Resourced Curriculum**

A further significant finding from the interviews is that there is a surprisingly low level of external resource or support utilization by the teachers in the teaching of this subject. In this case, I use the term external resource support to denote either forms of training provided by the government, or the classroom resource of textbooks. Surprisingly, both teachers reported very
low adoption of textbook usage in their teaching, seemingly by choice, as there is no indication of difficulty in accessing these materials. For example, when asked about utilizing resources in class, Carly mentions using graphs, photocopies of articles, internet resources – but makes no mention of textbooks until I explicitly prompt with, “Do you ever incorporate textbooks in class?” to which she responds off-handedly: “If we are using textbooks, it’s usually because…it’s already like a lesson in itself. Like they would have some questions already set out, and we don’t have to like throw questions to them. They – it would usually um – they would usually have some passages adapted from different sources….” This implies that she only utilized textbooks when the textbooks aligned well with her lesson structure, suggesting that textbooks are not consistently used, nor are they a centerpiece resource to her teaching.

In addition, professional development training does not seem to be of substantive help to the teachers when it comes to teaching critical thinking. When asked how she first came across the term critical thinking, Sarah mentioned that she did not remember how she first came across the term, and also that she “[didn’t] think it was being explicitly taught at [pre-service] teacher training.” Carly also made specific mentions of how government training programs were insubstantial in providing practical application help when it comes to teaching Liberal Studies. For example, she noted:

Basically, it wasn’t that the government’s help wasn’t – it’s not that in the beginning they didn’t give any support. It’s just that it wasn’t very…it wasn’t enough. Like, for example we have a topic called public health. They might give a lecture on public health, they may invite some speakers to talk about public health to us. But it’s not something that we could directly – like it teaches us what public health is about, but it’s not about how you should conduct your lessons, what materials you’re giving your students. Sometimes they would provide more of that, but...in the beginning, more often than not...

In this example, Carly expressed that although the government did provide some means of support, it was inadequate and did not directly provide help on how to conduct the lesson. This
finding suggests that these resources were not designed to explicitly train teachers in the instruction of critical thinking skills, resulting in such programs being of little effective use.

In summary, the low incorporation of external resources and input in the teaching of the subject – either due to a lack of provision or by the teacher’s own choice – is a mechanism through which decoupling could potentially occur. The underutilization of resources provided by educational authorities in attempts to standardize the conceptualization of critical thinking demonstrates a disconnect between higher level governmental policymakers and on-the-ground practitioners.

**High-Stakes Orientation Around Examination Culture Emerges From Interviews**

Despite reform efforts to lessen the examination-oriented culture in Hong Kong, its prevailing influence was still clearly expressed through both interviews, even in answers to questions that did not explicitly ask about the examination. From these frequent and unsolicited mentions of the exam, it is clear that the Diploma of Secondary Education (DSE) examination is high on the minds of students and teachers. Interestingly, the intense focus on the DSE examination – and, to a lesser extent, the overall academic structure – seems to potentially serve as an opposing force to the effective teaching of critical thinking. In fact, Carly very directly presented the DSE examination as an obstruction to the learning of critical thinking. She expressed:

So, I was saying, personally, when I think about critical thinking, I don’t think it can be examed [sic] this way. Like, if you make it into an exam in this very exam-oriented environment, then people would just try to get the grades by taking short-cuts, going to tutorial classes, memorizing those answers… because it’s so important for them to get a good grade so that they can get into university.

In this example, it is evident that Carly perceives the examination-oriented culture in which the Hong Kong academic system is entrenched to be an opposing force to critical thinking, as it
results in students taking “short-cuts” to achieve a certain academic result that would enable them to attend university.

Such “short-cuts” to learning, for Carly, may take the form of tutorial classes. Carly described how the pressure of the DSE examination drives many students to private tutoring (i.e. shadow education):

And actually there are a lot of tutoring agencies who offer these courses. Like institutions that offer Liberal Studies courses and they just try to make it into like a formula, thing, for them. Like use the old method of spoon-feeding them, like yeah, and if they go to these classes, then...they’re not thinking for themselves. They’re just, yeah, they just try to memorize. “Oh, if they ask me about this topic, I should answer – I should talk about these things…”

Her description indicates her opinion that, in attending private tutoring centers which “spoon-feeds” formulaic answers to students in regards to the Liberal Studies portion of the DSE examination, students are not exercising critical thinking. However, Carly was also aware of the inherent difficulty and ambiguity in the design of the examination structure. She recognized that if an examination is not in place to test for learning, some less mature students may not pay attention to the learning; while if an examination is in place, people may utilize shortcuts.

On the other hand, Sarah briefly mentioned that the new DSE examination structure does not allow for as much “regurgitation” of answers, implying a higher level of critical thinking is necessary to do well. She noted that the examination may give the students an opportunity to present their thoughts in a clear and logical manner, which she believed facilitates their critical thinking.

Table 2 shows a more in-depth detailing of the teachers’ mention of the exams. As seen from the teachers’ responses, there is evidence that the high pressure to perform on the
examinations and succeed in the overall academic structure may pose as a potential obstacle to effective critical thinking.

[Table 2 about here]

Chan and Bray (2014) have investigated the tension between the focus on performance in external examinations and the emphases stressed by the government and educators in the Hong Kong context. They found that although the official curriculum emphasizes creativity and critical thinking, many students – due to a desire to perform well on the examination – seek out private supplementary tutoring, which focuses on a formulaic method for passing examinations instead. They highlighted that the tutors often provided information or content which “reduced the need for students to research by themselves” (2014: 378) and thus is inconsistent with the objectives presented in policy documents. Chan and Bray also provided specific examples in which tutors taught techniques that contradicted the approach outlined in the official guidelines of “learning to learn.” In this light, the private tutoring centers can be seen as a mechanism through which decoupling occurs, and the high-stakes, performance-oriented culture in which Hong Kong’s educational system is ensconced can perhaps be seen as a potential reason for which decoupling occurs.

**Generally Negative Perceptions Around the Reform**

Lastly, while both teachers made several sparse positive comments in regards to the NSSC reform, both interviews conveyed a conclusively negative perception around the reform overall. For example, both teachers mentioned how the new system seems to disadvantage students further when compared to the old system. Sarah remarked that, under the new academic structure, “weaker” students who may not have the ability to tackle the difficulty of the DSE
exam now have less time to get up to speed, while Carly remarked that the new academic structure provides less time for the students to intentionally choose their subjects of interest.

Based on the findings, it appears that not only is critical thinking conceptualized inconsistently on the intended, resourced, and implemented levels of curriculum respectively, but that the understanding of critical thinking is also general and fairly vague across the levels. When viewed through the lens of neo-institutional theory (DiMaggio & Powell, 1983; Meyer & Rowan, 1977), these conclusions offer evidence of a decoupling between policy and practice in the Liberal Studies subject of the NSS curriculum reform. In light of this decoupling, it can be surmised that the policy objectives around promoting critical thinking skills may have arisen from the pressure of institutional isomorphism in a globalizing educational environment. Paying attention to such isomorphic norms – and, where appropriate, considering whether these global priorities are worth emulating – is often beneficial in educational agenda. However, the decoupling that often occurs points to a need to address the specific complexities of the current underlying system, such as a high-stakes examination orientation or inadequate provision of governmental resources, when attempting to implement these changes.

**Conclusion**

The study reveals several themes and tensions in Hong Kong’s critical thinking education through Liberal Studies in the New Senior Secondary Curriculum. Firstly, on the intended level of curriculum as explored in policy documents, the term critical thinking occurs with relatively high frequency and is clearly outlined as an important curriculum aim of the Liberal Studies subject; however, it lacks a clear definition. An analysis of the resourced curriculum, or the textbooks, revealed that while attempts to intentionally impart critical thinking skills are present, its conceptualization of critical thinking remains somewhat simplistic and does not itself
demonstrate a strong mastery of critical thinking when presenting content knowledge. The textbooks themselves are not necessarily exemplary models of arguments and viewpoints developed through critical thinking, and the term critical thinking is rarely mentioned.

In terms of the implemented curriculum as gleaned through teacher interviews, several tensions also encumber an effective teaching of critical thinking: teachers do not always have a complete and thorough understanding of the term and a way to effectively impart it; there is a low level of utilization of governmental and other resources generally perceived to be inadequate; and the high-stakes examination culture of the academic system in which Liberal Studies is embedded often incentivizes both students and educators in ways not conducive to developing critical thinking skills.

In culmination, it is clear that while a key policy purpose of Liberal Studies is the promotion of critical thinking, the above tensions prevent an effective teaching of critical thinking in practice. Although both the textbooks and teachers present an overall understanding of critical thinking, this conceptualization is still nascent, indicating a need in the educational system for a consistent, unified definition.

However, as the current study sampled only a limited number of textbooks and educators, it does not purport to be necessarily representative of the larger Hong Kong context. The textbooks sampled may not be altogether similar to other textbooks used as curriculum resources in the teaching of critical thinking; and the insights on critical thinking shared by the teachers may not be generalizable to the entire population of Liberal Studies teachers. Despite the potential limitations of this study, perhaps what is clear from the findings is that the conceptualization of critical thinking is still fairly unclear at the intended, resourced, and implemented levels of curriculum, which is a potentially contributive factor to decoupling.
This study also inspires important areas of future research, including the question of how to best teach critical thinking as a part of an academic system in which competing forces against the effective teaching of critical thinking, such as a high stakes examination culture, may be deep-rooted. As is evident from the findings, what is prioritized by the centralized educational authority as a curriculum goal does not always lead to said goal being realized on the implementation level. Hence, another important area of research on the teaching of critical thinking in the NSSC reform should include interviews with policymakers in the Education Bureau, as well as interviews with textbook authors, to understand whether gaps exist in their conceptualization of critical thinking. Such a study may provide direction and guidance on how to best ensure a standardized vision across the different levels of curriculum reform, from top-down policy to on-the-ground implementation.

*Policy Implications*

The fact that the term “critical thinking” lacks a distinct definition to both textbook publishers and educators is a concerning one, and suggests that the government should more consistently define and provide resources for the teaching of critical thinking. In order to avoid decoupling and instead to adapt the curriculum in ways that align with and bolster original objectives, clearer guidelines need to be standardized by educational authorities on both the meaning of and the pedagogical methods for teaching critical thinking. In addition, in order to best sustain curriculum alignment across all levels, more programmatic measures should be provided and mandated by the government to support schools and teachers in their understanding and implementation of the newly reformed curriculum.

Second, the findings generated from this study demonstrate that any aspect of curriculum reform is part of a larger, systemic whole. For example, teacher interviews revealed that the high
stakes examination culture prevalent in Hong Kong’s educational system – although not directly related to the teaching of critical thinking – indeed poses significant challenges to an effective development of critical thinking skills in students. Thus, it is important for policymakers to keep in mind how other parts of the larger academic system may enable or inhibit curriculum change, and design policies accordingly that address these challenges.

In conclusion, this study facilitates further understanding of how critical thinking is conceptualized on the intended, resourced, and implemented levels of curriculum in Hong Kong, and through that, provides a view on how policies may potentially decouple from practice in the NSSC reform. By assessing the mechanisms of translating top-down policy change throughout system and structures, specifically through the lens of critical thinking education in Liberal Studies, we consider the potential impact of this curriculum reform on a post-1997 generation of students at such a critical juncture in Hong Kong’s history.
References


Curriculum Development Council, & The Hong Kong Examinations and Assessment Authority. (2007). Liberal Studies: Curriculum and Assessment Guide (Secondary 4-6).


Education Bureau, & Hong Kong Examinations and Assessment Authority. (2014). *Quality Education. The Government of the Hong Kong Special Administrative Region*.


Appendices

Appendix A: Figures & Tables

**Figure 1:** Hong Kong Education Bureau’s Senior Secondary Curriculum and Assessment Framework, taken from “Senior Secondary Curriculum Guide - The Future is Now: From Vision to Realisation (Secondary 4-6)”, Booklet 1. Hong Kong Education Bureau, http://cd1.edb.hkedcity.net/cd/cns/sscg_web/html/english/main01.html
**Figure 2:** Steps in Curriculum Decision-making, adapted from Adamson & Davison (2003, adapted from Johnson 1989)
| **Dispositions of the Ideal Critical Thinker** | 1 | To be clear about the intended meaning of what is said, written, or otherwise communicated |
| | 2 | To determine and maintain focus on the conclusion or question |
| | 3 | To take into account the total situation |
| | 4 | To seek and offer reasons |
| | 5 | To try to be well informed |
| | 6 | To look for alternatives |
| | 7 | To seek as much precision as the situation requires |
| | 8 | To try to be reflectively aware of one’s own basic beliefs |
| | 9 | To be open-minded: consider seriously other points of view than one’s own |
| | 10 | To withhold judgment when the evidence and reasons are insufficient |
| | 11 | To take a position (and change a position) when the evidence and reasons are sufficient |
| | 12 | To use one’s critical thinking abilities |

| **Abilities of the Ideal Critical Thinker** | **Clarification** | 1 | To identify the focus: the issue, question, or conclusion |
| | | 2 | To analyze arguments |
| | | 3 | To ask and answer questions of clarification and/or challenge |
| | | 4 | To define terms, judge definitions, and deal with equivocation |
| | | 5 | To identify unstated assumptions |
| | **Basis** | 6 | To judge the credibility of a source |
| | | 7 | To observe, and judge observation reports |
| | **Inference** | 8 | To deduce, and judge deductions |
| | | 9 | To induce, and judge inductions |
| | | 10 | To make and judge value judgements |
| | **Metacognitive Abilities – involving supposition and integration** | 11 | To consider and reason from premises, reasons, assumptions, positions, and other propositions with which one disagrees or about which one is in doubt – without letting the disagreement or doubt interfere with one’s thinking (“suppositional thinking”) |
| | | 12 | To integrate the other abilities and dispositions in making and defending a decision |
| | **Auxiliary Critical Thinking Abilities – having them is not constitutive of being a critical thinker** | 13 | To proceed in an orderly manner appropriate to the situation, for example, to follow problem solving steps; to monitor one’s own thinking; to employ a reasonable critical thinking checklist |
| | | 14 | To be sensitive to the feelings, level of knowledge, and degree of sophistication of others |
| | | 15 | To employ appropriate rhetorical strategies in discussion and presentation (orally and in writing) |
| | | 16 | To employ and react to “fallacy” labels in an appropriate manner |

**Table 1**: Ennis’ Streamlined Conception of Critical Thinking, adapted from his 1991 publication in *Teaching Philosophy*, “Critical Thinking: A Streamlined Conception”
Figure 3: An Example of a “Different Views and Perspectives” Section Activity, taken from New Horizon Liberal Studies: Globalization, Book 1 – Second Edition, page 44.
<table>
<thead>
<tr>
<th>Teacher 1: Carly So</th>
<th>Teacher 2: Sarah Hu</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Difficulty Level</strong></td>
<td>**So in the end, I think after the first year it was pretty clear that the HKEA – the education – sorry, <strong>the examination authority</strong> – they have a very low standard of passing the students. So if you just want to scrape through, like get a pass, it’s very easy. <strong>You don’t really have to, like...have a very critical thinking mindset.</strong>”</td>
</tr>
<tr>
<td>of HKDSE</td>
<td></td>
</tr>
<tr>
<td><strong>How the HKDSE Facilitates or Obstructs Critical Thinking in LS</strong></td>
<td>“Just make sure that your paper isn’t blank, like write down some relevant stuff and you’re already getting points. <strong>You might pass!</strong> So, yeah, that’s the...I’m not saying that the aim is bad, it’s a very, very necessary aim. I mean, it’s very essential for students to develop their own thinking – critical thinking – to protect themselves in the future. But...I think as a subject it’s not very successful.”</td>
</tr>
<tr>
<td></td>
<td>“So, I was saying, personally, when I think about critical thinking, I don’t think it can be examed [sic] this way. <strong>If you make it into an exam in this very exam-oriented environment, then people would just try to get the grades by taking short-cuts, going to tutorial classes, memorizing those answers...because it’s so important for them to get a good grade so that they can get into university.”</strong></td>
</tr>
</tbody>
</table>

*Table 2: Teacher Perceptions of Examination Structure and Culture in Relation to Liberal Studies and Critical Thinking*
Appendix B: Data Collection & Analysis Materials

Interview Protocol

Opening / Warm-up Questions
- E.g. How was your day? Etc.

Introduction
- Express appreciation
- Address the concern of privacy. Review details around recording / transcription; gain consent.
- Ask whether he/she has more questions or concerns.

Questions about Teacher Background
- Tell me a little bit about your current role / position.
  - What subject(s) do you currently teach?
  - At which school do you currently teach?
  - Which grade levels
  - How many years have you been teaching?

Questions on the Concept and Teaching of Critical Thinking
- How would you define critical thinking? When and how did you first come across the concept of critical thinking?
- When do you know when a student has developed critical thinking skills? What are the behaviors that signal that to you?
  - Sub-skills: How might you break down critical thinking into sub-skills?
- How important do you think it is to teach critical thinking to your students? Why?
- In general, what is your overall plan for improving the critical thinking skills of your students through Liberal Studies subject? Please give several tangible examples.
  - Please think of an activity or lesson that you taught that was designed to exercise or teach critical thinking. Could you please describe that lesson/unit to me?
- In general, how would you describe the critical thinking levels in your students, and what patterns or trends (if any) have you noticed? How do you assess the critical thinking levels in your students?
- How, if at all, do you think that Liberal Studies helps to promote critical thinking?
- What role does the curriculum material (i.e. textbooks) play in your teaching of critical thinking? How do you incorporate the usage of textbooks?

Questions about Thoughts and Perceptions of Curriculum Reform
- What are your thoughts on the NSSC reform?
  - What are some specific aspects that you like?
  - What are some specific aspects that you are not fond of?
- What do you think are the objectives of the curriculum reform? Why do you think there is a need for the NSSC reform?
• What sort of changes have you seen since the implementation of NSSC?
  o What changes have you seen in teaching / student outcomes?
    ▪ [Looking at the policy documents, it seems like these key generic skills xxx are a central part of the NSSC reform. Which ones stand out to you, and what are your thoughts on them?]
  o What changes have you specifically made in your teaching since the NSSC reform?
    o Can you recall a lesson / topic that you teach differently now compared to before due to the reform? Please tell me about it.

Questions about Teacher Training

• How were you trained and prepared to become a teacher (credentialing process)?
• How were you trained and prepared to become a Liberal Studies teacher?
  o What is the process like for all teachers in Hong Kong?

Concluding Question

• Is there anything else you would like to add about this topic that you feel is important for me to know besides what has already been covered?
Table 3a: Policy Documents Sampling

<table>
<thead>
<tr>
<th>Publisher</th>
<th>Date of Publication</th>
<th>Document Name</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>HKSAR Curriculum Development Council; The Hong Kong Examinations and Assessment Authority</td>
<td>2007, with updates in January 2014</td>
<td><em>Liberal Studies: Curriculum and Assessment Guide (Secondary 4-6)</em></td>
<td>233 pages</td>
</tr>
<tr>
<td>HKSAR Curriculum Development Council</td>
<td>2009</td>
<td><em>Senior Secondary Curriculum Guide - The Future is Now: from Vision to Realisation (Secondary 4 - 6)</em></td>
<td>12 Booklets</td>
</tr>
</tbody>
</table>

Table 3b: Textbook Sampling

<table>
<thead>
<tr>
<th>Subject</th>
<th>Unit</th>
<th>Date of Publication</th>
<th>Textbook Name</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category</td>
<td>Parent</td>
<td>Child</td>
<td>Definition</td>
<td>Type</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------------</td>
<td>----------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Disposition - True</td>
<td>Beliefs</td>
<td>1. Care that their beliefs be true, and that their decisions be justified; that is, care to “get it right” to the extent possible; including to a. Seek alternative hypotheses, explanations, conclusions, plans, sources, etc.; and be open to them b. Consider seriously other points of view than their own c. Try to be well informed d. Endorse a position to the extent that, but only to the extent that, it is justified by the information that is available e. Use their critical thinking abilities</td>
<td>External</td>
<td></td>
</tr>
<tr>
<td>Disposition - Position</td>
<td>Presentation</td>
<td>2. Care to understand and present a position honestly and clearly, theirs as well as others’; including to a. Discover and listen to others’ view and reasons b. Be clear about the intended meaning of what is said, written, or otherwise communicated, seeking as much precision as the situation requires c. Determine, and maintain focus on, the conclusion or question d. Seek and offer reasons e. Take into account the total situation f. Be reflectively aware of their own basic beliefs</td>
<td>External</td>
<td></td>
</tr>
<tr>
<td>Critical Thinking</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abilities - Clarification</td>
<td></td>
<td>Asking questions to clarify a perspective</td>
<td>External</td>
<td></td>
</tr>
<tr>
<td>Abilities - Basis</td>
<td></td>
<td>Judge Credibility of a Source</td>
<td>External</td>
<td></td>
</tr>
<tr>
<td>Abilities - Inference</td>
<td></td>
<td>Forming judgements from a logical flow of thoughts</td>
<td>External</td>
<td></td>
</tr>
<tr>
<td>Ethics &amp; Morals</td>
<td></td>
<td>A definition of critical thinking (non-Ennis) that invokes values judgements</td>
<td>Internal</td>
<td></td>
</tr>
<tr>
<td>Ennis’ Definition</td>
<td></td>
<td>A definition of critical thinking that fits within Ennis framework</td>
<td>External</td>
<td></td>
</tr>
<tr>
<td>Teacher Own Definition</td>
<td></td>
<td>A definition of critical thinking that does not fit within Ennis framework and is the teachers’ own</td>
<td>Internal</td>
<td></td>
</tr>
<tr>
<td>Not-CT</td>
<td></td>
<td>A provided definition of critical thinking that is not critical thinking</td>
<td>Internal</td>
<td></td>
</tr>
</tbody>
</table>

**Table 4:** Example of 2nd Pass Coding Chart, with External and Internal Codes