THE ROLE OF HONG KONG SCHOOLS IN PROMOTING

STUDENTS' FUTURE CIVIC ENGAGEMENT :

A MIXED-METHOD APPROACH

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EdD

THE HONG KONG INSTITUTE OF EDUCATION

2014

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by

AU, Wai Chun Cherry

A Thesis Submitted to

The Hong Kong Institute of Education

in Partial Fulfillment of the Requirement for

the Degree of Doctor of Education

2014

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AU, Wai Chun Cherry

2014

Thesis Examination Panel Approval

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ABSTRACT

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Abstract

This study uses data from the International Association for the Evaluation of Educational Achievement (IEA) Civic Education Study (1999) (Torney-Purta et al., 2001) and the Civic Education Study (Kennedy & Chow, 2009) to investigate the role of Hong Kong schools in promoting students' attitudes to future civic engagement over the decade, from 1999 through 2009. A Rasch measurement approach was used to validate the Hong Kong student data from the 1999 (4997 students and 150 schools) and 2009 cohorts (602 students and 18 schools). Focus group interviews were conducted with samples of students to obtain an in-depth understanding of their attitudes to future civic engagement. The significance of the study is that the Hong Kong data for both cohorts of students have not been analyzed previously. The results demonstrate the utility of Rasch measurement for scale validation and identify changes over time in the

response of Hong Kong students to the attempts of schools to promote future civic engagement. The use of qualitative interviews further explore the issues raised by the Rasch analysis of the secondary data introduced a new methodological feature to civic education studies.

Chapter 1 commences with an introduction of the study. Chapter 2 provides a literature review of the theoretical basis for the IEA political socialization model, student attitudes to future civic engagement, and school-related factors in promoting future civic participation. Chapter 3 outlines the research design of the study, including the sample, measurement approaches, and analytical techniques used. The results are presented in Chapter 4. Chapter 5 discusses the findings in relation to the theoretical framework of the study, and outlines the implications for civic teachers, policy makers and the government.

Rasch analysis confirmed that students in both cohorts identified future civic engagement was a multidimensional construct comprising three dimensions, namely, conventional participation (CONVEN), unconventional participation (UNCONVEN) and protest activity (PROTE). The analysis further revealed that students' attitudes toward expected future civic engagement differed between the two cohorts. The 2009 students expected to engage more in community services. No significant gender differences were found in the 2009 cohort.

To assess the effects of school variables (i.e. civic curriculum, open classroom climate and students' perception of school participation) in promoting students' attitudes toward future civic engagement, multi-level regression analysis was performed. A slight variation in the effects of the variables across schools was observed. Within schools, the three school variables explained the three dimensions of civic engagement at both the school and student levels for the 1999 cohort. The three school variables for the 2009 cohort only explained CONVEN and UNCONVEN at the student level. The amount of variance for the 2009 cohort was smaller than that of the 1999 cohort. Finally, the results from focus group interviews further explain the quantitative findings that were identified by Rasch measurement.

Suggestions were made to civic educators to deliver a civic curriculum that includes topics on national level, and to practice democratic pedagogy. The government can also implement policies to encourage schools to develop stronger links with their communities and to implement reforms to prepare students to be active participatory citizens in the future.

ACKNOWLEDGEMENTS

This study is dedicated to Prof. Kerry John Kennedy who supervised and constantly provided insightful comments and suggestions during the administration of the research and in the process of writing the thesis. Without his patient guidance, warm encouragement, enthusiastic support and invaluable comments in every stage of the thesis writing, the thesis would not have been successfully completed.

Likewise, I am grateful for all the support and guidance I have received from Prof. Magdalena Mok Mo Ching, particularly for her patience, unwavering faith, and trust in my work. Her insightful comments inspired my great interest in quantitative research. I am also grateful to Dr. Leung Yan Wing for his patience and guidance in introducing me to the world of qualitative research. I learned to understand research methodology from another perspective and gained more insights and experience from qualitative interview through his teaching.

I express my warmest thanks to all the group members of the Civic Education, Measurement and Research Group. We constantly had fruitful and insightful sharing in the meetings. I also thank Prof. Wang Wen Chung, Xuelan, Jacob, Jensen and Joseph. Finally, I thank my mother and my husband for their endless support, love and assistance, who patiently took care of our home while I was away attending classes and preparing for the thesis.

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List of Abbrevitions

CCS	Civics Curriculum Scale
CDC	Curriculum Development Council
CIRCLE	Centre for Information and Research on Civic Learning and Engagement
CivEd Study	IEA Civic Education Study
CONVEN	Conventional Participation
EDB	Education Bureau
HKDSE	Hong Kong Diploma of Secondary Education
HKSAR	Hong Kong Special Administrative Region
ICCS	International Civics and Citizenship Study
IEA	International Association for the Evaluation of Educational Achievement
IH	Integrated Humanities
IRT	Item response theory
KLA	Key Learning Areas
KT	Four Key Tasks
NSS	New Senior Secondary Curriculum
OCCS	Open Classroom Climate Scale
OLE	Other Learning Experience
PAS	Political Action Scale
PRC	People's Republic of China
PROTE	Protest activities
PSHE	Personal, Social and Humanities Education
PV	Plausible values
SPS	School Participation Scale
UNCONVEN	Unconventional Participation (social movement-related participation)
UNESCO	United Nations Educational, Scientific and Cultural Organization

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<center>**Chapter One**</center>

<center>**INTRODUCTION**</center>

1.1 Background

The United States Civic and Political National Health Survey (2006) (Lopez et al., 2006) reported serious civic disengagement among adolescents aged 15 to 25 years, most of whom were unable to answer basic questions about politics and current events. Delli Carpini (2000) reported a similar observation regarding the decline of civic engagement among all age groups in the United States in the past three decades.

Delli Carpini (2000) suggested that the civic participation of the American youth could be characterized by "ten less." For instance, they were less likely to trust their government and fellow citizens, less interested in politics or public affairs, less likely to feel a sense of identity, less knowledgeable about the processes of politics, less likely to read a newspaper or watch the news, less likely to register or vote, less likely to participate in politics beyond voting, less likely to participate in community organizations, and less likely to connect individual efforts to help solve problems with more traditional, collective forms of civic engagement. These reports suggested serious problems with adolescent civic engagement.

Similar findings were mirrored in Hong Kong. A longitudinal study about the civic engagement and social networks of youth in Hong Kong conducted by Policy 21 (2010), which began in 2004, tracked the development of participants aged 18 to 27 years. The study reported that civic engagement, such as participation in conventional politics, civic rallies, volunteer work and faith-based engagement, decreased over time and with the age of the respondents. The problem of declining trend in civic engagement in Hong Kong appears to be as significant as that in the United States.

Against this background, concerted efforts to review the Hong Kong school curriculum have been attempted to make it more relevant and meaningful for students. These include the introduction of the "3-3-4 Educational Reform", an extension of compulsory education in public sector schools to twelve years, and mandating Liberal Studies as a core subject for all secondary school students from 2009 onwards. In addition, there was a proposal for making "moral and national education" as a subject for Primary 1 to Secondary 6 students to be fully implemented in 2013-2014 onwards. However, the implementation was delayed due to public protests. All these reforms suggest the importance of civic education, at least from the government perspective.

However, the importance of civic education is not confined to the local context. The former Secretary-General of the United Nations, Kofi Annan (the seventh secretary-general of the United

Nations) states, "No one is born a good citizen; no nation is born a democracy. Rather, both are processes that continue to evolve over a lifetime…A society that cuts itself off from its youth severs its lifeline; it is condemned to bleed to death." Therefore, it is important to understand the contexts that promote or facilitate the positive development of civic engagement.

Individuals are not born to be active participatory citizens; thus, it is essential to explore the role played by schools in political socialization in nurturing student attitudes toward civic engagement. The current study has been designed against such a background to assess the effectiveness of Hong Kong schools in encouraging civic engagement among adolescents. Nevertheless, civic engagement, especially in the form of political participation, is not simply an issue for schools but an important part of our daily lives. This study, therefore, aims to assess the contribution of schools to this important aspect of living.

1.1.1   Changes in citizenship education in the past decade

The past two decades have witnessed tremendous changes in the social, economic, and political lives of citizens in numerous countries. The changes include the breakdown of communism in Eastern Europe, increasing efforts to establish democracy and new forms of economic management, and the rise of the European Union with frequent immigration flows that increased multiracial populations and expanded multiculturalism.

Some countries in Asia have experienced economic renaissance, which also came with subsequent crises because globalization linked economies and societies in previously unknown ways. The economic development of the People's Republic of China (PRC) and its accompanying policies, such as the Reform and Openness Policy, which started in the 1980s, and the return of Hong Kong and Macao to Mainland control, have become important global events. Furthermore, this period witnessed the end of colonialism in the region. These events have highlighted the importance of civic and citizenship education and the role they play in preparing young people for a changing world.

The International Association for the Evaluation of Educational Achievement (IEA) was one of the first international organizations to recognize the importance of school-based learning for civic education. IEA conducted the first international study on civic education across 10 countries in the 1970s (Torney, Oppenheim & Farren, 1975). Prior to the conduct of the International Civics and Citizenship Education Study (ICCS 2009), IEA reviewed the features of global changes and reported its findings in the ICCS Assessment Framework (Schulz et al., 2008). The possible reasons for the changes are summarized below.

In the past decade, terrorism has occurred and threatened all societies. This phenomenon has spurred debates regarding the role of civic and citizenship education in dealing with the radical

terrorist movement in the West. As a result, sufficient citizenship and civic education in response to changes in the world is necessary (see Porath, 2006; IDEA, 2006).

Second, an increasing number of developing countries in the African, Asian, and South American continents experienced changes in their political systems after the end of colonial rule. However, the gap between the rich and the poor was still large and without adequate education, the real practice of democracy in those developing countries was hindered. Extant studies (e.g., Birzea et al., 2004; Reimers, 2007) stress the importance of democracy and democratic practice in government and even in education settings in those countries. The aspiration to pursue democratic government in developing countries has been prospering as evidenced by the recent Jasmine Revolution in the Middle East in 2011, the pro-democracy movement in Burma with the election of Anng San Suu Ki to the parliament in 2012 and the Sunflower student movement in Taiwan in 2014. Thus, strengthening citizenship education to help sustain democratic growth is necessary (see Cox, Jaramillo & Reimers, 2005).

Third, non-governmental groups have a higher demand for active citizenship. This world trend perhaps occurred after the breakdown of communist blocs during the Cold War. Furthermore, numerous types of social movements in different parts of the world emerged. Some advocated for democracy, others for human rights, and still others for environmental protection. With adequate civic education, people can better understand their rights and responsibilities (Wade, 2007).

Fourth, modernization and globalization brought about profound changes. For instance, the use of mass media such as the internet, global branding of consumer products, and cross-country business and investment facilitated the rapid transformation of societal structure in the past decade (see Branson, 1999; Rahn, 2004). Linked to these global changes is the change in the conception of citizenship. For instance, global citizenship values, such as freedom and liberty, democracy, equality, justice, tolerance, human rights and responsibility and so forth, have become more popular recently (Lee, 2004, 2005). In response to this issue, a number of researchers, social scientists, and education policy makers have focused on the need to implement an appropriate policy, which facilitates civic and citizenship education, in order to meet the needs of these changes (Birzea et al., 2004; Craig et al., 2005). Therefore, it is necessary to update empirical evidence on the new environment of civic education and engagement in the past decade.

1.1.2   Changes in citizenship education in Hong Kong

Hong Kong was a British colony for nearly one and a half centuries. Its colonial history was characterized by depoliticization in government and an apolitized attitude among Hong Kong citizens. Hong Kong is a small international city that has experienced tremendous changes after the handover from Britain to the PRC in 1997. The political climate in the last decade of the 20th century became politically sensitive. Aside from political changes, economic restructuring has also

become a priority in Hong Kong, resulting in widespread education reforms that have been designed to respond to global trends. A reform document entitled *Learning for Life, Learning through Life* (Education Commission, 2000) stated:

> The world is undergoing unprecedented changes, and Hong Kong is no exception. We are seeing substantial changes in the economic structure and the knowledge-based economy…Politically, reunification with China and democratization have changed the ways Hong Kong people think and live. Our social structure is fast evolving, and there is an urgent need to alleviate the disparity of wealth…The rapid development of information technology has opened up new domains in all aspects of our lives and creating new challenges. (Para. 2.1, p. 3)

These views naturally highlight the need for education reform to cope with the changes in the world and in Hong Kong society. Furthermore, the document explained the means or skills to deal with the new challenges:

> Adaptability, creativity and abilities for communication, self-learning and cooperation are now the prerequisites for everyone to succeed…'Lifelong Learning and All-round Development" is our expectation of everyone in this era.' (Para. 2.2, p. 3)

The citizenship curriculum in Hong Kong has also undergone reforms within this context. However, to date, few attempts to assess the effectiveness of these reforms have been made.

The Education Commission submitted the *Reform Proposal for the Education System of Hong Kong* in 2000 to "create more rooms for schools, teachers and students, to offer all-round and balanced

learning opportunities … (to) lay foundations for Hong Kong to become a diverse, democratic, civilized, tolerant and cultured cosmopolitan city" (Education Commission, 2000 p. 1). Moreover, a curriculum reform document entitled *Learning to Learn – the Way Forward in Curriculum Development* (Curriculum Development Council (CDC), 2001) proposed a curriculum restructuring plan for school education that would take 10 years to complete. Among the new features in the curriculum structure was the grouping of all academic subjects into eight key learning areas (KLAs).[1] Of these eight KLAs, Personal, Social, and Humanities Education (PSHE) has a more significant connection to civic and citizenship education (Lee, 2008: 33). Four key tasks (KTs)[2] were likewise identified. Among the KTs was Moral and Civic Education (CDC, 2001), which is considered as an important official guide to schools for developing students holistically through the cultivation of positive values and civic attitudes toward oneself, the government, and society. In 2002, CDC also urged the schools to nurture in their students five priority values, namely, perseverance, respecting others, responsibility, national identity, and commitment.

To achieve the goal of implementing citizenship education, schools were advised to adopt the Life Event Approach with authentic learning through multi-perspectives in order to help students understand current and important issues (Chai, Galloway & Lee, 2010: 53). In 2009, the *Senior Secondary Curriculum Guide* issued by CDC, schools were required to adjust the curriculum time (approximately 5% to 19% curriculum time from primary to secondary school) for different key stages of moral and civic education, reading, and counseling programs. Furthermore, the Education

Bureau (EDB) proposed to make "Moral and National Education" as a subject to be fully implemented in 2015. Meanwhile, the Chief Executive of the Hong Kong Special Administrative Region (HKSAR) announced in his Policy Address in 2010 that the education of Basic Law should be reinforced in both the primary and secondary education levels. The proposal involved compiling a package of learning and teaching related to Basic Law education and integrating that into the existing PSHE subjects (e.g., History, Chinese History, Geography, and Life and Society) and into the Moral, Civic, and National Education or class teacher periods. The proposal was originally meant to be implemented in 2013 on an optional basis. All these reforms indicated the growing importance of citizenship education in Hong Kong society. Specifically, the HKSAR government preferred formal education as a means to underpin political socialization in primary and secondary schools.

Local researchers (Fairbrother, 2003, 2008, 2010; Fairbrother & Kennedy, 2011; Lee, 1999, 2004, 2005, 2008; Kennedy, 2010b; Kennedy & Chow, 2009, in press; Leung & Yuen, 2009a, 2009b; Leung, Yuen & Ngai, in press) have studied changes related to civic education. Lee (2004), for example, discussed the difficulties faced by educators in implementing civic education in the 1990s. At that time, teachers had problems designing a civic education program across the formal curriculum, and apathy among some teachers was prevalent (Lee, 2004: 78). The major difficulties for informal curricula included the lack of financial support, competition with exam-oriented subjects and other extra-curricular activities, the lack of guidelines for teachers, the lack of interest

among students, and the absence of activities that were both "educational" and "entertaining." The lack of relevant teacher training has also been mentioned as a major obstacle in implementing civic education in schools because schools tended to treat civic education in a "loose manner" (Lee, 2004: 79). These issues remain to be resolved.

Fairbrother (2008) replicated his earlier study to assess the national attitudes of first year university students in Hong Kong and Mainland China. He found that students in 2005 had more positive national attitudes than the cohort he surveyed in 2000. The 2005 students reported that the school influence made them feel closer to the nation and strengthened their national attitude compared with the students in the earlier study. Additionally, more studies about measuring the changes among the attitudes of secondary students towards the concept of democracy have been conducted. Kennedy and Chow (in press) used Rasch analysis to measure the changes between students in 1999 and students in 2009. They reported that Hong Kong students had a stronger commitment to democracy 12 years after the handover to China. Despite the promising results from these empirical studies, the contribution of schools to these results has not yet to be systematically assessed. The present study hopes to use standard international measures to assess the changes in student attitude toward future civic engagement in the past decade as well as the role of schools in contributing to these changes.

1.2 Purpose of the study

1.2.1 Empirical aspects

Citizenship education prepares young people to be active and responsible citizens who demonstrate concern for their government and society. However, little is known about students' attitudes toward civic-related activities in the community and at school in the Hong Kong context. The current study examines the role of schools in influencing the attitudes of young people toward future civic engagement. Standard measures are used to assess secondary data from Hong Kong samples in the IEA Civic Education (CivEd) Study (Torney-Purta et al., 2001) and the Civic Education (CivEd) Study (Kennedy & Chow, 2009). After validating these measures using the Rasch analysis, they are used to assess the influence of school factors on civic engagement in Hong Kong. The relationship between these school variables is also examined. The findings from the present study provide direction for future empirical research about the civic engagement of Hong Kong students.

Second, this study uses secondary data from the 1999 IEA CivEd Study (Torney-Purta, et al, 2001). The survey provided significant outcomes and useful evidence that policy makers can employ in designing curricula. It also offers suggestions regarding pedagogical methods for the teachers. With a stratified sample of Hong Kong students, the current study hopes to contribute to new research findings as well as further develop and confirm previous work regarding the practice, curriculum design, and pedagogy of civic education in Hong Kong (e.g., Fairbrother, 2008, 2010; Fairbrother & Kennedy, 2011; Kennedy, 2010b; Kennedy & Chow, 2009; Leung, 2006; Leung & Yuen, 2009a,

2009b; Leung, Yuen & Ngai, in press).

Furthermore, the present study uses the Rasch Rating Scale model (Andrich, 1978) to conduct validation studies. Such analyses have not been conducted previously because the international report of the CivEd Study focused on country-level comparisons (Torney-Purta et al., 2001). Only a few studies with selected analyses have been made to the CivEd Study conducted by Kennedy and Chow (2009) (Kennedy & Chow, 2009, in press; Kennedy, Huang & Chow, 2012). Evidence drawn from both the 1999 and 2009 surveys would provide a valuable, relevant, and updated source to meet the needs of schools and policy makers. The focus group interviews were conducted in the second phase of the present research. These interviews help obtain a better understanding of the school contextual effect on civic engagement. Such qualitative approaches have been used previously to expand the understanding of quantitative data (Beaumont et al., 2006; Colby et al., 2007; Hahn, 2010; Torney-Purta, Amadeo & Andolina, 2010; Zukin et al., 2006). This is an innovative feature of the present research.

1.2.2 Theoretical aspects

Assessing the effectiveness of political socialization in schools has been a significant trend in research on citizenship education, and some attempts have been made in Chinese contexts. The current study utilizes the political socialization model adopted in the IEA CivEd Study

(Torney-Purta et al., 2001) to evaluate its usefulness in local contexts. Detailed data analysis is performed to build a model among the key variables, which can be compared with the international model (Torney-Purta et al., 2001). The proposed model is an important theoretical contribution to the literature and an essential tool that can help schools and policy makers foster better school environments that are conducive to citizenship development.

Numerous social scientists (e.g., Sanford, 1968) have raised the following very pragmatic question: How should the environment be manipulated in a way that promotes the development of all individuals? To address this question, the present study can testify the application of ecological systems theory in explaining the contribution of school factors to the development of civic engagement among Hong Kong adolescents.

Second, based on the theoretical framework and the empirical findings from the present study, suggestions are made on any school setting or culture-related improvement, particularly with reference to a classroom climate that favors or facilitates the nurturing of civic attitude and behavior in school and even perpetuating to future adulthood. What kind of pedagogies can align with democratic classroom for an effective civic education? What implications can be drawn for promoting civic knowledge and democratic values in curriculum?

Results of the secondary data analysis from the 1999 and 2009 cohorts of Hong Kong secondary

school students can be compared with those of any participating countries in the IEA CivEd Study (1999), thus reflecting the unique situation in the context of Hong Kong.

1.3 Current understanding of the main issues in this study

1.3.1 Assessment framework for civic education

In assessing the role of schools, the present study utilizes the model proposed by Torney-Purta et al. (2001) for the IEA CivEd Study (see Figure 1). The model, which explains that human development is dynamic and influenced by the environment, originated from the ecological systems model of Bronfenbrenner (1988, 2005) The "Octagon" model (Figure 1) represents a framework that guided the design of the IEA CivEd Study in the 1990s. This model posits that adolescent thinking is influenced by the environment in which they are "nested." Citizenship education involves the students' civic learning and engagement in the community. A civic identity gradually emerges from these experiences. At the center of the model is the individual student. The public discourse and practices of society affect the students through contacts with various microsystems, such as family (parents, siblings, and other family members), school (teachers, implemented curriculum, and participation opportunities), peer groups, and neighbours (agents from communities). The outer layer of the Octagon model also explains that the civic mind of an individual is influenced by the public discourse about goals and values. In sum, the model focuses on the influences coming from

multiple development systems. Within such a model, individuals are influenced through interactions among the systems and through the bi-directional relationship between the system and the individual (Torney-Purta et al., 2001).

In the political socialization model adopted by the IEA CivEd Study (Torney-Purta, 2001), schools can effectively promote students' civic engagement through a formal civic curriculum and school culture. Torney-Purta (2002) explains that schools play an important role in helping students acquire civic knowledge and skills by encouraging open class discussions and providing opportunities for participation in school life. The present study also focuses on the role of schools in political socialization via three agents, namely, the intended civic curriculum, classroom climate, and student perception on the value of school participation. A brief review indicates the significance of these three aspects in the political socialization of adolescents.
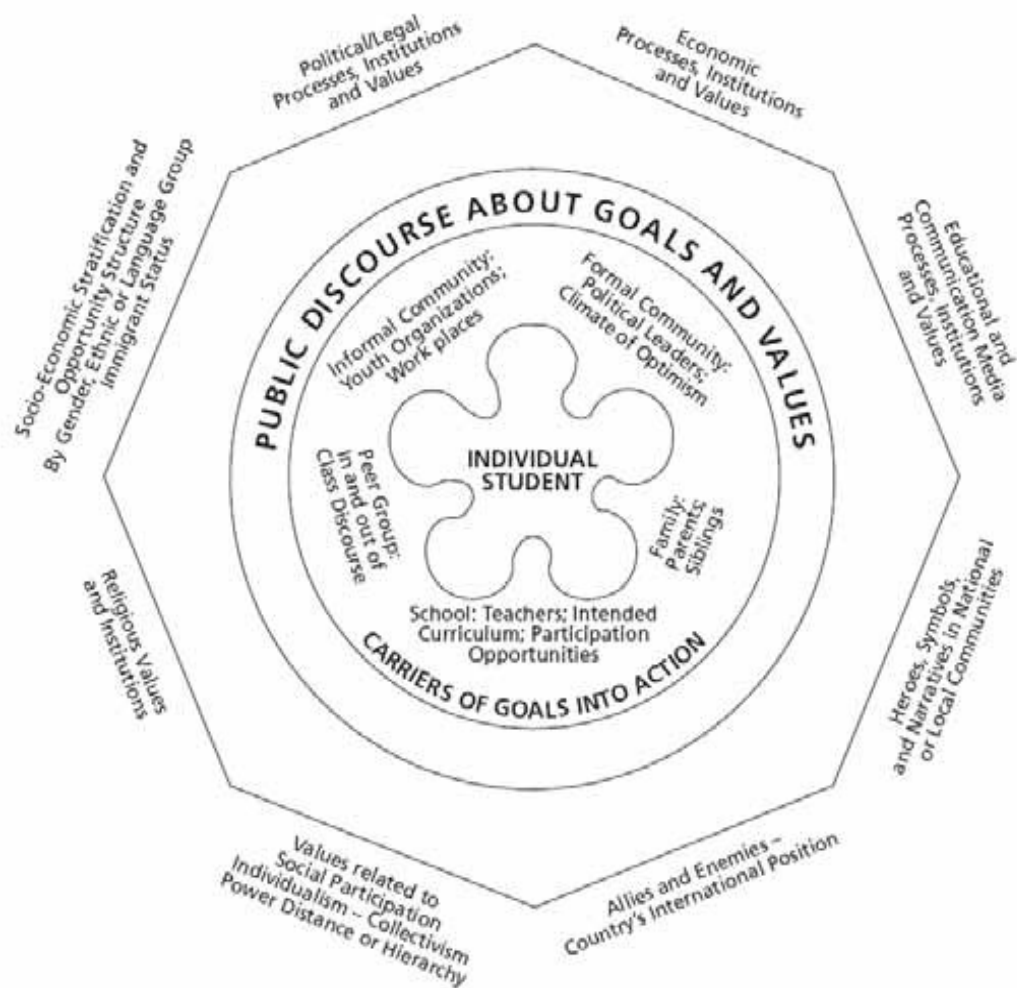
Figure 1. Political socialization model adopted by the IEA Civic Education Study

(Torney-Purta et. al., 2001)

1.3.1.1 Civic curriculum

Two aspects contribute to the civic curriculum, namely, formal and informal curriculum. Classroom

climate and civic courses are classified as formal curriculum. Previous literature (Galston, 2001)

tends to evaluate the effectiveness of civic courses negatively in improving students' civic attitudes.

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Schools can play either a positive or negative role in the political socialization process. Fortunately, more recent research contradicts the previous view that civic lessons are largely irrelevant to students' civic engagement (Gimpel, Lay & Schuknecht, 2003). Niemi and Junn (1998) argued that with more exposure to civic courses, students' political knowledge would increase. Students who favored civic courses would spend more time on the subject, and hence had higher achievement. Furthermore, good teachers with better pedagogical techniques would have a positive influence on student attitudes toward future civic engagement. Gimpel, Lay, and Schuknecht (2003) cited a strong connection between the students' evaluations of civic courses and attitudes that were relevant to political participation in the future. In sum, more recent research tends to attribute positive contributions to civic courses.

1.3.1.2 Classroom climate

An open classroom has a positive influence on students' discussion of current issues and their manner of interpreting the opinions of their peers (Torney-Purta, Richardson & Barber, 2005). Such an environment allows students to express their views freely on issues and form opinions from multiple perspectives. Hahn (2010) explored the relationship between classroom climate and students' learning behavior. A classroom climate that fosters open inquiry can encourage participatory civic behavior. Students can have more opportunities to experience democratic life. Ekman (2006) also contended that expressive ability, especially in verbal form, was the foundation

for the smooth running of an open, consultative, and democratic society. Students in a deliberative classroom climate gain more civic knowledge and skills than in other types of classroom. These studies suggest that a democratic and open classroom climate facilitates effective civic education.

1.3.1.3 Student participation in schools

Political efficacy is a construct based on Bandura's (2002) notion of self-efficacy and is linked to democratic participation theory. Political efficacy helps explain the extent to which individuals believe they can influence politics and the political system. The theory argues that the experience of political participation would prepare an individual to be better psychologically equipped to undertake further participation in the future (Pateman, 1995). Citizens with higher political efficacy are also more likely to participate in political processes and influence the government (Richardson, 2003). The assumption is that active students would be active participatory citizens in the future.

1.3.2 Adolescent civic engagement

In their review of the literature on civic engagement, Youniss and Levine (2009) found that many theorists have identified civic knowledge, civic attitudes, and civic action as crucial components for engaged citizenship. Sherrod and Lauckhardt (2009) examined civic engagement and proposed a multifaceted nature model of civic engagement. These facets are knowledge on civic and current

events; attitudes, beliefs, and civic behaviors in school; community services; and political activities. Labeling "political participation" as "civic engagement" is quite common for recent research (Richardson, 2003). Civic engagement might include activities such as participating in a protest march, collecting money for charity, working to solve a community problem, or paying attention to the news. Research on civic engagement of adolescents can be divided into two areas, namely, beliefs about future behavior and current activities. Many previous studies indicated that adolescents' current civic engagement was important as it was related to their development of political attitudes and identities (Youniss & Yates, 1997, 2000). Such civic engagement was also significant in predicting their future political behavior as adults (Burns, Schlozman & Verba, 2001).

Regarding the relationship between adolescents' early civic behaviors manifested in school and future civic participation in adulthood, Zaff et al. (2003) proposed that a supportive, open, and democratic classroom that allowed students to explore the meaning and values of civic activities would be an advantage in perpetuating students to actively engage in civic activities in the future. Zaff et al.'s (2003) speculation was supported by Campbell's findings (Campbell, 2007). An open classroom climate was found to be a mediating variable in civic education classroom to racial diversity and the informed voter index. The results were supported by replicated studies on African American students and white students in the United States. This confirms the notion that an open classroom climate is one of the key factors in successful civic education.

1.3.3 Assessment theory related to the present study

This study was an empirical assessment using measures from an international survey; thus, it follows certain internationally recognized methods for analysis. Barber (2006) discussed the reasons for choosing item response theory (IRT) to analyze the IEA CivEd data. First, IRT allows more sophisticated measurement and analytical techniques for studying the constructs. Second, IRT is preferable in cross-national studies because it allows a more precise estimation of respondent characteristics based on fewer items. Third, the data can be easily tested to ensure scale comparability across countries and age cohorts (Hambleton, Swaminathan & Rogers, 1991). Among all the IRT models, the Rasch model and its analysis are adopted in validating scales in the present study. Rasch (1977) also explains the Rasch model has advantages over the other IRT models. The Rasch model has specific objectivity in psychological measurement. They are invariant-person comparison (i.e. comparisons between persons are invariant over the specific items used in measurement) and invariant-item comparison (i.e. comparison between items are invariant over specific person used to calibrate). Therefore, the Rasch measurement would be accurate in scale validation.

The IRT models are statistical models to describe the data and the items. The Rasch model is not only used to describe data, but as a criterion for model data fit. It is based on measurement paradigm. It builds up basis for items and test to meet a set of apriori requirement of invariance. It is

also used as a means of quality control and for scaling of items (Wilson, 2002). As the present study focuses on instrument validation, therefore, the Rasch approach to establish the psychometric properties of scales can aptly be applied so that accurate measurement can be obtained to assess the changes in civic outcomes of the two cohorts (1999 & 2009) of students. For further discussion of the advantages of Rasch measurement, see Chapter 2 section 2.8.2 .

1.4 Significance of the study

First, the present study uses Rasch measurement, based on modern test theory to assess the student attitudes toward civic engagement across 10 years. The new measurement is more valid and accurate in conducting data analysis than assessment based on classical test theory. Thus, the findings obtained using this model are expected to be valid, reliable, and convincing for identifying the changes in civic attitudes and the accompanying concepts behind adolescent civic engagement.

Second, this study explores the application of the IEA political socialization model with ecological systems theory and other applicable theories such as situated learning model (Lave & Wenger, 2002) and social cognitive theory (Bandura, 2002) to a Chinese context in understanding the role of schools in explaining the changes in adolescent civic engagement. Hence, an extensive review of research related to the role of schools through the practice of formal and informal curricula was conducted. This process helped extend the current understanding of assessing the effectiveness of

political socialization in secondary schools in Hong Kong, and contributed to the further development of political socialization research in the Chinese context.

Third, the design of this study is a mixed research design comprising both quantitative research (i.e., the analysis of secondary data from the 1999 and 2009 cohorts) and qualitative research (i.e., focus group interviews among the secondary students). Such qualitative approach has not been previously used in political socialization or civic education studies to expand the understanding of the quantitative data. This approach provides more reliable and valid evidence, thereby enabling the current study to make an important theoretical contribution to the literature and function as an important tool for schools and policy makers for designing better school environments for citizenship development.

1.5 Research questions

This study attempts to answer the following research questions:

1. Have the attitudes of Hong Kong students toward future civic engagement changed between the 1999 and 2009 cohorts?

2. What is the role of schools in the changes in students' attitudes toward future civic

engagement from 1999 to 2009?

Several steps are undertaken to address the research questions.

For Research Question 1 (RQ 1),

Have the attitudes of Hong Kong students toward future civic engagement changed between the 1999 and 2009 cohorts?

Several statistical procedures were conducted. First, it was an assessment of differences between the attitudes of students in both cohorts toward future civic engagement. Second, the gender differences of students from both cohorts with regard to their attitudes toward future civic engagement was also explored to better understand their demographic background. Multidimensional Rasch latent regression analysis using ConQuest (Wu, Adams, Wilson & Haldane, 2007) is used to address RQ1.

With regards Research Question 2 (RQ 2),

What is the role of schools in changing students' attitudes toward future civic engagement from 1999 to 2009?

The key variables of school factors for predicting civic engagement are examined, and the multilevel modeling analysis with the MLwiN software package (Rasbash et al., 2009) was adopted to analyze the nested data of the 1999 and 2009 cohorts. The method assesses the extent to which school factors predict students' civic engagement in both cohorts. Finally, the portion of variances accounted by the school is identified at both the school and student level. Hence, the role of schools in preparing students for future civic engagement is determined.

Aside from using quantitative approach to address RQ 2, a qualitative approach was also adopted. Focus-group interviews were conducted to obtain student views on civic engagement and examine the school factors related to their perception toward future civic engagement. Qualitative research is conducted for complementary purpose.

1.6 Structure of the thesis

The overall purpose of this study is to investigate the school contextual factors influencing the attitudes of Hong Kong students toward future civic engagement, and whether these have changed in the past decade. The political socialization model of the IEA CivEd Study (Torney-Purta et al, 2001) is used to identify key variables in the school context - classroom climate, student participation in schools, and civic curriculum for promoting students' expectations on future civic

engagement. Both quantitative and qualitative data analysis are used to assess the role of Hong Kong schools at two points in time, namely, 1999 and 2009.

The initial step of the present study is to establish valid and reliable measures for the key variables. The second step is to measure changes in students' attitudes to future civic engagement based on the comparison of the two cohorts of Hong Kong students. The final step is to assess the key variables in the school context in promoting student attitude toward future civic engagement.

A literature review of the theoretical bases for the IEA political socialization model, student attitude toward civic engagement, and school-related factors for promoting civic participation are presented in Chapter 2. The research methodology is discussed in Chapter 3 and the scale validation procedures as well as quantitative and qualitative results are reported in Chapter 4. Chapter 5 presents the summary and interpretation of the major findings, as well as a discussion of the implications and limitations of the study.

THEORETICAL FRAMEWORK AND REVIEW OF THE RELATED LITERATURE

2.1 Introduction

This chapter commences with an introduction of the theoretical framework. Justifications are made and complemented with appropriate theories to explain the effects of school on adolescent civic engagement. The definitions of the key variables of this study are explored, and the relationships among these are reviewed. Most studies mentioned in this review are associated with youth, because the current work focuses on adolescents. However, research associated with adults is not meant to be excluded as long as the research area is relevant to the topic of this study. The literature review is cross-disciplinary with reference to disciplines from psychology, political science, sociology, and civic education. This review identifies the gaps in the research and presents links to the previously mentioned research questions. By the end of this chapter, a statement of the contributions of the review is presented.

2.2 Importance of adolescence

Theories in both political science and developmental psychology (Pateman, 1970, 1995; Erikson,

1968, 1985; Kohlberg, 1969; Bronfenbrenner, 1998, 2005; Steinberg, 2005; Lerner & Steinberg, 2009; Sherrod, Torney-Purta & Flanagan, 2010) highlight adolescence as a time during which significant changes occur in an individual. Adolescents are capable of having a more sophisticated thinking of abstract concepts, becoming more independent, autonomous, and more mature to make their own decisions, or choosing their own activities. Erikson (1968, 1985) considers adolescence as a period in which adolescents develop a sense of identity. They may have reflections on who they are, what they aspire to be in the future, and wonder about their role in the community and how they fit in the society (Flanagan, 2003a; Lenzi et al., 2012). Kohlberg (1969) explains the developmental needs of adolescents in social and moral terms, and contends that the adolescence stage possesses abilities that approach those of the adults.

At approximately 14 years old, adolescents are at the developmental stage known as "early adolescence." Early adolescents experience various changes in puberty and cognition, enabling them to think abstractly and view a situation from various perspectives. In addition, early adolescents can better transfer knowledge and are more aware of their own strengths and weaknesses (Eccles, 1999). During early adolescence, students show marked improvements in reasoning, especially deductive reasoning and information processing. These conclusions are derived from studies related to age differences in cognitive processes in long- and short-term memory as well as logical reasoning tasks on verbal and logical abilities (Keating, 2004). Moreover, adolescents are more capable of abstract, multi-dimensional, planned, and hypothetical thinking as

they develop during early adolescence (Steinberg, 2005: 71).

With regard to social development, early adolescents begin to spend more time with peers. Peer influence is particularly important at this stage because it meets the developmental needs of early adolescents. Self-determination, autonomy, and control are the developmental needs at the adolescent stage. Adolescents tend to make their own decisions about their activities, try to keep their distance from parents, and build closer peer relationships. Peer relationships are likely to be more influential because adolescents tend to develop more independent activities with peers (Larson et al., 2002).

Meanwhile, numerous psychologists have claimed that persistent childhood exposure to violence is related to aggressive behaviors in childhood, which may even persist later in life. Similarly, frequent exposure to pro-social behaviors, such as engaging in social and community services, is expected to be perpetuated to later adult life. Therefore, one of the focuses of socialization research is on the choices of young people in civic engagement and the influence of peers on such choices (Niemi & Hepburn, 1995).

Flanagan (2003b) reviewed research about youth civic engagement and reported that the research paradigm has shifted from "youth at risk" to "youth as asset." This change in research focus supports positive development during adolescence. Furthermore, researchers are interested in

exploring the factors empowering adolescents to become active and participatory citizens during the formative years in early political socialization.

Torney-Purta (2004) discusses the appropriateness of studying early adolescents and quotes the view of Stanford on this issue:

> Adults do not change as readily as children precisely because they have a greater repertoire of behavior. Unless they are presented with sufficient challenge, they will react as they have in the past. (Stanford, 1968: 860)

Adolescence is a time for potential changes. Given that adolescents are more malleable than adults, creating a more facilitative environment during early adolescence can have a positive effect on them. Developmental psychologists suggest that early adolescence is a time of increased plasticity and openness to positive influences (Youniss & Levine, 2009). Furthermore, adolescents are active participants in their own development. Socialization is reciprocal as development is bidirectional. Hence, adolescents can exert their influence on the environment and the environment can also exert influence on them (Wilkenfeld, Lauckhardt & Torney-Purta, 2010). Various longitudinal studies have found evidence of the lasting effects of early civic education of adolescents on adult civic engagement (Hooghe & Wilkenfeld, 2008; Jennings, 2002; Kahne & Sporte, 2008; McFarland & Thomas, 2006; Zaff, et al., 2011). Therefore, the present study focuses on 14-year-olds, usually students in Form Three in the Hong Kong context, to understand the connection between early development of adolescents and their later civic engagement.

2.3 Theoretical framework

2.3.1 Ecological systems theory

Considerable research in different Western countries on the school's contribution to students' civic engagement is available (Campbell, 2005, 2007; Torney-Purta & Barber, 2005; Wilkenfeld, 2009; Wilkenfeld, Lauckhardt & Torney-Purta, 2010). Torney-Purta et al. (1999, 2001) used a developmental approach and proposed a political socialization model for the CivEd Study based on the ecological systems model of Bronfenbrenner (1988, 1989, 2005). This model assumes that human development is dynamic and influenced by the environment. Humans learn and grow through interaction with multiple systems. These systems (contexts) not only interact with one another, but the individual also has a bidirectional relationship with the systems, thus indicating that individuals have a significant role through their impact on their environment. This relationship is examined more precisely in the present study. Furthermore, the specific aspect of the person-process-context model of Bronfenbrenner (1989) can clearly explain the relationship between individual and environmental factors that an individual is situated or "nested" in. According to this model, such outcomes as civic behavior and attitude vary as a function of the characteristics of the individuals and their family, peers, school, or even neighborhood. The proximal processes embedded in these systems also affect civic development.

With regard to the educational setting, Bronfenbrenner (1989, 1998, 2005) focused on the role of the environment (e.g., school setting) on the development of an individual. The ecological model attempts to explain how an individual develops and functions within a set of microsystems, exosystems, and macrosystems. Mesosystems link up these systems; thus, people should learn by interacting with their social environment. These social systems exist on a continuum from proximal to distal environments.

Microsystem

The microsystem is the immediate environment of an adolescent. Adolescents gain experience from family, peers, and social institutions (e.g., school and workplace) (Bronfenbrenner, 1989). Therefore, human development occurs through complex reciprocal interactions between an individual and other persons, objects, or symbols in the immediate external environment. During early adolescence, influences from schools and peers become greater than those in the childhood stage (Wilkenfeld, Lauckhardt & Torney-Purta, 2010). As a socializing agent, schools also have a significant role in influencing the development of adolescents.

Mesosystem

Bronfenbrenner (1989) found positive relationships among the major social systems necessary for the healthy development of adolescents. For instance, a strong connection between parents and

teachers benefits students because parents may join the Teacher-Parent Association or become volunteers in any school social activities. Moreover, teachers with a close connection with students may communicate more with parents, making the latter aware of their children's activities in school. Lack of interaction among the major social systems may have a negative effect on the school. Another potentially adverse effect on the mesosystem occurs when microsystems support values or behaviors that may conflict with other social systems or the larger macrosystem (Muuss, 1996).

Exosystem

The exosystem comprises microsystems related to the adolescent; however, adolescents may not need to participate directly (Bronfenbrenner, 1989). Certain community groups, organizations, and public policies that affect students' civic development and their conception of civic engagement may also exist (Wilkenfeld, 2009).

Macrosystem

The most distant influence on an individual can be found in the macrosystem. This system is considered the larger sociocultural context, in which the adolescents exist, and includes such influences as cultural beliefs, social customs, and economic values (Wilkenfeld, Lauckhardt & Torney-Purta, 2010). The influences of the macrosystem are evident throughout all the levels and areas of development because these larger societal processes are "a blueprint for the organization of every type of setting" (Bronfenbrenner, 1979: 4). Therefore, a number of studies have investigated

the effect of the macrosystem on civic development. The IEA CivEd Study (1999) and the International Civics and Citizenship Study (ICCS) (2009) examine the effect of macrosystem on adolescent civic engagement.

Applying the ecological model to study the role of school on adolescent development, Eccles and Midgley (Eccles et al., 1993; Eccles & Roeser, 2009) proposed a person-environment fit theory to guide the research on the impact of the school's role on adolescent development in the late 1980s. According to the theory, a person's behavior, motivation, and mental health are influenced by the fit between the characteristics an individual brings to his/her social environments and those of the social environment. Applying this theory to the school context, if the social environments in the school do not fit the psychological needs of an adolescent, person-environment fit theory predicts a decline in motivation, interest, performance, and behavior as the adolescent moves into this environment. However, if the social environment can fit well with the student's psychological needs, then it can motivate the students to be more open, be more involved in school activities, and realize higher academic achievement. In the classroom context, teachers should provide a sufficiently challenging, supportive, and open environment to help students achieve higher levels of cognitive and social development. If teachers foster a repressive, rigid, and conventional school or classroom climate, they are unable to provide sufficient opportunities through which students can cognitively achieve optimal development as well as attain social and moral maturity and civic development.

Several variables can affect classroom environment, and these can influence students' cognitive and social development. These include environment variables, task structure, task motivational strategies, locus of responsibility for learning, and quality of teacher-student relationship. If these variables operate undesirably, they may have negative effects on students' motivation and achievement (Eccles et al., 1993). Furthermore, the type of classroom environment that enables students to have autonomy in dealing with class affairs, take initiative in decision making, freely express their opinions in class discussion with respect from peers, and feel competent and socially attached in the classroom context is important for stimulating the intellectual, motivational, and socio-emotional development of early adolescents (Eccles & Roeser, 2009).

The ecological model is too loose and broad to explain the different processes of student development in the school context (Eccles & Roeser, 2009). The application of ecological systems theory by Bronfenbrenner (1989) to explain political socialization in a school setting has drawn several criticisms. Thus, researchers should focus on a few aspects of the possible environmental impact on the development of individuals. Using the situated learning model (Lave & Wenger, 2002), Torney-Purta, Amadeo, and Andolina (2010) and Wilkenfeld (2009) studied the contextual effects on adolescent civic development and attempted to supplement the ecological model, in order to understand the proximal processes within the school context. Finally, Bandura's social cognitive theory (1997, 2002) is also helpful because it can provide a framework for exploring the influence of an individual's perception as reflected through self-efficacy on the engagement processes in

school activities and their expectations toward future civic engagement in the community.

2.3.2 Lave and Wenger's situated learning model: Proximal processes

Wenger's situated learning model (1998) has its roots in sociology because the model focuses on the processes of community participation and identity. This model of learning emphasizes the relationship between an individual and the community and how the individual creates meaning and identity in learning. The notion of communities of learning and practice (Kirkup, 2002; Lave & Wenger, 1991; McIntosh & Youniss, 2010; Torney-Purta, Amadeo & Andolina, 2010; Wenger, 1998) originated from learning through apprenticeship. The initial research focused on craft apprenticeship in which the apprentices learn through observation from the practice of the mentor in the workplace context. The origin of situated learning was demonstrated in the way apprentices respected their mentors and copied their work in the workplace. Later, the concept of situated learning transformed its primary emphasis from cognitive processes to social practice.

Learning occurs in the form of social participation rather than the ordinary practice of academic learning (Lave & Wenger, 2002). Adolescents are engaged in the practices or processes of social communities. Through communities of practice, adolescents commonly explore individual identities, construct meaning, and find learning skills that relate to their respective communities (McIntosh & Youniss, 2010; Torney-Purta, Amadeo & Andolina, 2010).

When applying the situated learning model to a school setting, classroom climate and school ethos can transmit the values of civic knowledge and engagement to students through the formal or informal curricula, role model from teachers, teaching practices such as pedagogies, and teaching styles. Wenger further explains:

> in spite of curriculum, discipline, and exhortation, the learning that is most personally transformative turns out to be the learning that involves membership in these communities of practice. (Wenger, 1998, p. 6)

Thus, students' community of practice may be in or outside the school. The situated learning model has four components (i.e., community, identity, meaning, and practice). These are delineated below.

Civic development can be promoted through specific political socialization processes in the school community (Wenger, 1998). Community refers to learning as "belonging," that is, an individual realizes his or her participation is worthwhile through the processes of belonging, such as being part of the school, family or peer group, as well as the processes to be valued and maintained (Kirkup, 2002; Wenger, 1998). Students may apply this sense of belonging to participation in student bodies or community service. Similarly, this process helps them understand and value the fact that they belong to the community or their nation in relation to their role and status as citizens.

Identity is a negotiated experience and is produced through learning. Identity refers to the process by which a person learns to become an individual or to become a part of a group. Individuals develop their identity in the context of a community of practice through common experiences (Kirkup, 2002; Torney-Purta, Amadeo & Andolina, 2010; Wenger, 1998). Wilkenfled (2009) has applied the concept of identity to the civic engagement of adolescents. Civic identities can be developed through learning from group interaction with their peers on some civic topics, group objectives, and the identity related to civic culture and practices of their group.

Meaning refers to "learning as experience," which is the outcome of a negotiation in the community. The community constructs meaning on certain matters, and the communities of practice create meaning of various experiences (McIntosh & Youniss, 2010; Torney-Purta, Amadeo & Andolina, 2010). In the school context, students, teachers, and administrators can create meaningful civic experiences by participating in school activities, showing preference for current social or political issues, and discussing political or national issues in class. Wilkenfeld (2009) also suggests that the informal aspects of school-based civic education, such as the implicit rules or norms in joining school services or community services, contribute to a more meaningful civic understanding.

Practice refers to students' engagement with the community, which enables them to learn through participation and actual engagement with community activities (Torney-Purta, Amadeo & Andolina, 2010). For instance, adolescents can participate in activities both in and out of school, which are

related to civic engagement, such as joining the student union, writing letters to student post, and committing voluntary or community services. Through these activities, they learn how to contribute to their school community and infer from their learning experience in a school context to the larger community or society they are nested in (Wilkenfeld, 2009).

The situated learning model proposed by Lave and Wenger (2002) appropriately complements ecological systems theory, which focuses on the processes that occur between an individual and the community through participation, thereby allowing a more in-depth understanding between the interplay of the processes or activities between an individual and the context in which he or she is nested. The model also facilitates the easy identification of areas that need a more systematic investigation with appropriate methodology and measurement. However, the situated learning model has received challenges from Levinson and Brantmeier (2006). They raised criticisms related to the themes of authority and authenticity when applying the model in a civic classroom. First, they criticized how much of the students' perception of a teacher's authority in the classroom is similar or even identical to their perception of the authority that they encounter in a democratic community. This question highlights the issue of the limits of students' power in a school context. Second, Levinson and Brantmeier (2006) questioned the authenticity of classroom discussions compared with the actual world of civic practice. Moreover, the extent to which the teachers can negotiate the civic syllabus with students has also been questioned (Grossman, 2010: 30). The above challenges tend to justify the extent to which the situated learning model can be fully implemented in a genuine

school or classroom setting.

2.3.3 Bandura's social cognitive theory: Self-efficacy

The present study focuses on the interaction of an individual (student) in the school setting (one of the microsystems in ecological systems theory) and his/her expectations toward future civic engagement; it is a type of cognitive phenomenon subject to contextual influences. Bandura's social cognitive theory (2002) provides a framework for exploring the influence of an individual's perception as reflected through self-efficacy in the processes of current engagement in school activities and how this perception is related to his/her expectation toward future civic engagement in the community. The key tenet of social cognitive theory is the mechanism of "triadic reciprocal determinism", which includes personal characteristics, environment, and behavior that interacts to affect learning (Bandura, 1986; Wilkenfeld, Lauckhardt & Torney-Purta, 2010). Such theory has been used to explain the process of making judgments about situations through the concept of perceived self-efficacy.

Self-efficacy refers to the perceived confidence in one's ability to control his/her actions or environment to deal with the current and future situations. Four sources of information (i.e., mastery experiences, vicarious experiences, verbal persuasion, and physiological or affective state used by individuals in building up self-efficacy) serve as the bases for self-efficacy judgment (Bandura,

1997).

Mastery experience is the most effective means to develop a strong sense of efficacy. Bandura (1994) explains that if one succeeds (fails) in performing a task, his/her sense of self-efficacy is strengthened (weakened). This premise helps explain how previous experiences can affect an individual's perception of being successful in a future performance. For instance, if a student is successful in influencing school authority to change policies, this may increase his/her expectation to succeed in influencing government policies in the future.

Vicarious learning refers to an individual's observational learning from successful social models. Completing a task successfully is another important source of learning to build high efficacy (Bandura, 1997). For instance, students gain more successful experiences in joining civic activities through observation from their parents, teachers, or peers. This process, in turn, helps them raise their civic efficacy.

Verbal persuasion asserts that people can be persuaded to believe that they can master the skills or capabilities to perform certain tasks. Verbal encouragement or a positive comment motivates people to overcome self-doubts and be more confident in completing their tasks. This premise implies that group pressure or peer influence can affect an adolescent's perception of civic efficacy. Adolescents are at the stage of finding their identity and are eager to obtain recognition from significant others,

which probably explains why the influence from significant others is related to their perceived efficacy.

Physiological or affective state refers to our responses and emotional reactions to situations, and has an important role in affecting our self-efficacy. One's moods, emotional states, or stress level affect how an individual would feel about his/her personal abilities in a particular situation. A person who feels excited about voluntary community service develops a strong sense of self-efficacy in engaging in civic tasks. Conversely, a person who feels depressed in joining a radical political rally develops a weak sense of self-efficacy in engaging in similar types of civic activities. Furthermore, how people perceive and interpret the situations greatly affects their perception of their efficacy in performing tasks (Bandura, 1994).

The concept of self-efficacy is domain-specific, that is, it has different implications when applied to different domains. For instance, voluminous research on the link between students' perceived efficacy and academic success is available. Perceived efficacy is an academic motivator that helps raise students' perceived confidence or ability to perform better. Other studies have indicated gender differences in perceived efficacy cross-nationally. For instance, girls from Italy, Poland, and Hungary have a higher sense of efficacy for academic activities and tend to resist peer pressure when engaging in transgressive activities (Bandura, 2002).

When applied to the domain of politics, the concept of perceived self-efficacy refers to "the belief that one can produce effects through political action" (Bandura, 1997: 483). Therefore, self-efficacy pertains to an individual's judgment of his/her ability or confidence to produce a certain effect or outcome. The sense of efficacy and outcome expectancies can act in tandem or act separately in influencing engagement. For example, a person with a high sense of political efficacy and a low sense of outcome expectancy at the same time is unlikely to take any actions in the future. Similarly, an individual who understands politics may not have the perceived confidence to take any future action. Bandura's theory also elaborates the difference between collective and personal efficacy. Collective efficacy refers to the belief that a group can be effective in a given situation (Fernandez-Ballesteros et al., 2002). Personal efficacy or self-efficacy refers specifically to a person's beliefs about his/her own competence. For instance, a person may believe that any united community action (i.e., a collective entity) can persuade local officials to improve local facilities. However, this purpose may not be accomplished through individual effort alone. Similarly, students believe that they can collectively influence the school authority to listen to their opinions. Thus, they decide to take an appropriate action to change the school policies. Conversely, students may believe that they have a sense of impotence if they act individually. This mindset indicates that mastery experience and positive effort of collective efficacy can affect students' self-efficacy. Thus, the goal of education is to equip adolescents with higher perceived efficacy.

Richardson (2003) has suggested two reasons why efficacy beliefs in school participation are

important for adolescent civic development. According to Bandura (1997: 491), adolescents who "get the beliefs about their capabilities to influence governmental functioning may also be partially generalized from their experiences in trying to influence adults in educational and other institutional settings in which they must deal (with)." Efficacy beliefs stem from an adolescent's previous successful mastery experience in influencing a specific outcome related to the school policy or teachers' opinions or actions. If the school is a place in which democracy is practiced, students can easily obtain their mastery experience in influencing school policies, thus raising their perception of self-confidence (self-efficacy) to change the policies.

Second, given that efficacy is a multi-dimensional construct influenced by the context (Bandura, 1997), different types of efficacy are related to different explicit civic outcomes. For instance, school efficacy may be more related to student's participation in student bodies (e.g., student unions), associations or clubs, making student posts, and student forums. Internal political efficacy is more related to an individual's perceived confidence in participating in civic or political activities. External political efficacy is more related to the government responsiveness toward the demands of citizens (Carlson, 2007; Craig et al., 1990; Kahne & Westheimer, 2006).

2.4 Civic engagement

2.4.1 Definition

A brief history of the previous research on the conceptualization of the construct of civic engagement remains unclear and inconsistent. Social scientists seem to have no consensus on the definition of the construct. Hence, the conceptualization and measures vary according to different studies. Youniss and Levine (2009) confined civic engagement to explicit civic behaviors, such as voting, volunteering, trusting others, tolerating others and their views, discussing issues, attending meetings, joining groups, and advocating for a political change (Youniss & Levine, 2009: 273). Campbell (2006) classified civic engagement into seven dimensions, including activities aimed at influencing public policy, civic engagement motivated by public-spirited activities, voter turnout, interpersonal trust, institutional trust, tolerance, and political knowledge through newspaper reading.

In a number of popular national or cross-country studies on civic engagement or political participation, researchers have shared similar views of using activity-oriented approach in assessing the levels of respondents' civic engagement. For instance, The Centre for Information and Research on Civic Learning and Engagement 〔CIRCLE〕(Levine et al., 2012) adopted such an approach to study civic engagement. Surveys were conducted from 2008 and 2010 to explore the views of young Americans on civic engagement. The measures of civic engagement were divided into three categories, namely, civic activities (e.g., volunteering for 25 or more hours a year, donating money, and working with neighbors to improve the community), electoral activities (e.g., registering to vote

and voting), and political voice activities (e.g., attending a public meeting, discussing social/political issues with family and friends at least a few times a week, engaging in boycott, and contacting public officials about issues in the community).

Instead of defining civic engagement as an expression of certain overt behaviors, Putnam (Lee et al., 2009: 9) adopted a more holistic perspective to define the concept of civic engagement as the connections of people with the life of their communities, and not merely politics. To measure this concept, Putnam (2000) used membership in society or involvement in organizations and community groups as indicators of civic engagement (Lee et al., 2009).

Hart and Kirshner (2009) reviewed the literature on civic engagement and found that several theorists have identified civic knowledge, attitudes, and action as crucial components for engaged citizenship. Sherrod and Lauckhardt (2009) proposed a multi-faceted nature model of civic engagement. The three components of the model are knowledge of civic and current events; attitudes and beliefs; and civic behaviors in school, community services, and political activities. However, evidence identifying the underlying factors affecting civic attitudes or behaviors remains insufficient. Flanagan, Syvertsen, and Stout (2007) assessed a range of behaviors, attitudes, and opinions related to civic engagement. Through advanced statistical techniques, such as principal components analysis and structural equation modeling, they identified 45 underlying constructs within 14 categories. Their study significantly contributed to the measurement of civic engagement

among adolescents. Zaff et al. (2010) extended the definition of civic engagement to the trajectories of multiple constructs involving higher-order and integrated constructs. At present, voluminous research about the definition of civic engagement is underway. The major focus of the current study is to measure civic engagement accurately, which would help reflect a possible broader theoretical view on the definition and underlying constructs of civic engagement.

2.4.2 Civic engagement among adolescents

Numerous studies (e.g., Carlson, 2007; Karp & Banducci, 2008; Finkel, 1985; Putman, 2000; Torney-Purta, 2002) concerned with the civic engagement of adults as constitutional and legal citizens have been conducted. By contrast, adolescents are supposed to have relatively fewer opportunities for civic engagement than adults. However, investigating the current civic behavior of adolescents and their relationship to future political participation is still worthwhile. Previous research findings (Burns, Schlozman & Verba, 2001; Sherrod, Torney-Purta & Flanagan, 2010; Youniss & Levine, 2009; Youniss & Yates, 1997, 2000) reported significant relationships between current behavior and expected future participation. Current civic engagement is related to adolescents' development in terms of political attitudes and identities.

Some mediators that affect the relationship between current civic engagement in adolescence and future political participation in adulthood have been reported (Zaff et al., 2003). Their research

revealed that positive experiences enjoyed by students, such as enjoyment, fulfillment and finding meaning from civic activities, had a crucial role in perpetuating civic behaviors in the future. However, this argument, which only relies on the self-report of the respondents, may not always produce consistent and reliable results. Galston (2001) argued that some young people in the United States reported that they would vote but less than one-third (18 to 29 years old) actually voted. Several longitudinal or retrospective adult studies have reported that adult civic engagement is related to previous civic activities during schooling despite the drawback from self-report studies (Burns, Schlozman & Verba, 2001; Stolle & Hooghe, 2002; Zaff et al., 2010; Zaff et al., 2011).

Recent studies commonly label "political participation" as "civic engagement". Richardson (2003) also regarded political participation as a form of civic engagement, which may include such activities as participating in a protest march, collecting money for charity, working to solve a community problem, and paying attention to news in the media or political discussion. Cohen et al. (2001) classified civic engagement into psychological involvement (e.g., engaging in political discussions and following the news) and actions (e.g., voting, running for political office). Research on adolescent current civic engagement that happens outside the classroom has two main streams. One is related to adolescents' volunteer activities, especially by participating in community service, while another stream is about their civic engagement such as by participating in civic-related extra-curricular activities.

For adolescents' civic engagement in community service, a long history of research is available to show a positive effect on adolescent growth (Dewey, 1916; Hansen, Larson & Dworkin, 2003; Putnam, 1995; Sherrod, Torney-Purta & Flanagan, 2010). Empirical evidence supports the positive effect of pro-social behaviors generated from community service. These positive effects include improved civic attitudes, appreciation of diversity, greater sense of responsibility to community needs, greater willingness to vote in the future or serve as volunteers, increased political efficacy, higher sense of personal and social responsibility, greater self-esteem, higher self-perception of social competence, social trust and self-efficacy, gained in moral reasoning, and more kindness and assistance extended to others (Billig, 2000; Eyler, 2000; Flanagan, 2003a; Kahne & Sporte, 2008; Kenny & Gallagher, 2003; Schmidt, Shumow & Kackar, 2007; Youniss & Levine, 2009; Yates & Youniss, 1998; Youniss & Yates, 1997, 1999). Moreover, extant research suggested that more service learning participation was negatively correlated with adolescent risk behaviors, such as drug and alcohol abuse, violent behavior, sexual-risk taking, and dropping out of school (Yates & Youniss, 1998; Youniss & Levine, 2009; Youniss & Yates, 1997, 1999). However, the main limitation of the abovementioned studies is that most data come from cross-sectional studies, which make it difficult to establish a causal link between civic participation and outcomes.

Another form of current civic engagement is participating in extra-curricular activities that have civic-related goals, such as joining student councils, social services, community or environmental clubs and interest groups. Participating in extra-curricular activities has a positive association with

identity development (Youniss & Yates, 1997) and builds social trust and civic ethics among adolescents (Flanagan, 2003a). Many longitudinal studies (e.g., Kahne & Sporte, 2008; McFarland & Thomas, 2006; Thomas & McFarland, 2010) suggested that the participation of high school students in extracurricular experiences has been linked to later civic and political engagement in longitudinal studies. This finding implies that positive civic experiences can have enduring effects on adulthood.

2.4.3 Civic engagement and gender issues

With regards to gender differences in civic engagement, both national and cross-national studies, revealed that boys were prone to engaging in political activities and were more willing to join political parties, wrote letters to newspapers, or had protest actions, whereas girls were more willing to engage in community service or show concern for community needs (Barber & Torney-Purta, 2009; Cicognani et al., 2012; Flanagan et al., 1998; Kennedy, 2007; Lee et al., 2009; Richardson, 2003). The review of Atkeson and Rapport (2003) regarding the gender issues of political engagement in the past five decades (from 1952 to 2000) further confirmed the persistent differences between men and women in their open expressive political attitudes in political socialization. In their work, Atkeson and Rapport (2003) used the National Election Studies (NES) to examine the gender differences in open-ended comments regarding the choices of candidates in political parties as well as several closed-ended questions related to policy, candidates, or political

groups. Based on the findings, they further proposed the use of three possible reasons in terms of political resources, psychological resources, and political socialization perspectives to explain gender differences. They also found that where women had comparatively fewer political resources, lower academic qualifications, or a more pronounced housewife status with family responsibilities on child rearing than men, they were less likely to show their political preference (Atkeson & Rapport, 2003). Conversely, men with more interest in political discussions were reported to have a stronger belief in internal efficacy than women. Finally, political socialization at home typically favors males. Therefore, women are under-represented in political activities at the parliamentary and executive levels.

Burns (2002, 2007) also proposed some possible reasons for the gender differences in political participation. Women have fewer opportunities to develop civic skills, such as making a public speech, writing texts, or chairing meetings, than men. Instead, women typically take on a more caring role in the family and, hence, have less time to participate in political activities. Furthermore, the culture in public political organizations, institutions, or political parties favors male citizens. This, therefore, inhibits women from enjoying full access to various forms of political engagement.

However, previous studies and the possible explanation of gender differences are often based on adult studies; therefore, this study wants to examine whether adolescents also have gender differences in the same way as those observed in adults. Adolescence gender-related studies have

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reported some contradictory findings. For instance, a gender study in Italy (Istat, 2010) found that 14-year old male and female adolescents showed a similar level of political interest. The gender gap becomes significant and persistent from late adolescence to adulthood, implying that the gender gap in their attitude toward civic or political participation may not exist during early adolescence (Cicognani et al., 2012).

Longitudinal studies have suggested that experiences of political socialization at a younger age can have a lasting impact on adult political ideas or behaviors. Studies indicated a gradual emergence of gender differences during the transition from adolescence to adulthood (Hooghe & Stolle, 2003, 2004; Yates & Youniss, 2000). Hooghe and Stolle (2004) used the secondary data of the U.S. national sample (n = 2,811) of 14 years old from the IEA CivEd Study (1999) and reported the remarkably persistent gender differences in various forms of political engagement. Females favored less conflict-oriented forms of political engagement or more politics with connection to their daily lives and needs. Hence, they preferred to engage in social movement-oriented forms of activities. By contrast, males were more interested in overt political activities and were bold enough to participate in certain radical or even violent forms (e.g., legal or illegal protests) of activities (Hooghe & Stolle, 2004; Barber & Torney-Purta, 2009).

Several studies reported gender equality in some forms of political engagement. For instance, women and men were equally likely to protest (Verba, Schlozman & Brady, 1995). Men

participated more than women in radical activities, but the gender difference disappeared when the political resource factor was controlled (Rosenstone & Hansen, 1993). Therefore, exploring more factors that favor gender equality in political engagement is important, because such factors help promote and perpetuate the activism of females in engaging in political activities in the future.

The concept of gender equality was more widely recognized among Hong Kong students as supported by the release of the *ICCS 2009: Hong Kong Report*. The rating of Hong Kong students in terms of measured attitudes toward gender equality was above the international mean (Hong Kong mean = 51, international mean = 50) (Lee et al., 2009). Furthermore, the report indicated that female students were more supportive than male students regarding the issue of gender equality. The new findings might challenge the traditional view that females were generally less politically and civically engaged (Delli Carpini & Keeter, 2000; Gronlund & Milner, 2006) or the traditional political socialization that favored males (Alozie, Simon & Merrill, 2003). For instance, the setting up of the Equal Opportunities Commission in Hong Kong in 1996 to promote equal opportunities to gender or ethnic minorities, and the introduction of gender equality topics in civic education since 1995, along with equal education opportunities to pursue further education would probably explain the phenomenon of gender equality (Au, 2013). Paulsen (1991) reported gender gaps favoring male students; however, this gender gap existed mainly among students, who did not choose to further their education. Barber and Torney-Purta (2009) also suggested that the effect of higher education on political socialization can provide important resources to explain the trend of gender equity.

2.4.4 Civic engagement and the role of schools in civic development

Arguments related to the role of school in civic education have two main streams. One of the streams perceives schools to be conservative and often hindering learning (e.g., Brown, Collins & Duguid, 1989; Illich, 1970; Neill, 1953). Illich (Rea, 2010:145) and Foucault (Rea, 2010:145) shared similar views that the school is a form of social control exercised by the state in Western countries. Lyotard (1984) also suggested that schools only teach knowledge or skills for the needs in society rather than encourage students to be more reflective, innovative or creative. In response to the negative views on the role of schools, Neill (1953) built the Summerhill School to counteract the influence of the authoritative and controlling style of education. The Summerhill School favored school experience to stimulate the minds of the students to be more innovative and creative. This approach would motivate students to learn and create meaning in their experiential learning.

Another stream of research in Western countries has highlighted the positive role of schooling and its contribution to students' civic engagement (Campbell, 2005, 2007; Flanagan et al., 2010; Gilleece & Cosgrove, 2012; Hooghe & Quintelier, 2011; Isac, Maslowski & Werf, 2011; Torney-Purta & Barber, 2005; Wilkenfeld, 2009; Zaff et al., 2011). Research results have indicated that schools have played a very important role in facilitating the socialization of students' political values. Both the school and classroom were considered as "laboratories" for the practice of

citizenship and political values in the community. Torney-Purta, Barber, and Wilkenfeld (2007) argued that an open classroom climate could predict higher civic knowledge and voting intentions of the adolescents. Schools have the potential to provide adolescents with crucial civic knowledge, skills, beliefs, and values toward civic engagement. Civic teachers design activities or provide students with experiences that suit the students' age or life situation (Zaff et al., 2011). All these studies suggest that the school has played a significant role in adolescents' civic engagement. Similarly, several Asian and local studies (e.g., Fairbrother, 2003, 2008, 2010; Faribrother & Kennedy, 2011; Ho, Alviar-Martin, Sim & Yap, 2011; Kennedy, 2007, 2010a, 2010b, 2010c; Kennedy, Mok & Wong, 2011; Leung & Yuen, 2009a, 2009b; Leung, Yuen & Ngai, in press; Sim, 2012) argued that secondary school experiences significantly influence students' civic attitudes.

Torney-Purta et al. (2001) proposed an assessment framework to assess the role of schools in political socialization. The model focuses on the influence of multiple systems on civic development. Wilkenfeld (2009) used a multi-level analysis of context effects via various systems, such as family, peers, school and neighborhood, to examine the civic engagement of adolescents. The study provided a detailed analysis of political socialization and reported that schools have a positive role in narrowing the civic engagement gap among students from diverse backgrounds. Similarly, Gilleece and Cosgrove (2012), Hooghe and Quintelier (2011), and Kennedy, Mok, and Wong (2011) adopted multi-level modeling as an analytical technique for tapping the potential results at different levels of educational systems.

2.4.5 Civic engagement among adolescents in Hong Kong

A few local trend studies have assessed the changes of civic engagement among students. Fairbrother (2008) replicated his earlier study to assess the national attitudes of first year university students and found that students in 2005 had more positive national attitudes than the first cohort in 2000. Apart from this, Kennedy and Chow (2009) assessed the changes of students' conception on citizenship and democracy in the past decade (from 1999 to 2009). In a similar vein, Kennedy, Huang, and Chow (2012) conducted research to assess the levels of students' political trust ten years after the return to Chinese sovereignty. However, few systematic trend studies have been conducted in assessing students' changing attitude toward future civic engagement after the handover to Mainland China in 1997. Hence, RQ 1 was adopted in the current study to address the above issue. The findings of the present study may shed light on the development of students' civic attitudes in Hong Kong.

Furthermore, many previous works (e.g. Campbell, 2005, 2007; Flanagan et al., 2010; Torney-Purta & Barber, 2005) have shown that schools play a crucial role in contributing to the civic engagement of students. Thus, RQ 2 was adopted to assess the role of schools in promoting the civic engagement of Hong Kong students in the past decade. The assessment framework is based on the political socialization model of Torney-Purta et al. (2001), which explores the process within the

school context via three agents: intended civic curriculum, classroom climate, and students' perception of school participation in promoting their civic engagement. Political socialization is a reflection from the larger culture (Giroux, 1983). Lee (2004, 2005) explains that there are three distinctive features in Asian contexts that influence the practice of civic education in Hong Kong. The features are harmony, spirituality, and the development of individuality as well as the self. Harmony refers to the focus to maintain a harmonious human relationship. Spirituality emphasizes on cultivating a person's quality or one's inner life. The development of individuality and the self also focus on cultivating good quality of the inner-being. The emphasis on self-cultivation is originated from a Confucian tradition (Lee, 2004: 281-283). In light of this, the literature review presented from Section 2.5 to Section 2.7 has sought to justify the significance of the three agents in civic education, particularly with reference to the Hong Kong context.

2.5 Civic curriculum

2.5.1 Conceptual framework

Conceptually, various approaches are available for defining the features of curriculum. The first approach is to view the curriculum as an organization of study. Curriculum can be a course of study, a set of teaching materials, a subject to be taught, a curriculum integrated with other subjects and even across all subjects, or an extracurricular activity (Kennedy, 2008). Under this approach,

curriculum is not only confined to teaching contents, it also refers to a learning process through school activities (Posner, 1998; Lee, 2008). As applied to civic curriculum, curriculum can be a civic subject or certain school experience, such as engagement in voluntary services, community services, or school participation in election campaign for student bodies.

The second approach views curriculum as a learning orientation. Eisner and Vallance (1974) classified curriculum into the following five types of orientation: cognitive process, self-actualization, technological, academic-rationalist, and social re-constructionist orientation. Longstreet and Shane (1993) proposed four types of orientation, including society-oriented, student-oriented, knowledge-oriented, and eclectic curriculum. Lee (2008) compared the views of the aforementioned orientations and indicated that the latter view can meet the purpose and process of teaching and learning.

The third approach involves the use of an operational perspective in viewing curriculum in the context of school. In this view, Eisner (1994) identified three perspectives, namely, formal, implemented, and hidden curriculum. Formal curriculum is the official curriculum proposed by the education bureau of any government. However, the official curriculum can be modified, minimized, or expanded according to the broader goals or characteristics of individual schools. As a result, the school-based curriculum becomes a means by which to meet the needs of individual schools and regarded as an implemented curriculum. Aside from the explicit teaching curriculum in class, the

hidden curriculum also allows infusing implicit social norms or political expectations into students as a part of school life. The hidden curriculum can be an effective way for students to learn civic education through political socialization. Some examples are the democratic classroom climate for open discussion of political or social issues, student's active and participatory attitude toward school activities, and the hidden norms applicable to students to help the school authority carry out reasonable or appropriate policies.

Therefore, this study adopts an operational perspective in viewing curriculum as both formal and informal. Curriculum can be perceived as a formal subject with content learned in the classroom. Meanwhile, curriculum can operate in an informal manner and be infused into the school life or in the society that teachers or students experience every day.

2.5.2 Literature review on civic curriculum

Previous literature (e.g., Galston, 2001; Langton & Jennings, 1968) tends to provide a negative view on the effectiveness of civic courses in changing students' attitude and level of civic engagement. Schools can either enhance or degrade the political socialization process among the students. Bourgeoning recent research contradicts the previous view that classroom instruction in civic courses was largely irrelevant to students' civic engagement (Gimpel, Lay & Schuknecht, 2003). Niemi and Junn (1998) argued that with more exposure to government-related courses,

students' political knowledge would increase. Students from a disadvantaged minority background especially benefited more from the civic courses. Students who favored civic courses would spend more time in this subject, and hence had higher civic scores. Good teachers with better pedagogical techniques and an ability to build an open and democratic classroom climate would positively influence student attitudes (Hahn, 1998, 2010). Using students in the United States as their samples, Gimpel, Lay, and Schuknecht (2003) reported a strong connection between student evaluations of civic courses and attitudes that were relevant to political participation in later life. Torney-Purta (2002), who also based her research on the empirical findings of the IEA CivEd Study (both phases 1 and 2), reported that an increase in civic knowledge and engagement among 14 years old secondary students was related to students who studied civics-related topics in school. Although previous research indicated a mere or even insignificant effectiveness of civic courses on students, recent research was more positive on the effect of civic curriculum on civic engagement among students.

An emerging consensus in Western countries, such as the United States, the United Kingdom and Australia, proposed the three main elements in running an effective citizenship education program (Crick & Lister, 1979; Crick, 1998; Kerr & Ireland, 2004; Cleaver & Nelson, 2006), namely, values and dispositions, skills and competences, and knowledge and understanding (Ross, 2008: 495). These elements form the main objectives of civic curriculum. The three main objectives are elaborated in the next sections.

2.5.3 Civic values

Researchers have attempted to identify fundamental and universal civic values and dispositions (Ross, 1998). The key values may be related to upholding human rights, social responsibilities, obligations toward others (particularly in relation to equity, diversity, and minorities), legal matters (particularly in relation to the rule of law and democratic processes), notions of liberty and humanistic values, and empathy for others (Ross, 2008: 495). Kidder (Sutherland, 2002) argued that people from worldwide tend to identify honesty, respect, responsibility, fairness, and compassion as core moral values. Furthermore, Crick and Lister (1979) discussed the needs of procedural values that are necessary in conducting a liberal and democratic classroom climate, thereby tolerating the substantive values of others. These values may also include respect for truth and reasoning, willingness to compromise, open-mindedness, and tolerance.

Certain controversies related to the means of inducting and planning civic values within the curriculum have emerged. Several scholars (e.g., Hess and Torney, 1967; Connell, 1971) believed that civic values could not be planned sequentially. Ross (2008) maintained that some fundamental values, such as respect for human rights, rule of law and respect for diversity, ought to be introduced even to pre-school children as they were in the university. Furthermore, the effective induction and articulation of civic values require comprehensive school planning, thus allowing all

members (including school administrators, teachers, students, and parents) to recognize and maintain the values.

2.5.4 Civic knowledge

Developing students to become good future citizens can be done by increasing their political knowledge, which provides a more appropriate context for engagement in community-based civic experiences and classroom reflection (Galston, 2001). A formal education context is suitable for imparting the value of civic education to adolescents. However, a review of civic education in the past three decades indicated that formal civic education did not seem to play a strong role in the political socialization of adolescents. Furthermore, the acquisition of political knowledge from newspapers has been declining in recent years due to an increasing number of young people who prefer new media (e.g., the Internet and network TV news) as sources of political information (Rahn, 1999).

The role of civic knowledge has been discussed in a substantial number of studies. For instance, Popkin and Dimock (1999) asserted that citizens with meager information on political affairs could not follow public discussion on those political issues; hence, they would be less willing to participate in politics. Galston (2001) further pointed out the undesirable effect of insufficient civic or political knowledge. If citizens had political knowledge below the basic level, their ability to

make reasoned civic judgments would be impaired. Therefore, civic knowledge has a crucial role in equipping a mature citizen. Galston (2004) also reviewed the positive effects of civic knowledge. Civic knowledge would advance support for democratic values, promote political participation, help citizens understand their interest and responsibilities in the societies, learn more about civic affairs, reduce fear of and mistrust toward the public and the government, improve the consistency of the views of people in expressing public opinion, and alter our opinion on specific civic issues. This concept has inspired the bipartisan National Commission on Civic Renewal to recommend to the state the establishment of an assessment scheme for guiding students to develop basic civic mastery skills before they graduate from high school (Galston, 2004). All the studies mentioned above point to an important fact: knowledge plays a crucial role in promoting civic engagement.

2.5.5 Civic skills

Ordinary citizens must possess at least certain civic skills to function maturely in civic and political life. Civic skills include communication skills, knowledge of political systems and critical thinking for the civic or government affairs in general (Comber, 2003). Students who had taken civic or government courses in school reported that they possessed more civic skills than those who had not studied the courses. There are three essential civic skills for deliberative democratic communication (Peterson, 2009), and these include skills related to civic listening (i.e., hearing and accommodating others) (Barber, 1992: 128), civic empathy (i.e., understanding the interests of others from their

perspective) (Peterson, 2009), and internal reflection (i.e., internal perception processing) (Goodin, 2003).

Galston (2004) suggested certain actions that public schools could take to promote the acquisition of civic skills. First, public schools should allow students to experience public speaking. Second, students should be encouraged to participate actively in student bodies. Third, students should be urged to join projects that promote community services. Students' participation in the abovementioned activities can enable them to be open, active, and acquire the essential skills for cooperating with others or working in groups to accomplish tasks. Furthermore, students can have more opportunities to enhance their civic skills if service projects are integrated with classroom reflection. Gutmann and Thompson (1996: 359) discussed the role of schools in teaching civic skills by stating that:

> … to prepare students for citizenship, schools must go beyond teaching literacy and numeracy…schools should aim to develop their students' capacities to understand different perspectives, communicate their understandings to other people, and engage in the give-and-take of moral arguments with a view to making mutually acceptable decisions. (Gutmann & Thompson, 1996, p. 359)

Numerous civic skills have been identified, but few of them have been assessed empirically. In the present study, various civic skills, such as understanding people with different ideas, cooperating with others, and solving problems in the society, are assessed.

2.5.6 A review of the development of the civic curriculum in Hong Kong

Political changes were a crucial factor affecting the focus and practice of civic education in Hong Kong. Before the handover in 1997, civic education in Hong Kong was depoliticized to maintain the stability of the colony. After the signing of the Sino-British Joint Declaration in the 1980s, the government began to strengthen the concepts of sovereignty and national identity that facilitated the introduction of the *Civic Education Guidelines* from 1985 to 1996. To prepare for the return of sovereignty to the PRC in 1997, the content of civic education curriculum has undergone several changes. Such topics as democracy, national identity, human rights, and global citizenship received greater attention in schools and from the public (Leung & Yuen, 2009a, 2009b).

After 1997, promoting national education has been a salient part of the development of the civic curriculum. Commenting on the 1996 *Civic Education Guidelines*, Dong (1999) pointed out two obvious features: one addresses the importance of political and national education, whereas the other introduces the theme "One country, Two systems" for civic education. These features underlie the processes of democracy in the Hong Kong Special Administrative Region. Aside from the principles and values promoted by civic education, certain reforms have been introduced in relation to nurturing civic skills for coping with the global changes and becoming competent citizens. The Curriculum Development Council (CDC) (2001) suggested that all school curriculum should help adolescents develop a global outlook, learn how to learn, and master lifelong skills to enable them to adapt to the changing world outside schools. These lifelong skills are the generic skills that can

be classified as citizenship skills, such as collaborative skills, communication skills, critical skills, and problem-solving skills (Lee, 2008: 38).

The curriculum reform that began in 2000 aimed to promote the values of civic education by using a new name of 'moral and civic education' rather than just civics (CDC, 2002a, 2002b). These changes have promoted a trend of depoliticization. Furthermore, civic education was promoted through formal curriculum. Among all the key learning areas, Personal, Social, and Humanities Education (PSHE) has more connection to citizenship education. A new subject called Integrated Humanities (IH), first introduced in 2003, aims to broaden student perspectives to understand the world, globalization and globalization-related values, such as democracy, freedom, liberty, and human rights. Both PSHE and IH adopt the issue-based approach and emphasize the accompanying study skills, such as multiple-perspective thinking, discussion skills, and critical thinking. Furthermore, the introduction of the compulsory Liberal Studies subject, the practice of Other Learning Experiences (OLE)[3] in senior secondary schools, and the proposal of implementing "Moral and National Education" subject in both primary and secondary schools were designed to enable an effective and full-scale implementation of civic education in the 21st century in Hong Kong. However, this goal has not yet been realized since the government has withdrawn the national education initiative.

2.6 Classroom climate

2.6.1 Definition

Adelman and Taylor (2005) interpreted classroom climate as an atmosphere or ambience that facilitates or hinders learning. Taking the concept of classroom climate as a social psychological construct, different observers have presented their subjective perceptual interpretations of the classroom atmosphere. Moos (1979) adopted a three-dimensional measure to define the shared perceptions of climate in a given classroom. The three dimensions include personal relationships within the environment, basic directions for personal growth, and the system that maintains or changes within the environment. The main focus in measuring classroom climate depends on the interactions of individuals with others and the environment. Wheldall, Beaman, and Mok (1999) focused on the nature of interactions among individuals in the classroom, as well as the relationship between the instructors' teaching styles and their students' response within the classroom. Kubow and Kinney (2000) emphasized the role of teachers in influencing the classroom climate because they perceived atmosphere or ambience as being related to how teaching should be conducted.

Aside from the abovementioned measures for assessing classroom climate, various researchers have developed other measures to assess classroom climate for specific academic subjects such as Social Studies and Civic Education. For example, Ehman (1969) created a scale to measure Social Studies classrooms. The findings generated from the scale indicated that an open classroom climate is

positively correlated with the students' level of political efficacy, political interest, citizens' responsibility, and trusting attitude toward their school and society (Hahn, 2010). An increasing number of studies have suggested the beneficial effects of an open and positive classroom climate (Campbell, 2008; Hooghe & Quintelier, 2011). Such a classroom climate reflects a school culture that promotes an open exchange of ideas, opinions, or discussions on political and social issues (Ehman, 1969; Ekman, 2006; Giroux, 1989; Hahn, 1998, 2010; Kubow & Kinney, 2000; Print, Ornstrom & Nielsen, 2002), raises students' self-efficacy, achievement, as well as social and emotional development (Fraser, 1998; Freiberg, 1999).

2.6.2 Open classroom climate and civic education

Researchers have attempted to define open classroom climate in a specific manner. Campbell defined the concept of open classroom climate as a venue for the "discussion of political issues" (Campbell, 2008: 4). Other researchers have regarded it as a place for investigating issues or exploring opinions from students and their peers. Merelman (1970: 320) referred to this climate as a form of hidden curriculum and a set of practices, which facilitates the transmission of democratic values within the school context. Hooghe and Quintelier (2011) contended that this climate is a supportive environment, which allows students to discuss freely and develop their personal opinions regarding politics or other related issues.

Democratic and open classroom climate facilitates the teaching and learning of civic education. Kubow and Kinney (2000) identified eight characteristics of a democratic classroom, namely, active participation, avoidance of textbook-dominated instruction, reflective thinking, student decision-making and problem-solving choices, controversial issues, individual responsibilities, recognition of human dignity, and relevance. These characteristics ensure that an open classroom allows students to have greater freedom to discuss issues, be more willing to express their own views, and be responsible for their speech and judgment. Furthermore, this environment encourages all students to express their views while respecting those presented by others. Teachers are the facilitators in the classroom discussion; hence, they may also assume a status equals to that of their students. This ensures that teachers do not dominate discussions or impose their own views on the students.

Torney-Purta, Richardson, and Barber (2005) expressed similar views on the positive effects of open classrooms on civic education. An open classroom climate encourages students to have discussions about current issues, freely express opinions, listen to the opinions of their peers, and form opinions from multiple perspectives. Giroux (1989) and Hahn (1998) also studied the relationship between classroom climate and students' learning behavior. Giroux emphasized that schools are ideal places to provide opportunities for students to learn to be critical democratic citizens through critical pedagogy and democratic values. Hahn argued that an open classroom climate that fosters inquiry, participatory civic behavior, deliberation, reflection, and

communication could prepare students for adult civic life (Hahn, 1998: 247). Giroux (1989) and Hahn (1998) pointed out that secondary schooling could provide numerous learning opportunities through a formal curriculum to practice critical democratic citizenship. Ekman (2006) further elaborated the role of schools in nurturing democratic competence. Student training through classroom presentation and discussion could help develop students' expressive ability to voice out opinions, especially in the form of verbal ability. Such training can serve as the foundation of a discussion culture in a democratic society. A recent study from Hooghe and Quintelier (2011) indicated that students with a low level of political interest benefited more from the open and democratic classroom climate than students who had a strong political interest. Their study lends evidence to the assumption that schools function as equalizers to level the civic engagement gap.

Considering the role of teachers in an open and democratic classroom, Print, Ornstrom, and Nielsen (2002) reported that teachers could design and modify their learning environment to facilitate interactions between teachers and students as well as among students. The teachers may cultivate a democratic culture in class by designing curriculum or setting up civic topics that can arouse discussions on controversial topics and by providing students with more liberty and space in which to express, argue, and respect the viewpoints of others through effective communication.

Given that discussion strategies are highly valued in an open classroom, Parker (2008) proposed two kinds of discussions, namely, seminar and deliberation discussions. In a seminar discussion,

teachers would encourage students to view issues in a deeper and clearer manner as they need to discuss the meaning of the text; meanwhile, the deliberation strategy would encourage students to think together to find solutions for a common problem (Hahn, 2010). Hahn (2010) also suggested the use of issue-centered content in designing discussion topic and issue-centered pedagogy in classroom interaction, thus allowing every student's opinion to be valued and respected, as well as enabling the opinions or ideas to be reflected from different perspectives; students would benefit from such a supportive environment.

Teachers are effective role models in demonstrating the concept of democracy to their students. Their role is to encourage students to form their own values, and then influence students in understanding and even addressing moral and social issues of the government and the community (Arthur, 2011). Therefore, it is important to identify the attributes or characteristics of effective civic teachers. Leung (2006: 65) identified these characteristics as "open mindedness, being very knowledgeable, willingness to care and to participate in societal issues, willingness to care for students and courage." Mondak et al. (2010) examined the effects of traits on civic and political behaviors. Personality can be typified into five-trait dimensions, including openness to experience, conscientiousness, extraversion, agreeableness, and emotional stability. Their research findings confirmed the link of extraversion to civic engagement as extroverts are typically more active and involved in several civic and political engagements. Second, people who are highly open to civic experiences are thoughtful, analytical, and more willing to receive new information. Their sufficient

political knowledge and self-confidence allow them to handle political issues more easily. Third, people with high agreeableness tend to avoid conflicts. Together with the trait of emotional stability, these people tend to have broader social networks and are more welcomed by others. Therefore, personality traits are related to the involvement of an individual in civic engagement. Similarly, the task of developing a democratic classroom climate and using appropriate pedagogies depend on the teachers to a certain extent as they perform their role as mediators, building democratic processes through classroom interaction.

2.6.3 Open classroom climate and civic engagement

Zaff and Michelsen (2002) reviewed 60 studies about civic engagement and found that teenagers who are involved in civic engagement programs and all school activities have more positive civic attitudes and a higher tendency to avoid teen pregnancy and drug use than those who are not. Torney-Purta and Barber (2005) used secondary data analysis from the IEA CivEd Study to investigate the relationship between democratic school engagement and civic participation among European adolescents. They used curriculum (about voting behavior and cooperation with diverse groups), classroom culture (openness of classroom climate), and school culture (whether the student is a member of a student council and has confidence in the effectiveness of school participation) as predictors of the present democratic participation in school and students' future participation in civic activities in their respective communities. The analysis showed that explicitly teaching

democracy significantly affects students, such that they begin to accept the norms of voting or discussing politics with others. Furthermore, the Open Classroom Climate Scale from IEA CivEd Study showed that students considered items such as "Students feel free to disagree openly with their teachers about political and social issues" and "Teachers encourage the discussion of political and social issues about which people have different opinions," as the most important items in measuring an open classroom. Thus, the democratic classroom environment is positively related to current civic engagement in schools and even in future civic engagement in the community.

Recently, literature from both the Western and Asian settings to identify the relationship between democratic classroom climate and civic engagement has burgeoned. A positive and democratic classroom climate has been reported to be related to the following: students' trust in government, voting behavior, confidence in school participation, and positive attitudes toward immigrants (Torney-Purta & Barber, 2005); equal access to citizenship experience and reduction of civic engagement gaps between students from different demographic backgrounds (Wilkenfeld, 2009); greater political awareness, civic proficiency and higher tendency to be informed voters (Campbell, 2005, 2007); facilitate students to foster more civic knowledge, better interpretation skills, civic engagement, and acquire proper concepts in citizenship (Mapiasse, 2007). Campbell (2005) reported that an open classroom climate is negatively correlated to illegal protests, including spray-painting protest slogans on walls, blocking traffic as a form of protest, and occupying public buildings as a form of protest.

Regarding the relationship between early civic behaviors in school and future civic participation in adulthood, Zaff et al. (2003) examined several mediating factors affecting the relationship between civic engagement in adolescence and in adulthood. Their research indicated that positive citizenship experiences have a significant role in perpetuating future civic behavior. A supportive, open, and democratic classroom that allows students to explore the meaning and values of civic activities would be an advantage in perpetuating students to be actively engaged citizens in community services or civic activities in the future. Campbell's findings (2007) also supported the premise that an open classroom climate was a mediating variable in civic education classrooms.

Overall, an open and democratic classroom climate is beneficial to the conduction of civic education. First, students critically learn about civic knowledge through discussion, deliberation, and multi-perspective communication with mutual respect from both teachers and peers. Second, the civic skills and values they acquire from an open classroom can encourage students to actualize these ideas through active participation in civic activities in and outside the school. Third, students' civic mind and attitude, which they acquired and developed from a democratic classroom, can be perpetuated to future civic engagement in adulthood.

2.6.4 Review of the research on classroom climate and civic education in Hong Kong

Local studies (Fairbrother, 2003, 2008; Kennedy, 2010b; Kennedy & Chow, in press; Kennedy, Huang, & Chow, 2012; Leung & Yuen, 2009a, 2009b; Leung, Yuen & Ngai, in press) suggested that secondary school experiences significantly affect the civic attitudes of students. However, previous studies that examined the effects of school culture, especially those that measured the classroom climate, on students' civic engagement are very rare. The results were not entirely positive. For instance, from the international report of the 1999 IEA CivEd Study (Torney-Purta et al., 2001), the level of openness for discussion in the Hong Kong classrooms was lower (mean score of Hong Kong = 9.6, international mean = 10.0) than in other countries (n = 24). Prior to the IEA CivEd survey, a team of Hong Kong researchers conducted a qualitative research using the interview method, and revealed that teachers complained to their students as they were uninterested in discussion, particularly on issues related to democracy, political participation, and voluntary activities. Meanwhile, the student respondents also agreed that their discussion was more focused on personal issues rather than on civic issues, and civic-related classroom activities in school were few (Lee, 1999: 324).

Five key factors were identified in a local longitudinal study that investigated the relationship between positive school and classroom environment on the successful implementation of Positive Youth Development Programs (a moral and civic education program that caters to the positive growth of junior secondary school students) (Sun, Shek & Siu, 2008). The first factor was positive school ethos and teachers' positive beliefs in the students' potential. Second, students' potential

would develop better if they were in a caring school climate that promotes intimate, mutual, respectful, accepting, caring, and supportive relationship. Third, students worked better in an encouraging environment. Students' measures on high involvement, level of enjoyment, and responsiveness to the program were regarded as indicators of program effectiveness. The other factors were related to the practice of school administrative personnel and systematic program arrangement. The above factors show that students have effective learning experiences in schools related to an open classroom climate, which is characterized as a free, democratic, and open atmosphere in which students can freely express their views, have mutual respect, and are able to exercise multiple perspective thinking. Therefore, democratic classroom climate and democratic pedagogies, to a certain extent, have an exerting role as a mediator to build the democratic processes through classroom interaction.

With the introduction of the senior secondary curriculum reform in Hong Kong from 2009 onwards, an increasing number of schools has dealt with the changes, introducing new academic subjects, such as Liberal Studies, and new policies, such as the practice of Other Learning Experiences (OLE). In addition, the CDC proposed to make moral and national education as a subject to be implemented in the future. These developments imply that the value of civic education is becoming increasingly important.

An effective civic curriculum needs to be accompanied by changes in classroom pedagogy and

school culture. Hence, the need to build an open classroom climate is an urgent one. Such concern can be justified by the growing body of research in the West to support that an open and democratic classroom climate helps foster the growth of civic knowledge about democratic principles, processes, and positive attitudes toward civic engagement (Campbell, 2005, 2006, 2007; Ekman, 2006; Gilleece & Cosgrove, 2012; Hahn, 1998, 2010; Hooghe & Quintelier, 2011; Print, Ornstrom & Nielsen, 2002; Torney-Purta, Richardson & Barber, 2005). However, under the influence of Chinese culture, especially in the Confucian heritage classroom which emphasized obedience, respecting authorities (Watkins & Bigggs, 2001) and harmonious relationship with others (Lee, 2004, 2005), there is a doubt whether Hong Kong teachers can build a genuine democratic classroom that is open to political discussion and to receive challenges from students with conflicting views.

2.7 Student perception of school participation

2.7.1 Political efficacy: Definition

In a democratic culture, citizens are expected to participate actively in any processes to reflect their opinions or enact their political behaviour. The sense of political efficacy affects their confidence to change their government. The construct "political efficacy," based on Bandura's notion of self-efficacy (Bandura, 1997; 2002) and participatory theory of democracy, helps explain the

efficacy of people with regards political or civic-related matters. Participatory democracy theory argues that an individual's experience of political participation prepares him/her to be more psychologically equipped to undertake further participation in the future (Pateman, 1970; 1995). Citizens with positive political efficacy are more likely to participate in political processes to influence the government. Similarly, active students become active participatory citizens in the future. Numerous studies support the notion that democratic practices in schools help students develop the feeling of school efficacy and hence, positively affect their later political participation (e.g., Hooghe & Quintelier, 2011; Hooghe & Stolle, 2003; Isac et al., 2013; McFarland & Thomas, 2006; Richardson, 2003; Schulz, 2005). Therefore, students' participation in school civic activities, in terms of their attitudes, frequency of engagement, and types of civic engagement, merit our attention.

The concept of political efficacy can be divided into internal and external political efficacy (Acock, Clark & Stewart, 1985; Beaumont, 2010). Internal political efficacy refers to an individual's beliefs about his/her competence to understand and participate effectively in politics, whereas external political efficacy denotes the beliefs about the responsiveness of governmental authorities and institutions to citizen's demands (Craig, Niemi & Silver, 1990). There is another classification of political efficacy in terms of social movement, and in this system, there are two categories, namely, individual sense of political efficacy and collective political efficacy. Collective political efficacy

refs to the confidence in a group's ability to work effectively in influencing the government (Beaumont, 2010).

Shingles (1981) and Harris (1999) cited the differential effects of internal and external political efficacy on the political behavior of citizens. Those with high internal political efficacy may not have high external political efficacy toward the government. For instance, citizens with high internal political efficacy typically show a positive attitude toward civic or political activities. Conversely, people with low external political efficacy feel that the government is unresponsive to their needs; therefore, they tend to exhibit more radical actions through protests or litigations (Kahne & Westheimer, 2006). However, research that clarifies the different effects of various dimensions of efficacy on political participation remains scarce.

2.7.2 Political efficacy and political participation

Attempts to explain the possible connection between political efficacy and political participation of the citizens have been made. For instance, Finkel (1985; 2003), Karp and Banducci (2008), and Schulz (2005) showed a consistent link between political efficacy and different types of political participation. Finkel (1985) explored the relationship between political efficacy and political participation based on a longitudinal study with a three-wave panel from the Election Study of the

Survey Research Centre. External political efficacy was reported to affect the participation of people in voting and political campaigns. Internal efficacy also predicts voting and campaign participation, whereas these political activities do not predict changes in internal efficacy. Finkel's research confirms Bandura's notion that efficacy is domain-specific and at least two dimensions of efficacy are related to political participation.

Carlson (2007) examined the effect of external political efficacy on political participation, especially in voting behavior. People with high external efficacy would be more politically active because they believed their actions could change government policies and their opinions could influence the government. Carlson used two large-scale surveys, the "National Survey of Civic and Political Engagement of Young People" from Tisch College (2007) and the "National Civic Engagement Survey 1" (2002), in his work. The first survey involved 1,000 young people of 18–24 years old, with roughly equal numbers of college students and non-college students. The first survey measured respondents' political efficacy toward government policies. The second survey sampled 3,200 respondents from different generations, with roughly the same numbers across the following age groups: 15–25 years old, 26–37 years old, 38–56 years old, and 57–97 years old. This survey provided data for analyzing the relationship between efficacy, age, and political participation. The results from both surveys yielded similar findings. First, participants who did not believe that they could make a difference in government policies were less likely to vote. By contrast, respondents were more likely to vote in the upcoming elections if they perceived their government as helpful.

Furthermore, the second survey (2002) confirmed that correlations between external efficacy and voter participation existed across generations. Although external political efficacy was not the only predictor for voting behavior, improving people's confidence in the government through political efficacy would be an effective way to motivate citizens to be involved in civic and political activities, especially in the form of voting.

In another study related to political efficacy and participation, Karp and Banducci (2008) examined the electoral systems in 27 countries and how they shaped political behaviors in participant countries. They found a number of factors that were directly correlated with the practice of electoral system. The variable of political efficacy indirectly mediated the link between the electoral system and voter participation. Karp and Banducci (2008) used multi-level modeling statistical analysis in further exploring the contextual factors moderating the relationship between political efficacy and voter participation. Their results indicated that efficacy influences voting and that the contextual factors also have a role in moderating the effects. Overall, the positive relationship between adults' political efficacy and political participation is consistently supported by research (e.g., Carlson, 2007; Hooghe & Quintelier, 2011; Karp & Banducci, 2008).

2.7.3 Efficacy for adolescents

Challenges confront studies that aim to examine adolescents' efficacy beliefs that relate to future

political participation. The main criticism stems from the fact that adolescents are not mature citizens, constitutionally and legally, that is, adolescents do not have the right to vote in the community. Previous research revealed that young people had fewer political advantages, and resources were likely to be perceived to have little political efficacy (Beaumont, 2010). However, social scientists (e.g., Hess & Torney, 1967; Hahn, 1998; Schulz, 2005) often use the construct of political efficacy to be a valid operationalized and measurable variable in numerous adolescent studies. Researchers also believe that certain adolescent characteristics, such as high civic efficacy, active involvement in school affairs and participatory voicing out of opinions to change school polices, are related to future political participation. Bandura (1997) explained that young people's perceptions of their confidence to influence government policies may be due to their previous successful experiences in influencing adults in educational and other institutional settings. A democratic school can enable students to constitute a mastery experience.

Using the traditional measure of internal political efficacy (i.e., the beliefs of people about their ability to influence the government), Hahn (1998) examined adolescents from five countries based on Bandura's conception of efficacy. She also used another measure called political confidence, developed from the measure of Ehman and Gillespie (1975), to judge an individual's competence to influence an outcome. Both results from quantitative data and qualitative interviews indicated that students from Denmark and the United States had higher internal political efficacy and confidence than students from other participating countries.

Through a comparative analysis, Schulz (2005) investigated the relationships between different types of political efficacy (i.e., internal political, external political, and school efficacy) and political participation through two measures (i.e., expected electoral participation and expected political activities scale). With a sample consisting of students from two different age groups, Schulz compared the different levels of political efficacy and expected political participation between the groups. Students in the upper secondary school had high levels of internal efficacy but low levels of external efficacy in most participating European countries (n = 10). Students had higher external efficacy tended to have higher trust in institutions, whereas students with higher internal efficacy tended to have more political discussions with peers and parents. School efficacy is also positively associated with expected electoral participation and positively related to school activities, such as participation in school councils and perceptions of an open classroom climate. Democratic practices in schools have a positive effect on students' perception of the political actions and their development of school efficacy. Students may be confident that they can make decisions to influence school policies. Thus, such confidence has positive effects on their political participation in subsequent years. This finding consistently appeared in citizenship studies in the West. With regards to gender differences, girls tended to have higher significant scores in school efficacy than boys in about half of the participating countries (e.g., Hooghe & Quintelier, 2011; Hooghe & Stolle, 2003; Isac et al., 2013; McFarland & Thomas, 2006; Richardson, 2003).

Kennedy (2010a) used the secondary data analysis from the ICCS (2009) and compared the Thai and Hong Kong students' attitudes toward citizenship and its relationship to the influence of civic knowledge. Using regression analysis with students' civic knowledge as the outcome variable and various forms of efficacy as predictor variables, Hong Kong students' sense of internal political efficacy was found to directly influence civic knowledge. However, students' citizenship self-efficacy was not a good predictor of civic knowledge for both Hong Kong and Thai students. More research should be conducted in this area to clarify the relationship on different types of efficacy and their effects on students' civic knowledge.

2.7.4 Efficacy and civic education

Previous studies (e.g., research generated from the Centre for CivEd, 2005; McDevitt & Kiousis, 2004) have focused on assessing the immediate effect of civic curriculum to improve the level of students' civic or political behaviors, whereas little research about the long-term effect of the effectiveness of civic education has been conducted. Pasek et al. (2008) evaluated the effect of a supplementary civic education program named 'Student Voices' on the subsequent political participation of students. The samples were from classes of 26 public high schools in Philadelphia in the United States. The experimental groups adopted the 'Student Voices' program with 10 sessions in a semester or another 10 sessions in the second semester. The control group went through traditional civic curriculum without intervention. Positive results were found among the

experimental groups. The experimental groups (either a one-semester or two-semester course) progressed more than the control group. In addition, the internal efficacy was found to be a significant mediator. The program indirectly influenced the voting behavior through the effects on efficacy and attentiveness. The long-term effects of the program were noticeable because each additional semester of program showed a significant increase in the outcome variables, including tendency to vote, political awareness, and knowledge about candidates. This finding suggests that future civic curriculum design can consider building the political efficacy of students to facilitate students to maintain a more durable and higher motivation in civic engagement in the long run.

2.7.5 Review of research on student efficacy and civic engagement in Hong Kong

A number of local studies related to students' efficacy and political participation have been reported. The main study was generated from the report of Lee based on the results from the IEA CivEd Study (Lee, 1999, 2004). Lee used the qualitative interview method to obtain the data. He examined secondary school students' sense of confidence in influencing school policies. Students' school efficacy was related to their participation in school activities. Several positive changes could happen in school when students worked together. The measure that assessing student participation in school and can fit in the conceptualization of political efficacy is the School Participation Scale. The scale was used by the IEA CivEd Study. Compared with that of other countries (n = 24), the level of school participation among students in Hong Kong (mean score of Hong Kong = 9.8, international

mean = 10.0) was lower than the international mean score. Furthermore, the *ICCS 2009: Hong Kong Report* indicated that the value of school participation score of Hong Kong students was slightly lower than the international mean [mean score of Hong Kong = 48 (0.3), international mean = 50 (0.0)]. Thus, more intensive efforts need to be exerted in designing a relevant curriculum and creating more channels for experiential learning, thereby increasing students' confidence or efficacy during the process of political socialization.

2.8 Assessment

2.8.1 Secondary data analysis

The present study uses international standard measures to assess the effectiveness of civic engagement among secondary school students. The secondary datasets were obtained from the IEA CivEd Study (1999) and the CivEd Study conducted by Kennedy and Chow (2009).

Usually, researchers who use secondary data do not participate in either the research design or data collection in the original study. Therefore, the data collected may not be designed to answer any specific questions that fit the needs of other researchers. Particular information that the researchers intended to measure may be missing as well. Subsequent researchers may need to use other research methods, such as administering other surveys, qualitative interviews, and observations, in addition

to secondary data analysis to obtain information for meeting their research needs. Boslaugh (2007) also argued that, although the researchers could conveniently work with the existing secondary data, the data collected might not have been defined or categorized according to the intention of the subsequent researchers. Furthermore, certain data collected may be unavailable to secondary researchers. For instance, the addresses and phone numbers collected by the original research team may not be released to secondary researchers for confidential or ethical reasons. Thus, a secondary dataset should be treated with caution to include the necessary data that meet the needs for subsequent analyses.

However, studies that use secondary data analysis are on the rise, indicating that such type of analysis has values. Boslaugh (2007) outlined the advantages of the use of secondary data. The first advantage is economy. A large research team with sophisticated research design and professional method of data collection can collect their primary data, and the secondary researchers no longer need to exhaust abundant resources, manpower, or energy to collect the data again. Secondary data can be more reliable than that obtained from any individual study or local small-scale projects. Second, the secondary data collected have been cleaned and stored in some electronic devices; hence, the researchers can retrieve the data to perform secondary analysis at their convenience, which is time saving. Third, the breadth of secondary data is highly representative even on a national basis. This aspect facilitates cross-country or cross-age cohort comparison.

2.8.2 Rasch measurement

The use of secondary data analysis involves a large sample, and more sophisticated and advanced measurement techniques can be used in validating scales and subsequent data analysis to allow cross-country comparison. Therefore, statistical analysis from Rasch measurement was used in the present study for instrument validation and further subsequent analysis. Rasch (1960) postulated an assessment model that makes invariance an integral part of the model. The Rasch model is used not only for describing the data, but also for data fitting. Wilson (2002) contended that the Rasch model is based on a measurement paradigm, which involves setting up a basis for items or testing to meet a set of a priori requirements of invariance. This model controls the quality of scaling items. For instance, if the data cannot fit the model, then various issues, such as the data set, questions or items format, and administration, must be revised. Conversely, if an overall scale and individual item fits the Rasch model, evidence of construct validity is provided. Using Rasch measures is also a powerful means of setting up the construct validity through item hierarchy, which represents the level of difficulty. Construct validity is attained when the ordering of the item difficulty matches the intentions of the instrument developer and the potential consumer of the test results (Wright and Stone, 1979).

2.9 Contributions of the literature review and the study

The present study adopts a cross-disciplinary approach to assess the role of schools as agents of political socialization. The research review starts with the theoretical framework based on Bronfenbrenner's ecological model (1989, 1998, 2005). However, the model may be too loose to explain political socialization. Therefore, the entire framework is supplemented with the situated learning model proposed by Lave and Wenger (1998, 2002) to understand the proximal processes within the school context and with Bandura's social cognitive theory (1997, 2002), which explains the perception of an individual's self-efficacy on civic engagement processes. Second, this study provides a detailed understanding of the processes between key school factors via classroom climate, civic curriculum, and student perception of the value of school participation to political socialization.

For the strength of the literature review, this research uses several longitudinal studies to understand civic engagement among adolescents. Longitudinal studies typically focus on the transition between adolescence to adulthood, which helps understand the link between adolescents' attitudes toward future civic engagement and their future civic behavior in adulthood. Second, the literature review discussed the advantages and disadvantages of using secondary data. The solutions to resolve the limitations can guide the further procedure of conducting focus-group interviews. The use of primary qualitative data is for complementary purpose to support the findings from quantitative secondary data analysis. Hence, the results can have high representativeness. Third, issues on civic engagement and genders were also highlighted to draw attention to the recent global and local

developments in gender equality in different forms of civic participation. Fourth, the literature review focused on global and local studies in the past decade to provide a thorough understanding on the recent international and local developments in civic education.

Overall, the current study utilizes secondary data from the IEA CivEd Study (1999) (Torney-Purta et al., 2001) and the CivEd Study (2009) (Kennedy & Chow, 2009) to understand the attitude of Hong Kong students toward future civic engagement in the past decade (as raised in RQ 1). In explaining the changes, the role of schools contributing to such changes (as raised in RQ 2) is also investigated. As regards the research methodology and methods to address the above research questions, it will be presented in Chapter 3.

Chapter Three

METHODOLOGY

3.1 Introduction

In the previous chapter (Chapter 2), extant literature was reviewed to highlight current research issues in political socialization. A model that measures the role of schools in promoting civic engagement was also identified (Torney-Purta et al., 2001). Chapter 3 describes the research methods used to address RQ 1 (whether the attitudes of Hong Kong students toward expected future civic engagement have changed between 1999 and 2009) and RQ 2 (to examine the role of schooling through three school factors, namely, students' perception of the learned civic curriculum, open classroom climate, and their school participation, has contributed to the changes). The main approach used to address the research questions was based on the secondary data from the IEA CivEd Study (Torney-Purta, et. al., 2001) and the Civic Education (CivEd) Study (Kennedy & Chow, 2009). This chapter also deals with issues of sampling and instrumentation of key variables. To supplement the quantitative data, focus group interviews were conducted to explore issues brought by the statistical analysis. Using both quantitative and qualitative approaches is a main feature of this thesis.

3.2 Research design

As mentioned earlier, this study adopted a mixed-method research design, which involved both quantitative and qualitative methods. The mixed-method design is commonly used in studies on political socialization and civic engagement (e.g., Beaumont et al., 2006; Colby et al., 2007; Hahn, 2010; Torney-Purta, Amadeo & Andolina, 2010; Zukin et al., 2006). Both secondary data from the 1999 and 2009 cohorts and primary data collected from the focus group interviews in 2011 were used in the study.

3.2.1 Secondary data from the 1999 IEA CivEd Study and the 2009 CivEd Study

Data from the IEA CivEd Study (Torney-Purta, et. Al., 2001) were collected in 1999 through a survey conducted in 28 countries. The survey comprised two phases. The first phase involved participating countries responding to a common set of questions (Torney-Purta et al., 2001) that highlighted issues regarding civic education across all countries. This phase enabled the national research teams to develop common instruments to be used in the second phase of the study. These instruments consisted of a test of civic knowledge and a survey of the demographic information, concepts, attitudes, and participation in the civic education of students. The second phase of the study was administrated to more than 90,000 14-year-old students from the 28 participating countries, including Hong Kong. In 2009, a repeat study, with the original survey component of the above study, was administered to a sample of Hong Kong students from 18 local schools (Kennedy

and Chow, 2009).

3.2.2 Secondary data analysis

Using secondary data analysis is advantageous because it allows the use of different analytic techniques, the testing of new hypotheses, and the development of new theoretical formulations (Trzesniewski et al., 2010; Smith, 2009). In this study, the focus was to make a comparison to enhance academic understanding of changes over time in levels of student civic engagement. Hence, secondary data from the two cohorts were utilized to account for such changes. Neither of these issues were addressed in the original studies but it will form the main focus of this study.

3.2.2.1 Comparison approach: Comparing students' attitudes toward future civic engagement over time across the 1999 and 2009 cohorts

The present study aimed to assess changes in students' attitudes toward expected future civic engagement from the 1999 and 2009 cohorts. Thus, secondary data generated from two administrations of the same measure were used to assess two samples (one from each cohort) of Hong Kong students. This approach allowed for the measurement of trends among students' attitudes toward civic engagement over time. A comparison model was adopted in measuring the different dimensions of civic engagement between the two cohorts. Thus, the first research question

(RQ 1) can be addressed:

Have the attitudes of Hong Kong students toward future civic engagement changed between

the 1999 and 2009 cohorts?

The methods of comparison are discussed in section 3.8.1 of this chapter.

3.2.2.2 Explanatory approach: Using school variables as the predictors of the different dimensions of future civic engagement

The second research question (RQ2):

What is the role of schools in the change in students' attitudes toward future civic engagement

from 1999 to 2009?

was addressed by exploring the role played by schools through the perceived civic curriculum, classroom climate, and student perception of school participation that contributes to the changes. In this study, the explanatory models of the 1999 and 2009 cohort, including the predictor and outcome variables, were used. The predictor variables were school factors, and the outcome variables included the different dimensions of expected future civic engagement. Figure 2 shows a

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model on multi-level analysis with school factors on civic engagement. The statistical methods to

address RQ 2 are presented in section 3.8.2 of this chapter.

Figure 2.   A model on multi-level analysis with school factors on future civic engagement.
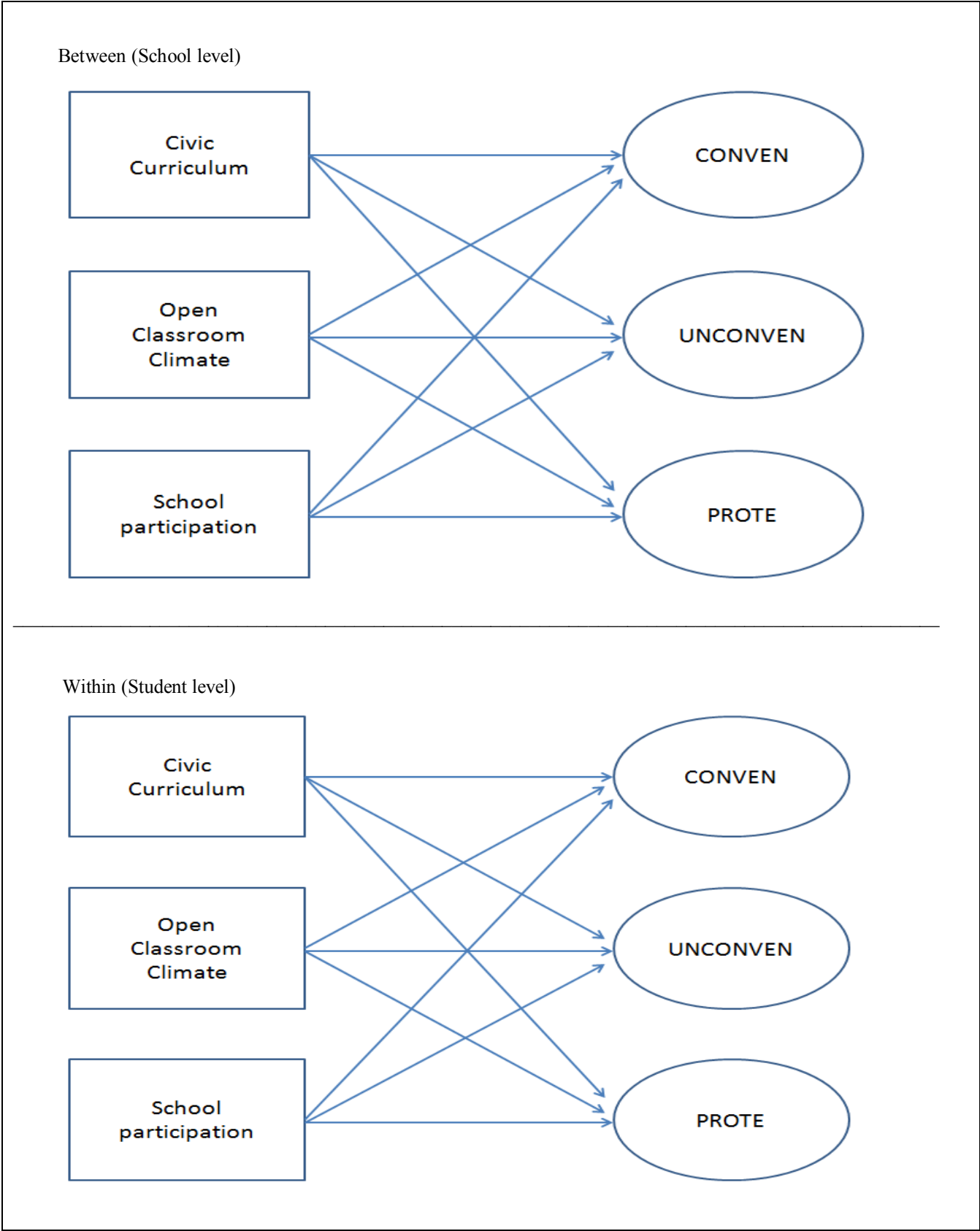
3.2.3   Primary data analysis

The quantitative data used from the IEA CivEd Study (Torney-Purta, et al., 2001) and the 2009 CivEd Study (Kennedy & Chow, 2009) can provide insights into students' civic attitudes over time. An innovative feature of this study is to use focus group interviews to explore the response of a same age sample of students to the issues of civic engagement raised in the civic education surveys of 1999 and 2009. The data obtained through the focus-group interview helped in answering RQ 2.

3.3   Sampling procedures of the IEA CivEd Study (1999) and the CivEd Study (2009)

3.3.1 Population

The international desired population for the CivEd Study (1999), including all full-time students aged 14:00 to 14:11 [years: month], was selected at the time of testing (Schulz & Sibberns, 2004: 42). Generally, the aim of the sampling procedures in each participating country or city is to ensure that the effective target population is as close as possible to the international desired population.

3.3.2 Sampling procedures of the IEA CivEd Study (1999)

A two-stage stratified cluster sample design was used in the IEA CivEd Study (1999) (Schulz &

Sibberns, 2004: 47–49). At least 150 schools were randomly chosen to obtain sufficient data for reliable analyses at the school and class levels. For each sample school, one sample class was randomly selected for the survey. The details of the sampling procedures of the IEA CivEd Study were found in Torney-Purta et al. (2001: 33–36) and Schulz and Sibberns (2004: 41–54).

In Hong Kong, the two-stage stratified cluster design led to the random selection of schools from a total of 480 secondary schools and the selection of an intact class from each sample school. All students from the selected class participated in the survey. A relative weighting procedure was applied to the data at each stage, which included schools and students. The achieved samples in the first cohort (1999) came from 150 schools; the total number of participating students was 4,997 (Kennedy & Chow, 2009). The details of the characteristics of the samples are shown in Table 1 and Table 2.

3.3.3 Sampling procedures of the CivEd Study (2009)

For the 2009 cohort, schools were selected on a voluntary basis. Eighteen schools and 602 students participated in the survey (Kennedy & Chow, 2009). The details of the characteristics of the samples are also shown in Tables 1 and 2.

3.3.4 Achieved samples

The achieved sample of students and schools of the 1999 and 2009 cohorts are shown in Tables 1 and 2.

Table 1. *Number of achieved samples of students in the 1999 and 2009 cohorts*

	1999	1999	2009	2009
No. of students	Males: 2544	Females: 2452	Males: 258	Females: 342
Total		4997		602
Mean Age (SD)	Mean age = 15.32 (SD = 0.839)		Mean age = 15.35 (SD = 0.728)	

Table 2. *Number of achieved sample schools in the 1999 and 2009 cohorts*

	1999	2009
Total number of schools	150	18
(number of classes)	(150)	(18)

Data collected from all the achieved samples were used for secondary data analysis for the present study.

3.4 Sampling and samples of the focus-group interview

The target schools for the focus-group interview were all the secondary schools in Hong Kong. The target samples were all Form Three students from the sample schools. To follow the conventional practice of the IEA CivEd Study (1999), stratified sampling method was used to select the participated schools. It was hoped that the selected schools and the interview participants constituted a sample which was similar to that of the IEA CivEd Study (1999). Thus, four sample schools were selected based on their location, banding, religion and type of school. The target samples were all Form Three students (about 15 years old) with equal number of male (n = 2) and female (n = 2) students from each sample school.

3.4.1 Achieved samples

The achieved sample students of the present study were selected with the help of the teachers of the four achieved sample schools based on the criterion, i.e., whether they had or had no/inactive civic participation (see Table 3). The plan was to select 8 female and 8 male students to be the samples and to attend the focus-group interviews. Finally, four focus-group interviews from four sample schools were conducted. There were 18 students participated in the interviews. Among them, 10 were female students and 8 were male students.

Table 3.   *Characteristics of each sample school*

School	A	B	C	D
Location	New Territories	New Territories	New Territories	Kowloon
Band	1	2	3	1
Religion	Protestant	No	Catholic	Protestant
Background	Co-ed & subsidized	Co-ed & subsidized	Co-ed & subsidized	Co-ed & subsidized

3.5 Instrumentation

3.5.1 Background

The IEA CivEd Study (Torney-Purta et al., 2001) developed instruments for assessing various domains of civic and citizenship education, including civic knowledge, skills, and attitudes. Survey items were scored in a Likert-type scale with responses ranging from "1" (strongly disagree) to "4" (strongly agree), and "0" was used to denote the response of "do not know." The survey instrument is available from Schulz and Sibberns (2004).

IRT scaling methods were used to develop the scales to allow cross-country comparison (Hambleton, Swaminathan, & Rogers, 1991). One of the advantages of using the IRT scaling method is that it effectively accounts for missing data or incomplete information in measuring the latent traits or attitudes of respondents confirmed in the factor analysis. Another advantage is that

this method provides common scales that allow comparing respondents from different countries or groups of students within countries (Husfeldt, Barber & Torney-Purta, 2005).

3.5.2 Conceptualization and operationalization of variables

The present study aimed to assess the differences, if any, in future civic engagement among students in the 1999 and 2009 cohorts. Students spend most of their time in school during their secondary education. Thus, the present study attempted to focus on the role of schools in political socialization. In the following section, the conceptualization and operationalization of the outcome variables (i.e., different dimensions of civic engagement) and the predictors (i.e., three agents of school variables) are presented.

3.5.2.1 Civic engagement

The definition of the construct of civic engagement in this study is based on adolescents' attitudes in participating in civic activities (e.g., voting, discussing issues, attending meetings, joining groups, and advocating for political change) (Campbell, 2006; Levine et al., 2012; Youniss & Levine, 2009). The operationalization of the construct of civic engagement is manifested through the following main areas of civic activities: conventional participation (e.g., voting and joining political parties), unconventional participation (e.g., fund raising and committing voluntary or social services), and

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anti-social protest activities (e.g., strikes and demonstrations) (Schulz & Sibbberns, 2004). Additionally, previous studies about the civic engagement of adolescents are mainly related to two areas, namely, beliefs about future behaviors and current activities. Adolescents' perception of civic engagement is important because it is related to the development of political attitudes and identities (Youniss & Yates, 1997, 2000). Their perception of civic engagement is also a significant predictor of future political behavior as adults (Burns, Schlozman & Verba, 2001). The present study aims to assess how adolescents prepare to be active citizens in the future. Hence, the Political Action Scale (PAS) was used to gauge the attitudes of adolescents toward the three dimensions of expected future civic engagement that are listed in Table 4.

Table 4. *Operationalization of the construct – civic engagement*

Dimension 1: items in the Scale of Conventional Participation (CONVEN)

When you are an adult, what do you expect that you will do?

1. Vote in national elections

2. Get information about candidates before voting in an election

3. Join a political party

4. Write letters to a newspaper about social or political concerns

5. Be a candidate for a local or city office

Dimension 2: Items in the Scale of Unconventional Participation (UNCONVEN)

As a young person could take during the next few years: What do you expect that you will do?

1. Volunteer time to help [benefit] [poor or elderly] people in the community

2. Collect money for a social cause

3. Collect signatures for a petition

4. Participate in a non-violent [peaceful] protest march or rally

Dimension 3: Items in the Scale of Anti-social Protest Activities (PROTE)

As a young person could take during the next few years: What do you expect that you will do?

1. Spray-paint protest slogans on walls

2. Block traffic as a form of protest

3. Occupy public buildings as a form of protest

The PAS has 12 items arranged in three subscales. The expected future Conventional Participation (CONVEN) subscale comprises 5 Likert-type items, which share a common stem "When *you are an adult, what do you expect that you will do?"* An example is *"*Vote in national elections" (See Table 4). The scale provides four options for respondents to show their preferences, which range from the strongest negative preference (e.g., I will certainly not do this) to the strongest positive preference (e.g., I will certainly do this) and coded from "1" to "4" to measure the student expectation of future civic engagement in the community. The second subscale is the expected future Unconventional Participation (UNCONVEN). The subscale comprises 4 Likert-type items, which share a common stem "*As a young person could take during the next few years: What do you expect that you will do?"* An example is as follows: "Collect money for a social cause" (Table 4). The third subscale is the expected future Protest Activities (PROTE). The subscale comprises 3 Likert-type items, which share a common stem "*As a young person could take during the next few years: What do you expect that you will do?"* An example is "Spray-paint protest slogans on walls" (See Table 4). The second

and third subscales also provide four options for respondents to show their preferences; the options range from the most negative preference (e.g., I will certainly not do this) to the most positive preference (e.g., I will certainly do this) and coded from "1" to "4" to measure the student expectation of future civic engagement in the community.

The PAS has been widely used in previous studies (e.g., Hahn, 2010; Husfeldt, Barber & Torney-Purta, 2005; Kennedy, 2007; Persson, 2011) to measure students' perception of future civic engagement among adolescents. *ICCS 2009 International Report* (ICCS 2009) also retained the same items to assess the preparedness of adolescents for future active citizenship. Appendix A shows the PAS items used in the report. Cronbach's alpha for the PAS (with 7 items) was reported in the IEA CivEd Study (1999), and the coefficients in all countries or cities that participated ranged from 0.65 to 0.82. The Cronbach's alpha for the Hong Kong sample was 0.82 (Schulz & Sibberns, 2004: 119).

3.5.2.2 School factors

According to the political socialization model, three school factors contribute to the civic engagement of students, namely, intended civic curriculum, open classroom climate, and students' school participation opportunities (Torney-Purta et al., 2001). The operationalization of each construct is explained in section 3.5.2.2, parts a to c.

a. **Intended civic curriculum**

The objective of the present study is to measure what students have learned in their civic classes. The topics selected are listed in Table 5. All topics can be found in the existing curriculum of secondary school, including the *PSHE Key Learning Area Curriculum Guide (Primary 1 – Secondary 3)* (CDC, 2002c), *Four Key Tasks—Achieving Learning to Learn: 3A Moral and Civic Education* (CDC, 2002b), *Moral and Civic Education Curriculum Framework Revised Version* (CDC, 2008), the proposed *Moral and National Education Curriculum* (CDC, 2011), and the *Liberal Studies Curriculum Guide* (CDC, 2007). A comparison analysis was conducted in order to justify the items of the scale used in the present study that were largely covered by the common topics offered by the official civic education curriculum (see Appendix B). The operationalization of the intended civic curriculum topics was defined as civic topics the respondents have been exposed to in their civic classes. The civic topics are listed in Table 5.

Table 5. *Operationalization of the construct – intended civic curriculum*

Civic Curriculum Scale starts with the question "What have you learnt in school?"

Subscale of civic topics related to people (PEOPLE):

In school I have learnt to …

* understand people who have different ideas.

* co-operate [work together] in groups with other students.

Subscale of civic topics related to community or country (COMMUNITY):

In school I have learnt (to) …

* contribute to solving problems in the community [society].

* be a patriotic and loyal [committed] citizen of my country.

* protect the environment.

* concerned about what happens in other countries.

* the importance of voting in national and local elections.

Students' attitudes toward the civic topics they have learnt were measured by the Civic Curriculum

Scale (CCS), which was made up of 7 items arranged into two subscales, namely, a subscale of

civic topics related to people (PEOPLE) and that related to community or country (COMMUNITY).

The items shared a common stem "In school I have learnt to…" The two subscales provide four

options for respondents to show their preferences; the options range from "1" (strongly disagree) to

"4" (strongly agree) to measure the attitude of a student toward civic topics they have learnt in class.

Previous studies (e.g., Wilkenfeld, 2009) used the measure to assess civic topics implemented in

school-based civic curriculum in the United States. The Cronbach's alpha of the scale in that study

was 0.81 (Wilkenfeld, 2009).

b. Open classroom climate

Classroom climate refers to an atmosphere or ambience that facilitates or hinders the learning of an

individual (Adelman & Taylor, 2005). Classroom climate is a social psychological construct. An open classroom climate is operationalized as the students' attitudes toward respecting opinions expressed in class. The Open Classroom Climate Scale (OCCS) was designed to measure the extent to which students are free and open to conduct controversial discussion, respect divergent opinions, cultivate independent thinking, and how they perceive their teachers to be open to respect students' opinions and encourage students to conduct discussions. The OCCS consists of 7 Likert-type items. The scale provides four options for respondents to show their preference; the options range from the least preference (never) to the highest preference (often) that are coded from "1" to "4." The items are listed in Table 6.

Table 6. *Operationalization of the construct – open classroom climate*

The items related to what happened in history, civic education, or social studies [other civic-related subjects] classes.

* Students feel free to disagree openly with their teachers about political and social issues during class

* Students feel free to express opinions in class even when their opinions are different from most of the other students

* Students are encouraged to make up their own minds about issues

* Students bring up current political events for discussion in class

* Teachers respect our opinions and encourage us to express them during class

* Teachers encourage us to discuss political or social issues about which people have different opinions

* Teachers present several sides of [positions on] an issue when explaining it in class

---

The items in the OCCS were reused in ICCS 2009 (see Appendix D). Furthermore, the OCCS has been widely used in previous studies (e.g., Avery, et al., 2012; Hahn, 2010; Lee, 1999; Richardson, 2003; Torney-Purta & Barber, 2005; Wilkenfeld, 2009). Cronbach's alpha for OCCS (with 6 items) in the IEA CivEd Study (1999) ranged from 0.68 to 0.82 among all participated countries and cities. Cronbach's alpha for the Hong Kong samples was 0.79 (Schulz & Sibbern, 2004: 122).

c. Student participation in school activities

The IEA CivEd Study (Torney-Purta et al., 2001) used Bandura's social cognitive theory (2002) to provide a framework to explore the perception of an individual's self-efficacy in relation to their current engagement in school activities. Therefore, the operationalization of student participation in school activities is expressed by students' perception of their self-efficacy with regard to the effectiveness of school participation to change school policy. The operationalization of student participation is a measure of students' perception of their participation in school activities through their confidence in school participation (Schulz & Sibberns, 2004: 114). The confidence to participate is measured by the School Participation Scale (SPS), which has 7 items arranged in two subscales, namely, the general confidence of students in school participation (CONFS) and the self-confidence of students in school participation (SCON) subscale. The SPS comprised Likert-type items ranging from the strongest negative preference (strongly disagree) to the strongest positive preference (strongly agree); options "1" to "4." The items of the two subscales are listed in

Table 7.

Table 7. *Operationalization of the construct – student perception of the effectiveness of school participation*

Subscale related to general confidence of students in school participation:

* Electing student representatives to suggest changes in how the school is run [how to solve school problems] makes schools better.

* Lots of positive changes happen in this school when students work together.

* Organizing groups of students to state their opinions could help solve problems in this school.

* Students acting together [in groups] can have more influence on what happens in this school than students acting alone [by themselves].

* If members of my class felt they were unfairly treated, I would be willing to go with them to speak to the teacher.

Subscale related to self-confidence of students in school participation:

* I am interested in participating in discussions about school problems.

* When school problems are being discussed, I usually have something to say.

Four items in the SPS have been reused in ICCS 2009 (see Appendix E). Furthermore, the SPS has been widely used in previous studies (e.g., Lee, 1999, 2004; Lee et al., 2009; Richardson, 2003; Wilkenfeld, 2009). Cronbach's alpha for the SPS (with 7 items) in the IEA CivEd Study (1999) ranged from 0.56 to 0.80 among all participated countries or cities. The Cronbach's alpha for the Hong Kong samples was 0.75 (Schulz & Sibbern, 2004: 115).

3.6 Variables

In summary, the present study used the following four scales: SPS, OCCS, CCS, and PAS (see Appendix C for the full version of the four scales).

The OCCS (with 7 Likert-type items) measures the extent to which students perceive classroom climate to be democratic or not. The SPS (with 7 Likert-type items) measures student confidence in school participation. The CCS (with 7 Likert-type items) measures the student perceptions of the learned civic topics. Finally, the PAS (with 12 Likert-type items) measures student expectations of their future civic engagement in the community. Altogether, the study has the following six variables: Conventional Participation (CONVEN), Unconventional Participation (UNCONVEN), Protest Activities (PROTE), Civic Curriculum (CURRI), Open Classroom Climate (OCCLIM) and Students' School participation (SCHPART). These variables are listed in Table 8.

The internal consistencies (Cronbach's alpha) of the four measures used in this study are presented in Table 8. Alpha values that are greater than 0.9 indicate high internal consistency; values between 0.7 and 0.9 are reasonably good, and any value below 0.7 is considered having poor internal consistency (Cronbach, 1951). For this study, the values of Cronbach's alpha for all the scales are all above 0.7, suggesting that all the scales have a reasonably high internal consistency.

Table 8. *Summary of Cronbach's alpha for the scales in the study*

Variables	Meaning	No. of Items	Reliability of the scales (α) 1999 cohort	Reliability of the scales (α) 2009 cohort
Political Action Scale (PAS)		Total: 12 items	0.854	0.776
Variable one -- **CONVEN** Qs. 1 to 5	Joining conventional political participation as a form of civic engagement	5 items -- Examples When you are an adult, what do you expect that you will do? … vote in national elections … join a political party	0.786	0.713
Variable two -- **UNCONVEN** Qs. 6 to 9	Joining social movement or community service as a form of civic engagement	4 items -- Examples As a young person could take during the next few years: What do you expect that you will do? … volunteer time to help people in the community … collect money for social cause	0.735	0.704
Variable three -- **PROTE** Qs. 10 to 12	Joining protest activities as a form of civic engagement	3 items -- Examples … spray-paint protest slogans on walls … block traffic as a form of protest	0.866	0.866
Civic Curriculum Scale (CCS) Variable four – **CURRI**	Civic topics covered in existing civics curriculum	7 items -- Examples What have you learnt in school? In school I have learnt… ... to understand people who have different ideas … the importance of voting in national and local elections	0.783	0.763
Open Classroom Climate Scale (OCCS) Variable five – **OCCLIM**	Students' perception of an open and democratic classroom atmosphere to have controversial discussion, voice out opinions or independent thinking	7 items -- Examples … Feel free to disagree openly with their teachers about political / social issues … Teachers respect our opinions …	0.812	0.818
School Participation Scale (SPS) Variable six – **SCHPART**	Student's perception of their confidence to participate in school activities to change school policy	7 items -- Examples … Lots of positive changes happen in this school when students work together. … I am interested in participating in discussions about school problems	0.754	0.743

3.6.1 Gender

Gender is a dichotomous indicator of whether a student is male or female. For the 1999 cohort, the samples were with 2,544 boys and 2,452 girls, and for the 2009 cohort, the samples were with 258 boys and 342 girls. The gender variable is used to address RQ1.

3.7 Establishing the validity of scales using Rasch analysis

Numerous studies related to civic education used validation techniques from modern test theory (e.g. Rasch measurement). These techniques are commonly used in the IEA CivEd Study (Torney-Purta, et al., 2001). The advantages of Rasch measurement are well known (Bond & Fox, 2007, Cavanagh & Waugh, 2011, Ganglmair & Lawson, 2003, Magno, 2009, Yan & Mok, 2012). Bond and Fox (2001) described the Rasch model as the probabilistic relation between any item difficulty and a person's ability. The model belongs to the family of logit models. As the IEA CivEd Study (1999) used a four-point Likert scale to measure the attitude of respondents to future civic engagement. Following the advice of Bond and Fox (2007: 110) and the practice of Kennedy and Chow (2009), the Rasch rating scale model (RSM) was used to analyse the secondary data used in the present study. Using the Rasch model has various advantages. Linacre (2006) suggested that the Rasch model can provide an objective and linear measurement scale to transform non-interval raw data into logit scale for measurement. Cavanagh and Waugh (2011) also argued that Rasch measurement

has advantages over the measurement techniques from classical test theory in educational or social science measurement studies. For instance, Rasch measurement requires that the data must fit the measurement model to produce scale-free person measures and sample-free item difficulties. The model can also estimate person measures and item difficulties on the same logit scale (Bond & Fox, 2007). To conclude, the use of Rasch measurement is justified and the validation procedures based on Rasch analysis was reported in section 4.2.1 of Chapter 4.

In Rasch measurement, several statistics are used. Item fit statistics, the EAP reliability that indicate the person reliability of the scales and item separation reliability were obtained using the ConQuest program (Wu, Adams, Wilson and Haldane, 2007). Apart from this, person reliability, person separation index, item reliability, item separation index were often reported in literature related to scale validation. The four indices were obtained from Rasch analysis using Winstep program (Linacre, 2006). They were also reported in the present study for reference. For reliability, the indices are analogous to Cronbach's alpha ranging from '0' to '1'. If the value is near '1', the scale has high internal consistency. Person separation index is the estimate of the separation of persons on the measured variable, whereas the item separation index is an estimate of the spread of items on the measured variable (Bond & Fox, 2007: 40–41).

Four goodness-of-fit statistics (i.e., infit t-value, outfit t-value, infit mean square and outfit mean square indices) indicate how well the data fit the Rasch model (Huang & Page, 2002; Wright &

Masters, 1982). The infit and outfit statistics are reported as mean squares in the form of chi-square statistics divided by their degree of freedom. Both outfit and infit mean square errors (MNSQ) are measures of the extent to which the data match the Rasch model. If the mean value of the squared residuals is large, a large misfit exists between data and the Rasch model (Yan & Mok, 2012). The infit MNSQ is the most preferred indicator, because it is less sensitive to sample size and more sensitive to the unexpected behaviors affecting responses to items (Chen, Liu & Cheng, 2012; Linacre, 2006). MNSQ values within the range of 1.40 to 0.60 are normally used as criteria to determine whether or not the data fit the Rasch rating scale model (Wright & Linacre, 1994). Some studies (e.g., Anshel et al., 2009; Linacre, 2002) also indicate that MNSQ values within the range from 0.5 to 1.5 are productive measurements. The present study follows the above conventional rule.

Chen, Liu, and Cheng (2012) and Bond and Fox (2007) also reported the relations between two key variables, item difficulty estimates and person ability estimates through the item-person map. Each dimension in the item-person map has a central line which is marked out in logits in the scale. The respondent location and item location are plotted on the left- and right-hand side of the line respectively. The present study also report the item-person map of each scale.

3.8 Data analysis to address research questions

3.8.1 Data analysis to address RQ 1

Have the attitudes of Hong Kong students toward future civic engagement changed

between the 1999 and 2009 cohorts?

To address to RQ 1, the descriptive statistics of the 1999 and 2009 cohorts by the PAS are shown in

Appendix N for reference. As the respondents' attitudes of the three dimensions of future civic

engagement are, indeed, three latent variables that cannot be observed explicitly, the Classical

Testing Theory method, e.g. using t-test / ANOVA, is inappropriate because it may ignore the

measurement errors and treats the measures as 'true' value (Adams, Wilson & Wu, 1997). A latent

regression approach is more appropriate as it takes the measurement errors into account and directly

assesses the mean difference between groups and gives more accurate inferences about group

difference of latent traits (Adams, Wilson, & Wu, 1997). Therefore, the Rasch multidimensional

latent regression analysis using ConQuest (Wu, Adams, Wilson & Haldane, 2007) was used to

assess any cohort differences (including gender differences) in students' attitudes towards the three

dimensions of future civic engagement simultaneously. The report is presented in section 4.2.2 of

Chapter 4.

In conducting Rasch latent regression analysis, Differential Item Functioning (DIF) analysis (Wang

et al., 2006) was conducted to assess the model-data fit of the two cohorts. Second, the responses of

the students were assessed using the three latent outcomes (CONVEN, UNCONVEN, and PROTE) of the PAS and regressed onto the cohort variable (i.e., '0' for 1999 cohort and '1' for the 2009 cohort). The formulae (Equation 1 to Equation 3) for assessing the cohort difference among the three dimensions of future civic engagement are listed as follows:

Equations

Cohort difference among the three dimensions of future civic engagement

$$CONVEN = \beta_0 + \beta_1 * cohort + \varepsilon \tag{1}$$

$$UNCONVEN = \beta_0 + \beta_1 * cohort + \varepsilon \tag{2}$$

$$PROTE = \beta_0 + \beta_1 * cohort + \varepsilon \tag{3}$$

The same procedure was applied to assess gender difference. First, DIF analysis was conducted to assess the model-data fit with regards gender of the two cohorts of students. Then, the multidimensional Rasch latent regression analysis was conducted to see if the 1999 and 2009 cohorts have any gender differences. There were nine formulae (Equation 4 to Equation 12) for assessing gender differences among the three dimensions of future civic engagement of both cohorts, the 1999 cohort and the 2009 cohorts respectively. The formulae are listed as follows:

Equations

Gender differences among the three dimensions of future civic engagement of both cohorts

$$CONVEN = \beta_0 + \beta_1 * gender + \varepsilon \tag{4}$$

$$UNCONVEN = \beta_0 + \beta_1 * gender + \varepsilon \tag{5}$$

$$PROTE = \beta_0 + \beta_1 * gender + \varepsilon \tag{6}$$

Gender differences of the 1999 cohort among the three dimensions of future civic engagement

$$99\_CONVEN = \beta_0 + \beta_1 * gender + \varepsilon \qquad (7)$$

$$99\_UNCONVEN = \beta_0 + \beta_1 * gender + \varepsilon \qquad (8)$$

$$99\_PROTE = \beta_0 + \beta_1 * gender + \varepsilon \qquad (9)$$

Gender differences of the 2009 cohort among the three dimensions of future civic engagement

$$09\_CONVEN = \beta_0 + \beta_1 * gender + \varepsilon \qquad (10)$$

$$09\_UNCONVEN = \beta_0 + \beta_1 * gender + \varepsilon \qquad (11)$$

$$09\_PROTE = \beta_0 + \beta_1 * gender + \varepsilon \qquad (12)$$

3.8.2 Data analysis to address RQ 2

What is the role of schools in the change in students' attitudes toward future civic engagement from 1999 to 2009?

The role of schools was assessed using the political socialization model (Torney-Purta et al., 2001). Three school variables [intended civics curriculum (CURRI), open classroom climate (OCCLIM), and student perception of school participation (SCHPART)] were evaluated to explore their roles in predicting the different dimensions of future civic engagement as identified in RQ 1. Through multilevel modeling techniques, the contextual effects of school on the change in students' civic engagement using nested data of the 1999 and 2009 cohorts respectively, the portion of variances accounted at the school and student levels could be detected. Multilevel modeling analysis was used

for two reasons. The first reason was based on the nested nature of the hierarchical data structure in the sample. The second reason was the need to identify the contributions of schools to the three dimensions of the construct of expected future civic engagement (with the program of MLwiN, Rasbash et al., 2009) at both the school and student levels.

A two-level random slope model was used to fit the nested data. The model expressed the value of different dimensions of the expected future civic engagement for each student in each school. If the PAS results reflect a stronger school influence, then a relatively large portion of the variance in the scale rest at the school level. This result implies that the scale is an effective means by which to assess the school difference on students' expected future civic engagement. A small intra-class correlation will indicate the extent to which the scale reflects students' experience within their school only. Mathematically, intra-class correlation coefficient ranges from '0' (or 0%) to '1' (or 100%). If a larger difference between schools exists, a larger intra-class correlation coefficient would be near '1'. Nevertheless, a small intra-class correlation coefficient near '0' would indicate the scale reflected the within-school influence on its students.

The analysis involved several steps. First, the plausible values of the six variables (i.e. CONVEN, UNCONVEN, PROTE, CURRI, OCCLIM, and SCHPART) were utilized for the analysis using the ConQuest software (Wu, Adams, Wilson & Haldane, 2007). The construction of plausible values is based on IRT. Plausible values are multiple imputations of the unobservable latent achievement for

each student (Wu, 2005: 114), and are often used in large-scale assessment programs, such as

TIMSS and PISA. Typically, a set of plausible values randomly drawn from the posterior student

distribution is available (Wu, 2005). Plausible values estimate the population characteristics, and are

more accurate and objective than using point estimates of abilities adopted by the traditional

approaches (e.g., Marginal Maximum Likelihood and Expected A-Posteriori Estimate). The

traditional approaches are point estimates that are optimal for individual students. Therefore, these

approaches result in biased estimates (Von Davier, Gonzalez, & Mislevy, 2009). From the

simulation studies conducted by Wu (2005), which contained student responses from a 20-item test

with 2,000 students, the results were computed through the analysis of measures such as Weighted

Maximum Likelihood Estimates, Maximum Likelihood Estimate, Expected A-Posteriori Estimate,

and a set of five plausible values for each student (Wu, 2005). The plausible values generated more

accurate results to recover population parameters than the other estimates. The procedure is to make

use of the five sets of plausible value scores and to do the analysis five times. Then, the average of

the results from the five analyses is taken (Little & Rubin, 1987; Wu, 2005). The program that was

used to compute the plausible values of the 1999 and 2009 cohorts is shown in Appendix L. The

descriptive statistics of the plausible values of the three dimensions of civic engagement and the

three school variables of the 1999 and 2009 cohorts are presented in Appendix I, and the correlation

matrix of the plausible value scores of the three dimensions of civic engagement and the three

school predictor variables of both cohorts is presented in Appendix J. The results indicated that the

1999 cohort had higher correlation coefficients among the three school factors than that in the 2009

cohort. Furthermore, the inter-correlations between predictor variables were from moderate to low in both cohorts, suggesting that the three school factors were independent predictors.

Second, subsequent analysis was conducted to address RQ 2 and it is reported in section 4.2.3 of Chapter 4. The analysis was divided into two parts. The first part involved identifying whether the school had a role in students' civic engagement. The analysis was conducted through a report on intra-class correlation coefficient from the multi-level modeling analysis of the null models. The second part explained the extent to which the three school predictors contributed to student expectation on future civic engagement at both the school and student levels (see Figure 2 on p.95). The random slope model was used because the effect of school predictors could differ from school to school. Four models were created to predict each dimension of the future civic engagement, namely, the two-level constant slope null model of 1999 cohort (Model 1), two-level random slope model with effects of three school predictors random at school level of 1999 cohort (Model 2), two-level constant slope null model of 2009 cohort (Model 3), and two-level random slope model with the effects of three school predictors random at the school level of the 2009 cohort (Model 4).

The procedure to investigate the role played by school in predicting students' future civic engagement was explained as follows. Model 1 and Model 2 were from 1999 cohort whereas Model 1 was a null model but Model 2 was with three school predictors: civic curriculum, classroom climate and students' perception of school participation added to the equation. Comparison was

made between the null model (Model 1) and Model 2, deviance shrinkage might occur. If the decreased value was significant, it showed that Model 2 was a better fitting model to explain the role of school variables to predict student's future civic engagement. Similarly, Model 3 and Model 4 were from 2009 cohort. Model 3 was a null model and Model 4 was with three school predictors added to the equation. It was through comparing Model 3 with Model 4 to see any significant deviance shrinkage and to determine whether the school predictors played a significant role in predicting students' future civic engagement.

Overall, 12 formulae to study the effects of school factors to predict each dimension of student expectation of future civic engagement in the 1999 and 2009 cohorts were used and expressed as follows:

Equations

For the dimension of future Conventional Participation (CONVEN):

Model 1 (null model of 99_CONVEN):

$$99\_CONVEN_{ij} = \beta_{0j} + e_{ij} \tag{1}$$

$$\beta_{0j} = \beta_0 + \mu_{0j}$$

$$\mu_{0j} \sim N(0, \sigma^2_{\mu 0})$$

$$e_{ij} \sim N(0, \sigma^2_e)$$

Model 2 (full model of 99_CONVEN):

$$99\_CONVEN_{ij} = \beta_{0j} + \beta_{1j}CURRI_{ij} + \beta_{2j}OCCLIM_{ij} + \beta_{3j}SCHPART_{ij} + e_{ij} \tag{2}$$

Model 3 (null model of 09_CONVEN):

$$09\_CONVEN_{ij} = \beta_{0j} + e_{ij} \quad\quad\quad (3)$$

$$\beta_{0j} = \beta_0 + \mu_{0j}$$

$$\mu_{0j} \sim N(0, \sigma^2_{\mu 0})$$

$$e_{ij} \sim N(0, \sigma^2_e)$$

Model 4 (full model of 09_CONVEN):

$$09\_CONVEN_{ij} = \beta_{0j} + \beta_{1j}CURRI_{ij} + \beta_{2j}OCCLIM_{ij} + \beta_{3j}SCHPART_{ij} + e_{ij} \quad\quad\quad (4)$$

For the dimension of future Unconventional Participation (UNCONVEN):

Model 1 (null model of 99_UNCONVEN):

$$99\_UNCONVEN_{ij} = \beta_{0j} + e_{ij} \quad\quad\quad (5)$$

$$\beta_{0j} = \beta_0 + \mu_{0j}$$

$$\mu_{0j} \sim N(0, \sigma^2_{\mu 0})$$

$$e_{ij} \sim N(0, \sigma^2_e)$$

Model 2 (full model of 99_UNCONVEN):

$$99\_UNCONVEN_{ij} = \beta_{0j} + \beta_{1j}CURRI_{ij} + \beta_{2j}OCCLIM_{ij} + \beta_{3j}SCHPART_{ij} + e_{ij} \quad\quad\quad (6)$$

Model 3 (null model of 09_UNCONVEN):

$$09\_UNCONVEN_{ij} = \beta_{0j} + e_{ij} \quad\quad\quad (7)$$

$$\beta_{0j} = \beta_0 + \mu_{0j}$$

$$\mu_{0j} \sim N(0, \sigma^2_{\mu 0})$$

$$e_{ij} \sim N(0, \sigma^2_e)$$

Model 4 (full model of 09_UNCONVEN):

$$09\_UNCONVEN_{ij} = \beta_{0j} + \beta_{1j}CURRI_{ij} + \beta_{2j}OCCLIM_{ij} + \beta_{3j}SCHPART_{ij} + e_{ij} \quad\quad (8)$$

For the dimension of future Protest Activities (PROTE):

Model 1 (null model of 99_PROTE):

$$99\_PROTE_{ij} = \beta_{0j} + e_{ij} \quad\quad (9)$$

$$\beta_{0j} = \beta_0 + \mu_{0j}$$

$$\mu_{0j} \sim N(0, \sigma^2_{\mu0})$$

$$e_{ij} \sim N(0, \sigma^2_e)$$

Model 2 (full model of 99_PROTE):

$$99\_PROTE_{ij} = \beta_{0j} + \beta_{1j}CURRI_{ij} + \beta_{2j}OCCLIM_{ij} + \beta_{3j}SCHPART_{ij} + e_{ij} \quad\quad (10)$$

Model 3 (null model of 09_PROTE):

$$09\_PROTE_{ij} = \beta_{0j} + e_{ij} \quad\quad (11)$$

$$\beta_{0j} = \beta_0 + \mu_{0j}$$

$$\mu_{0j} \sim N(0, \sigma^2_{\mu0})$$

$$e_{ij} \sim N(0, \sigma^2_e)$$

Model 4 (full model of 09_PROTE):

$$09\_PROTE_{ij} = \beta_{0j} + \beta_{1j}CURRI_{ij} + \beta_{2j}OCCLIM_{ij} + \beta_{3j}SCHPART_{ij} + e_{ij} \quad\quad (12)$$

3.8.3 Focus group interviews

Aside from using quantitative approach to address RQ 2, a qualitative approach was also used. The purpose of the qualitative research was to explore the civic engagement survey responses in greater depth from the same age but different sample of students. There were bourgeoning civic education studies using qualitative research method (e.g. Fairbrother, 2003, Ho, Alviar-Martin, Sim & Yap, 2011; Lee, 1999, 2004, 2005, 2008; Leung, 2006; Leung & Ng, 2004; Leung & Yuen, 2009a, 2009b; Sim, 2012).

Focus group interview method was used in the present study as such research technique has its advantages. It is a structured and focused discussion on an interested topic with a small group of participants, usually run by a facilitator or by a moderating team (Barrows, 2000; Masadeh, 2012; Prince & Davis, 2001). The term 'focus' is used as it refers to any participated group has an in-depth discussion on a designated interested topic rather than any loose discussion (Boddy, 2005). This technique only involves a small group of discussants, usually 4 to 6 persons, as it assumes every participant to voice out his / her opinions. Barrows (2000), Morgan and Krueger (1993) and Masadeh (2012) suggest that such qualitative research technique enables the researchers to "drill" more deeply and to obtain in-depth insights, opinions and information to the designated research topic. However, such research technique has its limitations. It is relatively time-consuming. It needs more resources and man power than the surveys in collecting primary data. Second, owing to the

small samples, the findings cannot be generalized to the whole population (Barrows, 2000; Leung, 2006). Therefore, it will work together with other research methods, e.g. survey or secondary data analysis, to enable the findings to be valid and generalizable. In the present study, the primary data from focus group interview is for supplementary purpose to further elaborate the findings from secondary data analysis.

In this study, the four focus groups explored the role of schools in contributing to the students' political socialization in terms of key contextual factors, such as student perception of the value and effectiveness of school participation, open classroom climate, and intended civics curriculum. The findings of the focus group interviews are presented in section 4.2.4 of Chapter 4.

3.8.3.1 Design of the focus group interviews

Fifteen open-ended interview questions were asked. The interview questions were divided into four sections. In section one, Questions 1 to 4 were related to students' experiences in the current civic engagement (e.g., "What kind of civic activities offered by the community would you like to participate in?") and their values toward joining civic activities in the school and the community (e.g., "Can you prioritize the importance of the civic activities you mentioned previously?").

Questions in sections two to four were related to students' perspectives or attitudes toward

participation in civic activities—be they in class, in school, or in the community. The interview questions were developed to guide the students to express their understanding of the issues related to school experience and their civic development. Questions 5 to 7 explored student's opinions on their confidence in school participation and their influences on the government in the future [e.g., "Do you think (as a person or as a group) you have the confidence or ability to change things at school?"]. Questions 8 to 12 explored student views on topics for classroom discussion, open classroom climate, and pedagogy (e.g., "Which current issues, political or social, would you prefer to discuss more and why?"). Finally, Questions 13 to 15 were related to civic education curriculum and topics as well as civic skills the students learned (e.g., "What sort of special skills have you learned in civic class?" "Name the three most common skills you have learned.") The full version of the interview guide is shown in Appendix F.

3.8.3.2 Procedures of conducting focus group interviews

Invitation letters to principals and parents' consent letters were sent to the target schools before the interviews (see Appendix G). Four focus group interviews were organized. Data were collected in mid-2011 (before the end of the school term in the academic year 2010 – 2011). Qualitative data were collected by semi-structured focus group interviews with the students. The interviews were conducted in Cantonese, the native language of the participants. Each interview lasted for 45 minutes to 60 minutes, and it was tape recorded.

3.8.3.3. Analysis of the qualitative findings from focus group interviews

Each interview script was transcribed into English. The constant comparative method was adopted to analyze the data. Each interview transcript was compared to another transcript, and one section to another section to determine emerging patterns. Themes and categories were developed based on patterns across student responses. Transcripts were reviewed a second time using these categories. Simple frequency tallies were used to process the selected categories. Examples from the transcripts were used and then analyzed to understand student interpretations of the interview questions.

3.8.4 Integration of quantitative and qualitative analyses

The last step of the data analysis integrated the findings from the secondary data analysis of the large representative data set of Hong Kong samples with the qualitative data from the focus group interviews. The objective was to broaden the interpretation of the statistical analyses results to address RQ 2 (i.e. to explore the role of schools that contributed to the changes in students' attitudes towards future civic engagement). The results were presented in Chapter 4. Using this integrated approach has some advantages. First, using the interview data to help identify the limitations of the findings from the secondary analysis was worthwhile. Second, the data from the interviews provided a context from which implications and generalizations were made. Third, the combination of quantitative methods and qualitative descriptive data provided a more detailed analysis of the

role of schools through the school variables on students' expected future civic engagement within their respective communities.

3.9 Ethical issues

Approval for this research was granted by the Human Research Ethics Committee of the Hong Kong Institute of Education. The secondary data set was obtained from the IEA CivEd Study (1999) and the 2009 CivEd Study (Kennedy & Chow, 2009) of the HKIEd Faculty of Education and Human Development. The four schools and interviewees of the four focus group interviews participated in the current study were on a voluntary basis. Invitation letters were sent to the four participating schools. The parents of the interviewees and the interviewees themselves were informed of the purpose of the study (see Appendix G). Potential participants were informed that they would not be penalized if they withdrew from the interview at any time. The interviewees were also assured of the confidentiality of their responses. All the names used in this study were pseudonyms. Data were collected for research purposes, and to be reported in the thesis or all related publications thereafter.

RESULTS

4.1 Purpose

The purpose of this chapter is to report the results of the study. The chapter is divided into four

sections. Section 4.2.1 examines the psychometric properties of the scales used in the present study.

Section 4.2.2 addresses RQ 1 by using multidimensional Rasch latent regression analysis to assess

the changes in students' attitudes toward future civic engagement over the period from 1999 to 2009.

Section 4.2.3 addresses RQ 2 by using multi-level modeling analysis to assess the influence of

schools over the period from 1999 to 2009. Finally, Section 4.2.4 reports the results of focus group

interviews that were designed to provide complementary evidence in relation to RQ 2.

4.2 Results

4.2.1 The validation of the scales for the Hong Kong samples

Chapter 3 introduced the scales used in the IEA CivEd Study (Torney-Purta et al., 2001). The

international scales were validated using a calibrated international sample (n = 500 for each

participating country) and only minimal psychometric information was provided in relation to each participating country. In this study, only Hong Kong data was used from the 1999 IEA CivEd Study. The scales need to be validated using that data. Furthermore, the scales used in the 2009 cohort had no validating reports; hence, the scales also need to be validated. The justification of the use of Rasch measurement and the validation procedures have already been reported in Chapter 3. The results of scale validation of the four adopted measures are reported in subsequent sections.

4.2.1.1 Political Action Scale (PAS)

According to the IEA test designers, the PAS included 12 items to assess students' expected future political participation. There were three theoretical dimensions: Conventional Participation (CONVEN), Unconventional Participation (UNCONVEN) and Protest Activity (PROTE) (Schulz & Sibberns, 2004: 117). In the present study, the ConQuest program (Wu, Adams, Wilson & Haldane, 2007) was used to test the fit of the data from the 1999 and 2009 cohorts to the multidimensional Rasch models. Table 9 reports the item fit indices of the 1999 and 2009 cohorts, respectively. Table 11 reports the summary of item estimates of the PAS of both cohorts. The report on EAP reliability and item separation reliability were extracted from ConQuest program (Wu, Adams, Wilson & Haldane, 2007) whereas the person reliability, person separation index, item reliability and item separation index were extracted from Winstep program (Linacre, 2006).

Table 9. *Item overall difficulty, standard error (SE), and infit and outfit statistics of the PAS of the 1999 and 2009 cohorts*

Items	1999	Cohort			2009	Cohort		
	Measure	SE	Infit MNSQ	Outfit MNSQ	Measure	SE	Infit MNSQ	Outfit MNSQ
				CONVEN	SCALE			
m1	-1.406	0.016	1.49	1.44	-2.191	0.049	1.18	1.16
m2	-0.604	0.016	1.09	1.02	-1.264	0.047	1.16	1.14
m3	0.971	0.016	0.98	0.90	1.430	0.049	0.83	0.86
m4	0.255	0.015	1.03	0.96	0.625	0.047	0.94	0.99
m5	0.783	0.031	1.03	0.94	1.401	0.096	0.97	0.98
				UNCONVEN	SCALE			
m6	-0.433	0.015	0.99	0.93	-0.861	0.046	1.14	1.12
m7	-0.450	0.015	0.91	0.86	-0.893	0.046	0.96	0.93
m8	0.213	0.015	0.91	0.85	0.463	0.045	1.09	1.09
m9	0.670	0.026	0.99	0.93	1.291	0.079	1.18	1.16
				PROTE	SCALE			
m10	-0.110	0.021	1.00	0.96	-0.108	0.080	0.81	1.09
m11	0.012	0.021	0.85	0.60	0.101	0.082	0.71	0.54
m12	0.098	0.030	0.94	0.58	0.007	0.114	0.89	0.54

Table 10. *Correlation matrix among the three PAS dimensions of the 1999 and 2009 cohorts*

1999 cohort

Dimension	Dimension 1 (CONVEN)	Dimension 2 (UNCONVEN)
Dimension 1 (CONVEN)		
Dimension 2 (UNCONVEN)	0.83**	
Dimension 3 (PROTE)	0.56**	0.50**

2009 cohort

Dimension	Dimension 1 (CONVEN)	Dimension 2 (UNCONVEN)
Dimension 1 (CONVEN)		
Dimension 2 (UNCONVEN)	0.64**	
Dimension 3 (PROTE)	0.18**	0.08*

Note: The correlation is statistically significant at ***$p < 0.001$, **$p < 0.01$, *$p < 0.05$.

The correlation matrix for the three-dimension latent variables ranged from moderate to moderately high for the 1999 cohort (n = 4997). The analysis indicated that the correlation between these latent dimensions was not sufficiently high to justify the use of a unidimensional model (Wu, Adams, Wilson & Haldane, 2007). For the 2009 cohort (n = 602), the correlation between the three latent dimensions ranged from moderate to low, also indicating that a unidimensional model was not acceptable (Wu, Adams, Wilson & Haldane, 2007). Other evidence (e.g. Au, 2013) also indicated that the PAS was a three-factor structure scale. The results using Confirmatory Factor Analysis (CFA) of the PAS of the 1999 and 2009 cohorts are reported in Appendix P.

Table 11. *Summary of the item estimates of the PAS of the 1999 and 2009 cohorts*

	1999 cohort	2009 cohort
EAP reliability		
Dimension 1	0.82	0.77
Dimension 2	0.83	0.77
Dimension 3	0.73	0.53
Item separation reliability	0.99	0.99
Person reliability	0.81	0.72
Person separation index	1.78	1.62
Item reliability	1.00	1.00
Item separation index	44.13	24.02
χ^2 test of parameter equality (df)	$\chi^2 = 15313.23$, df = 9, p < 0.001	$\chi^2 = 4570.28$, df = 9, p < 0.001
Mean (SD) of item estimates	Mean of Infit MNSQ = 1.01 (SD = 0.21)	Mean of Infit MNSQ = 0.99 (SD = 0.15)
	Mean of Outfit MNSQ = 0.92 (SD = 0.23)	Mean of Outfit MNSQ = 0.97 (SD = 0.69)

As shown in Table 9, all the infit MNSQ values are within the conventional range from 1.50 to 0.50 (Anshel et al., 2009; Linacre, 2002). The values of item reliability of both cohorts were high, indicating the scale had high internal consistency (see Table 11). The values of person reliability were also higher in the 1999 cohort than that of the 2009 cohort. As dimension 3 (protest activity) had relatively lower EAP reliability, it was suggested to have larger sample size to increase the reliability of the subscale (protest activity) in future study. On the whole, the PAS was a reliable measure for both cohorts.

The variable map for the three latent dimensions and the item difficulties of the 1999 and 2009 cohorts are presented in Figures 3 and 4. From Figure 3, it is shown that the spacing of the items of the 1999 samples was concentrated within a narrow range from - 2 logits to + 1 logit. The measures of the persons were widely spread out from - 9 logits to + 2 logits. From the item map of the 2009 samples, the spacing of the items was spread more widely than that of the 1999 samples, ranging from - 2 logits to +2 logits. The measures of the persons spread wider from - 11 logits to + 3 logits when compared with the distribution of the 1999 samples.

From Figure 4, it is shown that the item distribution of each dimension of the 1999 and 2009 samples showed a similar pattern of item ordering. For dimension 1, Hong Kong students expressed positive political attitudes by endorsing activities, such as voting (e.g., "m1" – "Voting in the national election" and "m2" – "Obtaining information about the candidates before voting"). The item that is easiest to endorse is "m1" in both cohorts. This outcome indicated that students in both cohorts were most willing to endorse voting as a form of future political participation when they became adults.

For dimension 2, students preferred to engage in social or community service, such as "m6" ("Spending time to help the poor and the elderly") and "m7" ("Collecting money for a social cause"). These items were located at the bottom part of the logit scale of both cohorts, indicating that during the past decade, students consistently preferred to engage in the two types of civic

activities.

However, some items were not so strongly endorsed, and these were located at the top position of the item maps of the 1999 and 2009 cohorts, respectively. For dimension 1, in the 1999 cohort, "m3" and "m5" were at the top position, whereas in the 2009 cohort, only "m3" was at the top position, implying that the 2009 students had the least interest in joining political parties in the future as adults. For dimension 2, students expressed difficulty in engaging in non-violent protest as reflected by the top position of "m9" in the logit scale of both cohorts. This result suggested that students were consistently less willing to adopt non-violent protest as a means to express their political attitudes toward the government or the country.

For dimension 3, items related to open and violent protest, namely, "m10," "m11" and "m12," were at the same location along the logit scale and near to the mean value of 0 logits in the 1999 cohort. A closer examination of the person map showed that only a few students (about 12%) endorsed these items. For the 2009 cohort, almost none of the students endorsed "m11" and "m12" although their logit values were barely above the mean value of 0 logit. The logit value of "m10" ("Spray-paint protest slogans on walls") in the 2009 cohort was below the mean value, with less than 1.3% of the students endorsing the item. Overall, the person map of the 1999 cohort indicated three types of protest activities accepted by a small number of students. This phenomenon was similar in the 2009 cohort, in which only a few students chose "m10" ("Spray-paint protest slogans

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on walls") to express their discontent over other protest methods. This observation may explain the fact that only very few students in both cohorts choose violent protests to express their political discontent.

The 1999 Cohort

The 2009 Cohort

```
MAP OF LATENT DISTRIBUTIONS AND RESPONSE MODEL PARAMETER
ESTIMATES of 1999 cohort
==================================================================

     Dimension 1 Dimension 2 Dimension 3    +item
-----------------------------------------------------------------

               |          |          |
 3             |          |          |
               |        X |          |
 2          X |       XX |          |
            X |      XXX |        X |
           XX |     XXXX |        X |
 1        XXXX| XXXXXXX |       XX |3 5 9
         XXXXXXXXXXXXXX |       XX |4
 0      XXXXXXX| XXXXXXX |       XX |8 10 11 12
       XXXXXXXXX| XXXXXXX |       XX |6 7
-1     XXXXXXX|   XXXXX |      XXXX |2
        XXXXXXX|    XXXX |      XXX |1
        XXXXX |     XXX |      XXX |
-2       XXX |      XX |      XXX |
          XX |       X |      XXX |
-3        XX |       X |      XXX |
          XX |       X |      XXX |
          XX |       X |      XXX |
-4         X |       X |      XXX |
           X |         |      XXX |
-5         X |         |      XXX |
             |         |      XXX |
-6           |         |      XXX |
             |         |      XXX |
             |         |       XX |
-7           |         |       XX |
             |         |       XX |
-8           |         |        X |
             |         |        X |
             |         |        X |
-9           |         |        X |
             |         |          |
-10          |         |          |
             |         |          |
             |         |          |
             |         |          |
             |         |          |
             |         |          |
             |         |          |
             |         |          |
             |         |          |
==================================================================
Each 'X' represents  75.3 cases
```

```
MAP OF LATENT DISTRIBUTIONS AND RESPONSE MODEL PARAMETER
ESTIMATES of 2009 cohort
==================================================================

     Dimension 1  Dimension 2   Dimension 3    +item
-----------------------------------------------------------------

               |          |          |
 3             |        X |          |
               |        X |          |
               |       XX |          |
 2             |      XXX |          |
            X |     XXXX |          |3
            X |    XXXXX |          |5 9
 1        XXX| XXXXXXX |          |
        XXXXX| XXXXXXX |          |4 8
 0    XXXXXXXXXXXXXXXX |          |11 12
      XXXXXXX|XXXXXXXX |        X |10
      XXXXXXXX|  XXXXXX |        X |
-1    XXXXXXX|   XXXXX |        X |6 7
       XXXXXX|    XXX |       XXX |2
       XXXXXX|     XX |       XXX |
-2      XXXX |      X |       XXX |1
        XXX |      X |       XXX |
-3      XXX |      X |        XX |
          X |      X |        XX |
          X |         |       XXX |
-4         X |         |       XXX |
             |         |       XXX |
             |         |      XXXX |
-5           |         |      XXXX |
             |         |       XXX |
-6           |         |      XXXX |
             |         |       XXX |
             |         |       XXX |
-7           |         |       XXX |
             |         |      XXXX |
             |         |       XXX |
-8           |         |       XX |
             |         |       XX |
-9           |         |       XX |
             |         |        X |
             |         |        X |
-10          |         |        X |
             |         |        X |
             |         |        X |
-11          |         |        X |
             |         |          |
             |         |          |
==================================================================
Each 'X' represents   8.2 cases
```

Figure 3. Variable map for the three latent dimensions of the PAS of the 1999 and 2009 cohorts
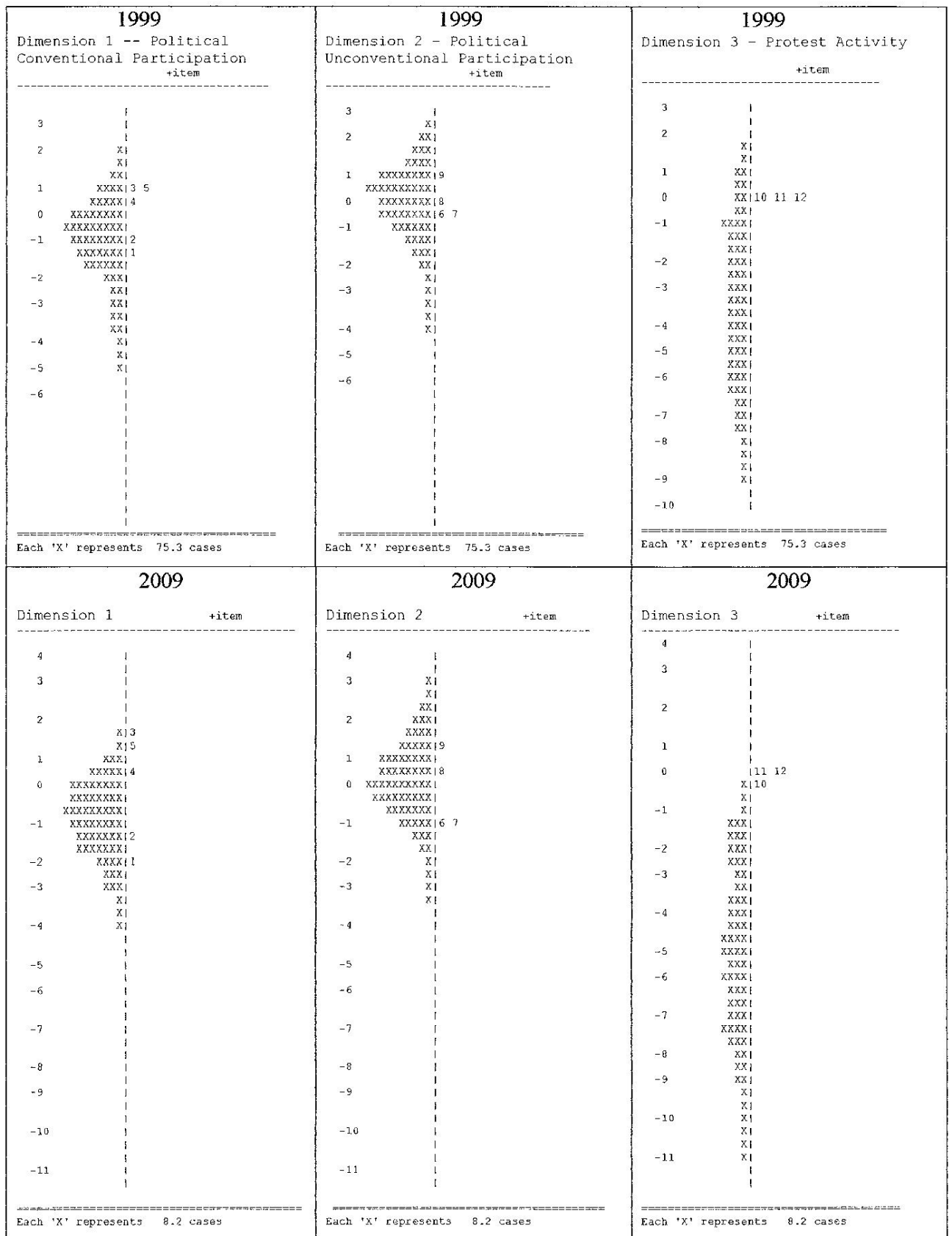
Figure 4. Item and person maps of each dimension of the PAS of the 1999 and 2009 cohorts

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Notes:

1- m1: Vote in national election; 2- m2: Obtain information about candidates before voting in an election; 3- m3: Join a political party; 4 - m4: Write letters to a newspaper about social or political concerns; 5 – m5: Be a candidate for a local or city office; 6 – m6: Volunteer time to help (poor or elderly) in the community; 7 – m7: Collect money for social cause; 8 – m8: Collect signatures for a petition; 9 – m9: Participate in a non-violent protest march or rally; 10 – m10: Spray-paint protest slogans on walls; 11 – m11: Block traffic as a form of protest; and 12 – m12: Occupy buildings as a form of protest

4.2.1.2 Civic Curriculum Scale (CCS)

The CCS was used in the IEA CivEd Study (1999) (Torney-Purta et al., 2001). The CCS consists of seven Likert-type items designed to assess the extent to which students had experienced particular topics in civic classroom.

Rasch analysis was used to test the fit of the data to the Rasch model. All the items of the two dimensions (COMMUNITY and PEOPLE) were combined into one scale for subsequent Rasch analysis. Tables 12 and 13 report the validated results for the 1999 and 2009 cohorts respectively.

Table 12. *Item overall difficulty, standard error (SE), and infit and outfit statistics of the CCS of the 1999 and 2009 cohorts*

Items	1999	Cohort			2009	Cohort		
	Measure	SE	Infit	Outfit	Measure	SE	Infit	Outfit
			MNSQ	MNSQ			MNSQ	MNSQ
k1	-0.224	0.015	0.98	0.94	-0.440	0.045	0.93	0.91
k2	-0.710	0.015	0.97	0.92	-1.168	0.046	0.87	0.84
k3	0.414	0.014	0.93	0.91	0.659	0.041	1.00	1.02
k4	0.577	0.014	1.04	1.02	0.873	0.041	0.98	1.01
k5	-0.402	0.015	1.06	1.01	-0.822	0.046	1.08	1.02
k6	0.122	0.015	0.97	0.92	0.095	0.043	0.97	0.96
k7	0.223	0.036	1.04	1.00	0.802	0.107	1.16	1.23

Table 13. *Summary of the item estimates of the CCS of the 1999 and 2009 cohorts*

	1999 cohort	2009 cohort
EAP reliability	0.82	0.75
Item separation reliability	0.99	0.99
Person reliability	0.73	0.77
Person separation	1.66	1.85
Item reliability	1.00	0.99
Item separation	19.05	10.52
χ^2 test of parameter equality (df)	$\chi^2 = 5656.93$, df = 6, p < 0.001	$\chi^2 = 1772.19$, df = 6, p < 0.001
Mean (SD) of item estimates	Mean of Infit MNSQ = 1.00 (SD = 0.06)	Mean of Infit MNSQ = 0.99 (SD = 0.10)
	Mean of Outfit MNSQ = 0.96 (SD = 0.07)	Mean of Outfit MNSQ = 0.99 (SD = 0.11)

To conclude, all the infit MNSQ values were within the range of 0.60 to 1.40 (Wright & Linacre, 1994). As shown in Figure 5, the items of the 1999 cohort were concentrated within a narrow range from +1 to - 1 along the logit scale, whereas the items of the 2009 cohort had the same distribution, ranging from +1 to - 1 along the logit scale. For the 1999 cohort, items "k4" and "k3" were the most difficult to endorse items, whereas items "k2" and "k5" were the items that were easiest to endorse. For the 2009 cohort, the item ordering pattern was similar to that of the 1999 cohort. Items "k4" and "k7" were the items that were most difficult to endorse, whereas item "k2" was the item that was easiest to endorse. For the person map, the person distribution of the 1999 cohort was from + 4 to - 4 along the logit scale, whereas that of the 2009 cohort was relatively concentrated within a narrow range from + 4 to - 2 along the logit scale. The details of the item and person distributions of both cohorts are presented in Figure 5. As shown in Table 13, the item reliability was high in both cohorts, indicating that the CCS had high internal consistency, whereas the values of person reliability of both cohorts were reasonably good. On the whole, the CCS was a reliable measure for both cohorts.
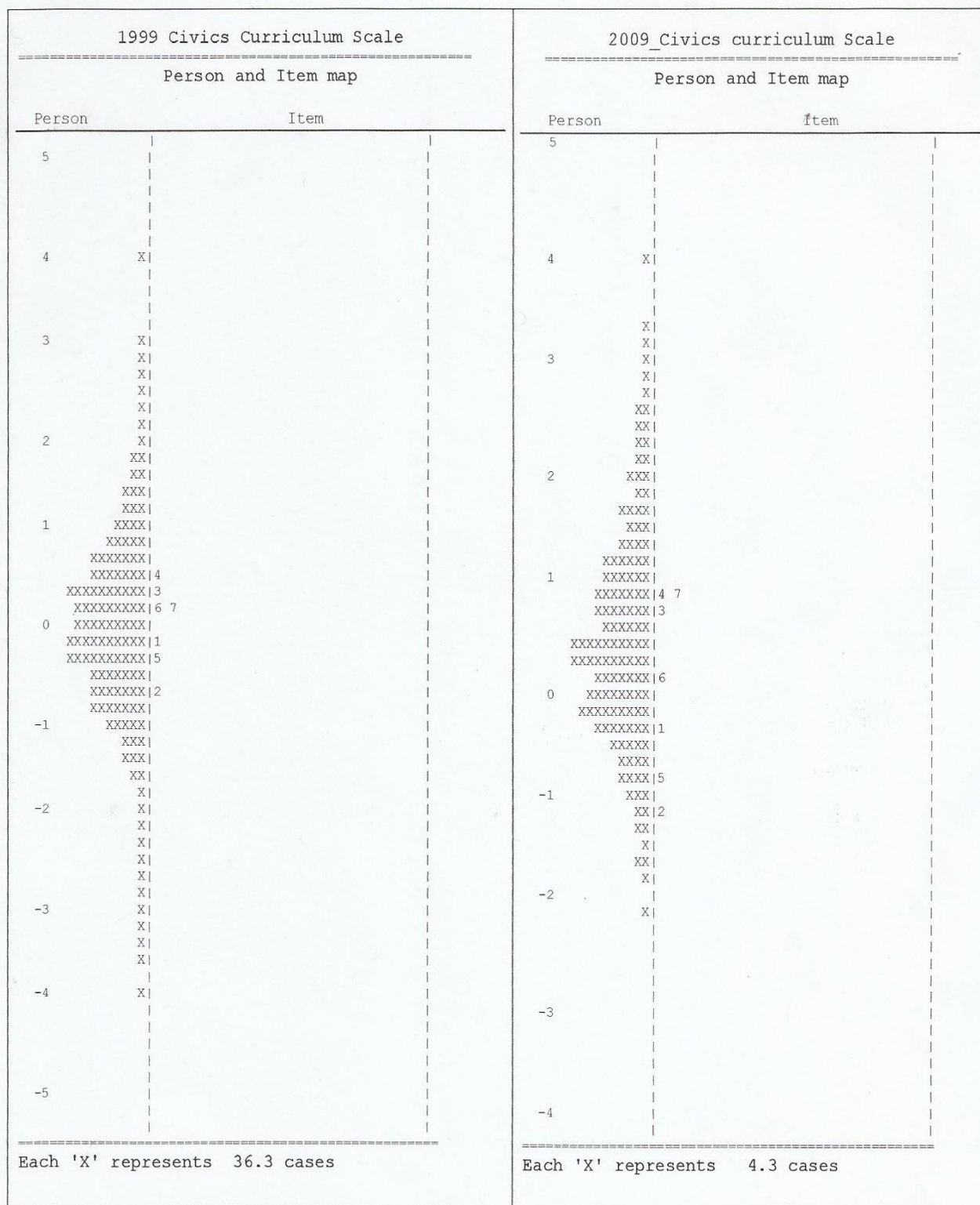
Figure 5. Item and person distribution maps of the CCS of the 1999 and 2009 cohorts

Notes:

1– k1: In school. I have learned to understand people who have different ideas.

2– k2: In school. I have learned to co-operate [work together] in groups with other students.

3– k3: In school. I have learned to contribute to solving problems in the community [society].

4– k4: In school. I have learned to be a patriotic and loyal [committed] citizen of my country.

5– k5: In school. I have learned how to act to protect the environment.

6 – k6: In school. I have learned to be concerned about what happens in other countries.

7 – k7: In school. I have learned about the importance of voting in national and local elections.

4.2.1.3 Open Classroom Climate Scale (OCCS)

The OCCS was designed to measure students' perceptions regarding open classroom climate and the extent to which the classroom is free, open, and democratic. The OCCS is a 7-item scale. Rasch analysis was used to test the fit of the data to the Rasch model. Tables 14 and 15 report the results of the 1999 and 2009 cohorts respectively.

Table 14. *Item overall difficulty, standard error (SE), and infit and outfit statistics of the OCCS of the 1999 and 2009 cohorts*

Items	1999	Cohort			2009	Cohort		
	Measure	SE	Infit	Outfit	Measure	SE	Infit	Outfit
			MNSQ	MNSQ			MNSQ	MNSQ
n1	0.428	0.014	0.99	0.97	0.662	0.040	1.15	1.15
n2	0.163	0.014	0.94	0.90	0.204	0.040	0.94	0.92
n3	-0.663	0.014	1.13	1.06	-1.188	0.043	1.10	1.01
n5	-0.498	0.014	1.08	1.01	-0.931	0.043	0.99	0.92
n7	0.313	0.014	0.94	0.90	0.631	0.040	0.88	0.88
n8	-0.186	0.014	1.02	0.98	-0.173	0.041	1.04	1.01
n9	0.444	0.035	1.01	0.99	0.795	0.101	0.99	1.05

Table 15. *Summary of the item estimates of the OCCS of the 1999 and 2009 cohorts*

	1999 cohort	2009 cohort
EAP reliability	0.83	0.80
Item separation reliability	1.00	1.00
Person reliability	0.79	0.79
Person separation	1.93	1.96
Item reliability	1.00	0.99
Item separation	23.28	12.80
χ^2 test of parameter equality (df)	$\chi^2 = 5031.97$, df = 6, p < 0.001	$\chi^2 = 1801.12$, df = 6, p < 0.001
Mean (SD) of item estimates	Mean of Infit MNSQ = 1.00 (SD = 0.07)	Mean of Infit MNSQ = 1.00 (SD = 0.14)
	Mean of Outfit MNSQ = 0.97 (SD = 0.07)	Mean of Outfit MNSQ = 0.99 (SD = 0.15)

To conclude, all the infit MNSQ values fell within the range of 0.60 to 1.40 (Wright & Linacre, 1994). As shown in Figure 6, the items of the 1999 cohort were concentrated into a narrow range within + 1 to - 1 along the logit scale, whereas the item distribution of the 2009 cohort had similar distribution, but the items spread wider than that of the 1999 cohort, which also ranges from + 1 to - 1 along the logit scale. For the 1999 cohort, items "n1" and "n9" were the most difficult to endorse items, whereas item "n3" was the item that was easiest to endorse. For the 2009 cohort, the item ordering pattern was similar to that of the 1999 cohort. Item "n9" was also the item that was most difficult to endorse, whereas item "n3" was the item that was easiest to endorse. For person distribution, the values ranged from + 3 to - 4 along the logit scale in the 1999 cohort, whereas the person distribution of the 2009 cohort ranged from + 3 to - 3 along the logit scale. The details of the item and person distribution of both cohorts are presented in Figure 6. As shown in Table 15, the item reliabilities were high in both cohorts, indicating the scale had high internal consistency,

whereas the values of person reliability of both cohorts were reasonably good. On the whole, the

OCCS was a reliable measure for both cohorts.
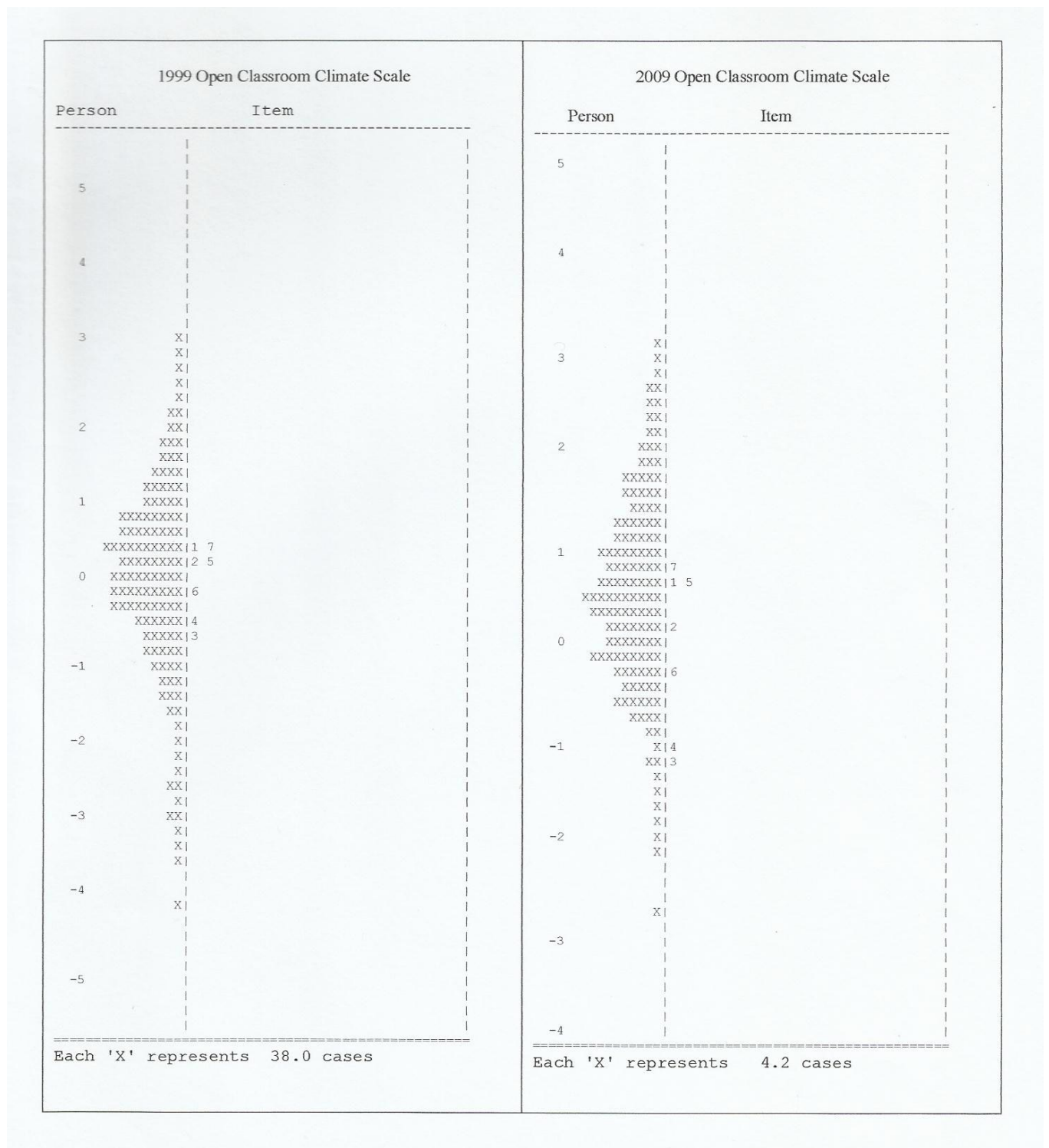
Figure 6. Item and person distribution maps of the OCCS of the 1999 and 2009 cohorts

Notes:

1 - n1: Students feel free to disagree openly with their teachers about political and social issues during class.

2 - n2: Students are encouraged to decide about issues.

3 - n3: Teachers respect our opinions and encourage us to express them during class.

4 - n5: Students feel free to express opinions in class even when their opinions are different from most of the other students.

5 - n7: Teachers encourage us to discuss political or social issues in which people have different opinions.

6 - n8: Teachers present several sides of [positions on] an issue when explaining it in class.

7 - n9: Students bring up current political events for discussion in class.

4.2.1.4 School Participation Scale (SPS)

The SPS measures students' perceptions regarding their effectiveness to influence school policy. The SPS has seven items. The items of the two dimensions (General confidence in school participation (CONFS) and Self-confidence in school participation (SCON)) were combined into one scale for subsequent Rasch analysis. Tables 16 and 17 report the validated results of the 1999 and 2009 cohorts, respectively.

Table 16.   *Item overall difficulty, standard error (SE), and infit and outfit statistics of the SPS of the 1999 and 2009 cohorts*

Items	1999	Cohort			2009	Cohort		
	Measure	SE	Infit MNSQ	Outfit MNSQ	Measure	SE	Infit MNSQ	Outfit MNSQ
j1	-0.352	0.014	0.94	0.91	-0.320	0.041	0.87	0.85
j2	-0.314	0.014	0.94	0.91	-0.854	0.042	0.95	0.91
j3	-0.371	0.014	0.86	0.81	-0.453	0.041	0.86	0.84
j4	-0.067	0.014	1.09	1.03	0.359	0.039	1.30	1.32
j5	-0.208	0.014	1.13	1.07	-0.631	0.042	1.24	1.17
j6	0.520	0.013	1.00	0.99	0.772	0.038	0.97	1.01
j7	0.792	0.034	1.07	1.11	1.127	0.099	0.96	1.01

Table 17. *Summary of the item estimates of the SPS of the 1999 and 2009 cohorts*

	1999 cohort	2009 cohort
EAP reliability	0.82	0.76
Item separation reliability	0.99	0.99
Person reliability	0.73	0.75
Person separation	1.64	1.71
Item reliability	1.00	0.99
Item separation	22.13	12.50
χ^2 test of parameter equality (df)	$\chi^2 = 3551.85$, df = 6, p < 0.001	$\chi^2 = 1314.18$, df = 6, p < 0.001
Mean (SD) of item estimates	Mean of Infit MNSQ = 1.00 (SD = 0.10)	Mean of Infit MNSQ = 1.00 (SD = 0.19)
	Mean of Outfit MNSQ = 0.98 (SD = 0.13)	Mean of Outfit MNSQ = 1.00 (SD = 0.21)

To conclude, all the infit MNSQ values fell within the range of 0.60 to 1.40 (Wright & Linacre,

1994). The item-person maps of the two cohorts are presented in Figure 7. For the item ordering, the items of the 1999 cohort were concentrated into a narrow range from + 1 to - 1 along the logit scale, whereas the items of the 2009 cohort had the same distribution pattern and ranged from + 1 to - 1 along the logit scale. For the 1999 cohort, items "j7" and "j6" were the most difficult to endorse items, whereas items "j1," "j2," and "j3" were the items that were easiest to endorse. For the 2009 cohort, the item ordering pattern was similar to that of the 1999 cohort. Items "j7" and "j6" were the most difficult to endorse items, whereas items "j2," "j5," and "j3" were the items that were easiest to endorse because they were located near the bottom position of the item map. The person distribution of the 1999 cohort was from + 3 to - 4 along the logit scale, whereas the person distribution of the 2009 cohort was from + 4 to - 2 along the logit scale. As shown in Table 17, the item reliability was high in both cohorts, indicating the scale had high internal consistency, whereas the person reliability of both cohorts was reasonably good. On the whole, the SPS was a reliable measure for both cohorts.
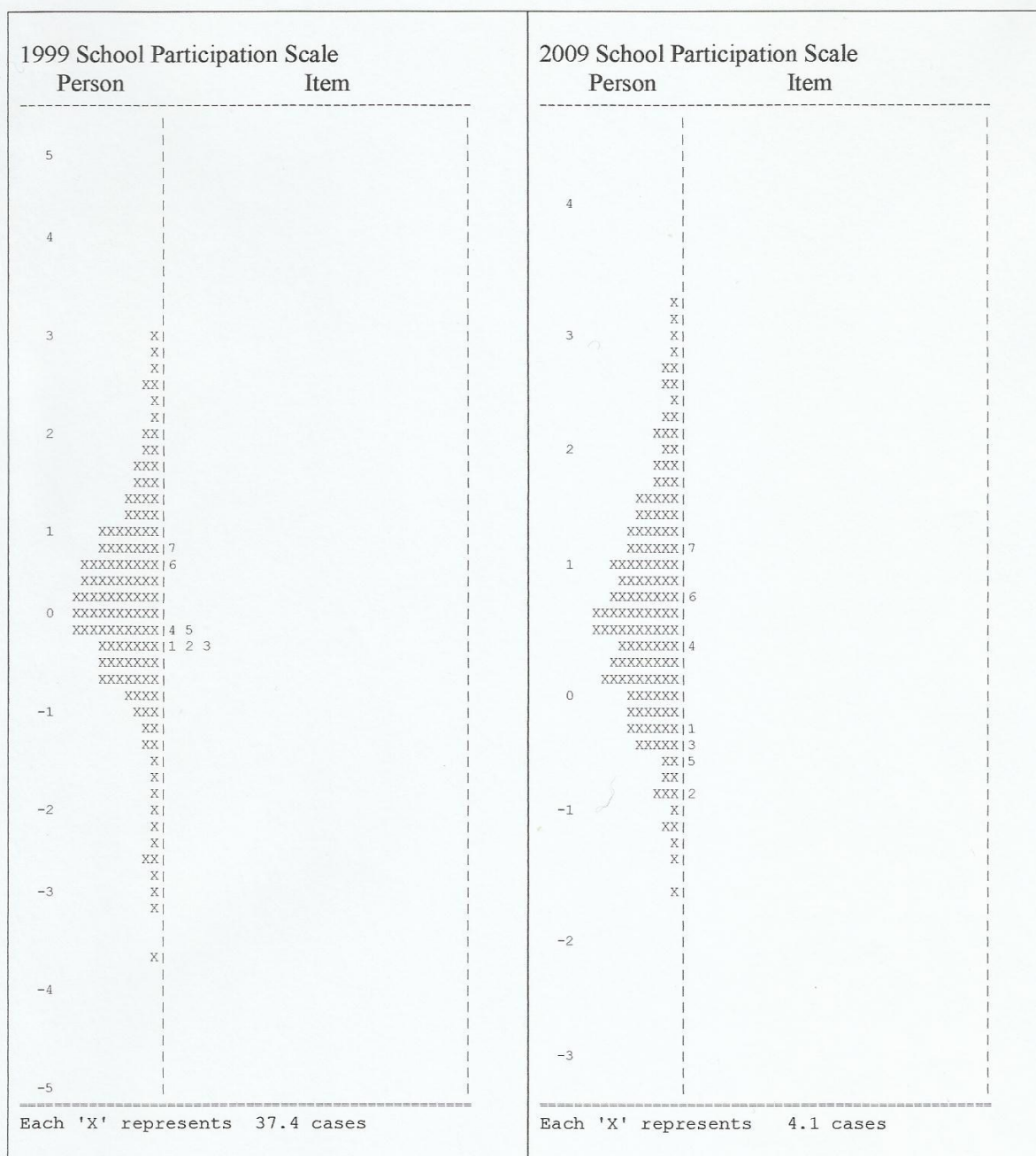
Figure 7. Item and person distribution maps of the SPS of the 1999 and 2009 cohorts

Notes:

1 – J1: Electing student representatives to suggest changes on how the school is run improves the schools.

2 – J2: Many positive changes occur in this school when students work together.

3 – J3: Organizing groups of students to state their opinions could help solve problems in this school.

4 – J4: If members of my class felt they were unfairly treated, I would be willing to accompany them to speak to the teacher.

5 – J5: Students acting together can have more influence on what happens in this school than students acting alone.

6 – J6: I am interested to participate in discussions about school problems.

7 – J7: When school problems are being discussed I usually have something to say.

Table 18. *Summary of validation results of each scale using Rasch measurement*

1999 Cohort

Scales	PAS	CCS	OCCS	SPS
Item fit indices:				
Infit MNSQ	1.49 – 0.85	1.06 – 0.93	1.13 – 0.94	1.13 – 0.86
Outfit MNSQ	1.44 – 0.58	1.02 – 0.91	1.06 – 0.90	1.11 – 0.81
EAP reliability		0.82	0.83	0.82
Dimension 1	0.82			
Dimension 2	0.83			
Dimension 3	0.73			
Item separation reliability	0.99	0.99	0.99	0.99
Person reliability	0.81	0.73	0.79	0.73
Person separation	1.78	1.66	1.93	1.64
Item reliability	1.00	1.00	1.00	1.00
Item separation	44.13	19.05	23.28	22.13
χ^2 test of parameter equality (df)	15313.23 (9)	5656.93 (6)	5031.97 (6)	3551.85 (6)

2009 cohort

Scales	PAS	CCS	OCCS	SPS
Item fit indices:				
Infit MNSQ	1.18 – 0.71	1.16 – 0.87	1.15 – 0.88	1.30 – 0.86
Outfit MNSQ	1.16 – 0.54	1.23 – 0.84	1.15 – 0.88	1.32 – 0.84
EAP reliability		0.75	0.80	0.76
Dimension 1	0.77			
Dimension 2	0.77			
Dimension 3	0.53			
Item separation reliability	0.99	0.99	0.99	0.99
Person reliability	0.72	0.77	0.79	0.75
Person separation	1.62	1.85	1.96	1.71
Item reliability	1.00	0.99	0.99	0.99
Item separation	24.02	10.52	12.80	12.50
χ^2 test of parameter equality (df)	4570.28 (9)	1772.19 (6)	1801.12 (6)	1314.18 (6)

Note: Item fit indices, EAP reliability and item separation reliability of each scale were obtained from the ConQuest program (Wu, Adams, Wilson & Haldane, 2007). Person reliability, person separation index, item reliability, item separation index of each scale were computed using the Winstep program (Linacre, 2006).

4.2.1.5 Summary of findings from the validation study

The summary of results for each scale using Rasch measurement was reported in Table 18. The Rasch model has specific objectivity in psychological measurement (Rasch, 1977). The measurement produces scale-free person measures and sample-free item difficulties. Hence, the method can estimate person measures and item difficulties on the same logit scale to achieve fundamental and objective measurement (Bond & Fox, 2007; Cavanagh & Waugh, 2011). This enables the measurement results to be communicated in a stable framework (Yan & Mok, 2012).

The validation of the scales used in the Hong Kong samples of the 1999 and 2009 cohorts has revealed some differences from results reported in the international samples of the IEA CivEd Study (Torney-Purta et al., 2001). The School Participation Scale (SPS) was identified as having two factors in the CFA models, using the calibrated international sample in the IEA CivEd Study. The report from Rasch analysis of the Hong Kong data identified the SPS as consistently unidimensional in the 1999 and 2009 cohorts. Similarly, Rasch analysis of the Hong Kong data identified the Civic Curriculum Scale (CCS) to be unidimensional in both cohorts. Meanwhile, the two scales provided more reliable measurement with the increased number of items in the unidimensional scales.

To conclude, Rasch measurement is a sample-independent measure that is more accurate because it

allows person responses to be predicted on all items that fit the measurement model by using both the person and item difficulty measures on the same logit scale (Bond & Fox, 2007; Cavanagh & Waugh, 2011). Therefore, the validated Rasch scales were used for further statistical analysis in the following sections, including the use of latent regression analysis in section 4.2.2. and the use of multi-level modeling analysis in section 4.2.3 to assess the role played by schools in the development of students' civic engagement in the future.

4.2.2 Assessing cohort differences in students' attitudes toward future civic engagement

The purpose of this section is to address RQ 1:

Have the attitudes of Hong Kong students toward future civic engagement changed between the 1999 and 2009 cohorts?

Multidimensional Rasch latent regression analysis was used to assess any attitude differences between the two cohorts of students on the three dimensions of future civic engagement. The ConQuest programme (Wu, Adams, Wilson and Haldane, 2007) was used to conduct the analysis. The responses of the students were assessed using three latent outcomes (CONVEN, UNCONVEN, and PROTE) and then regressed onto the cohort variable. The cohort variable was coded '0' for 1999 cohort and '1' for 2009 cohort. To assess any gender differences on their attitudes toward

future civic engagement, the three dimensions of future civic engagement were also regressed onto the gender variable. The gender variable was coded '0' for female and '1' for male. DIF analysis was conducted to assess the model-data fit. A difference larger than or equal to 0.5 logit indicated substantial DIF (Wang et al., 2006). None of the 12 items of the PAS showed any substantial cohort or gender DIF (See Appendix O).

4.2.2.1 Assessment of cohort differences in the three dimensions of future civic engagement

As shown in Table 19, the mean differences in CONVEN, UNCONVEN, and PROTE dimensions between the 1999 and 2009 cohorts were 0.062 (SE = 0.066) , 0.267 (SE = 0.061) and -0.947 (0.085) logits respectively. The equations (equation 1.1 to equation 3.2) of the estimated regression models of the three dimensions of civic engagement are shown in Appendix M. As indicated from the results shown in Table 19, there was no statistically significant difference between the two cohorts in the dimension of CONVEN though a small difference existed (1999 cohort: - 0.873 logits and 2009 cohort: - 0.811 logits). This indicated that in terms of student attitudes towards future CONVEN, there was no statistical significant difference.

As regards UNCONVEN, the result showed that there was a statistically significant difference between the two cohorts (1999 cohort: - 0.114 logits and 2009 cohort: 0.153 logits). This indicated that students of the 2009 cohort may be more inclined to be involved in social movement related

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activities than those students from the 1999 cohort. A closer examination of the items under the latent variable of UNCONVEN, [e.g. "m6" (Volunteer time to help poor or elderly in the community), "m7" (Collect money for social cause), "m8" (Collect signatures for a petition) and "m9" (Participate in a non-violent protest march or rally)] suggests the 2009 cohort students may be more concerned with the needs in the community and to be more willing to participate in voluntary works or community service in the future.

With regard to PROTE, the result also indicated there was a significant difference between the two cohorts (1999 cohort: - 2.820 logits and 2009 cohort: - 3.767 logits). The students of the 2009 cohort seemed less inclined than those in the 1999 cohort to be engaged in illegal protest activities in the future, though very few students from both cohorts indicated using protest means.

The correlation coefficients between the three dimensions reported from ConQuest ranged from 0.403 to 0.820 (see Table 20). The CONVEN dimension is highly correlated with the UNCONVEN dimension. This suggested that Hong Kong student's perceptions of conventional and unconventional types of civic engagement might not be as differentiated as the literature indicated. The present study showed that they were some pro-social, law abiding activities and perceived to be more similar in nature. Relatively, the dimension of PROTE was less correlated with the dimension of CONVEN and UNCONVEN. This suggested that the nature of protest activities was different from the conventional and unconventional type of civic engagement.

Table 19. *Regression coefficients on cohort and gender differences of a three-dimensional latent*

      multiple regression of the PAS

Regression variable	CONVEN	UNCONVEN	PROTE
Constant	- 0.873 (0.029)	- 0.114 (0.027)	- 2.820 (0.037)
Cohorts	0.062 (0.066)	0.267 (0.061)***	- 0.947 (0.085)***
Gender	0.118 (0.038)**	- 0.178 (0.035)***	0.417 (0.049)***

Note 1: Group '0' refers to the 1999 cohort and Group '1' refers to the 2009 cohort.

Note 2: Gender '1' refers to male and Gender '0' refers to female.

Note 3: Standard errors were placed in brackets.

Note 4: * p < 0.05; ** p < 0.01; *** p < 0.001

Table 20. *Covariance / correlation matrix of the PAS*

Regression variable	CONVEN	UNCONVEN	PROTE
CONVEN		1.743	1.382
UNCONVEN	0.820***		1.106
PROTE	0.466***	0.403***	
Variance	2.30 (0.043)	1.96 (0.037)	3.830 (0.072)

Note 1: Values below the diagonal are correlations, and values above are covariates.

Note 2: * p < 0.05; ** p < 0.01; *** p < 0.001

4.2.2.2 Assessing gender differences in perceiving the three dimensions of future civic

      engagement of the 1999 and 2009 cohorts

Using the combined data set (both 1999 cohort and 2009 cohort) to detect any gender differences,

the result indicated that there was statistically significant difference between male and female students on the three dimensions of civic engagement (Table 19). The equations (equation 4.1 to equation 6.2) of the estimated regression models of the three dimensions of civic engagement are shown in Appendix M. The results indicated that male students of both cohorts outperformed female students in the CONVEN and PROTE dimensions, and the regression coefficients were 0.118 logits (female: -0.873 logits and male : -0.755 logits) and 0.417 logits (female : -2.820 logits and male : -2.403 logits) respectively. These indicated that the female students were less involved in protest activities than the male students of the two cohorts. However, the female students outperformed the male students in the dimension of UNCONVEN, and the mean difference was -0.178 (SE = 0.035) logits. This result suggested that female students of both cohorts were more actively involved in social movement-related activities than the male students (female: -0.114 logits and male: -0.292 logits), such as engaging in voluntary service to help the poor or elderly in the community, collecting money for social cause, and participating in some peaceful petitions or rallies.

Gender differences in the three dimensions of future civic engagement of the 1999 cohort

The gender differences in students' attitudes toward the three dimensions of future civic engagement of the 1999 cohort were assessed by multidimensional latent regression analysis. The three latent outcomes (CONVEN, UNCONVEN, and PROTE) were regressed onto the gender

variable. Gender differences were statistically significant, as shown in the three dimensions of future civic engagement. Table 21 shows that the regression coefficients of the gender differences in the CONVEN, UNCONVEN, and PROTE dimensions were 0.134 logits (SE = 0.043) (male: -0.746 logits, female: - 0.880 logits), - 0.195 logits (SE = 0.039) (male: - 0.304 logits, female: -0.109 logits) and 0.486 logits (SE = 0.055) (male: -2.368 logits, female: -2.854 logits) respectively. The equations (equation 7.1 to equation 9.2) of the estimated regression models of the three dimensions of civic engagement are reported in Appendix M. The results indicated that gender differences were statistically significant, such that more male than female students perceived they would engage more in CONVEN and PROTE when they became adults in the future. The correlation coefficients between the three dimensions reported from ConQuest ranged from 0.403 to 0.820. The UNCONVEN dimension was highly correlated with CONVEN dimension (r = 0.820, p < 0.001), but less correlated with PROTE (r = 0.403, p < 0.001). This result suggested that the nature of protest activities was different from the conventional and unconventional civic engagements.

Table 21. *Regression Coefficients on gender differences for a three-dimensional latent multiple regression of the 1999 cohort*

Regression variable	CONVEN	UNCONVEN	PROTE
Constant	-0.880 (0.031)	-0.109 (0.029)	-2.854 (0.040)
Gender	0.134 (0.043)**	-0.195 (0.039)***	0.486 (0.055)***

Note 1: Gender '1' refers to male and Gender '0' refers to female; Note 2: Standard errors were placed in brackets.

Gender differences in the three dimensions of future civic engagement of the 2009 cohort

Although the gender differences in students' attitude toward the three dimensions of civic engagement in the 2009 cohort were not statistically significant, the pattern of civic engagement was similar to that in the 1999 cohort (see Table 22). The mean differences in the CONVEN, UNCOVEN, and PROTE dimensions were 0.054 logits (SE = 0.073), -0.139 logits (SE = 0.077) and 0.105 logits (SE = 0.086) respectively. These indicated that more male than female students perceived that they would engage more in CONVEN and PROTE in the future when they became adults. The correlation coefficients between the three dimensions reported from ConQuest ranged from 0.074 to 0.659. The UNCONVEN dimension was more correlated with CONVEN dimension (r = 0.659, p < 0.001), but less correlated with PROTE (r = 0.074, p < 0.001). On the whole, the findings were similar to that in the 1999 cohort, though all the results were not statistical significant. This implied that the nature of protest activities was different from the conventional and unconventional types of civic engagement.

Table 22. *Regression coefficients on gender differences for a three-dimensional latent multiple regression of the 2009 cohorts*

Regression variable	CONVEN	UNCONVEN	PROTE
Constant	-0.871 (0.059)	0.189 (0.062)	-3.796 (0.069)
Gender	0.054 (0.073)	-0.139 (0.077)	0.105 (0.086)

Note 1: Gender '1' refers to male and Gender '0' refers to female; Note 2: Standard errors were placed in brackets.

4.2.2.3 Summary of findings from assessing cohort differences in students' attitudes toward

future civic engagement

In summary, the results from the multidimensional Rasch latent regression analysis indicated significant cohort differences in students' attitudes in the UNCONVEN and the PROTE dimensions. This suggested that students from the 2009 cohort seemed more positive towards peaceful future civic engagement by engaging in social or community services to help the needy or poor, or by employing non-violent means to express their political preferences. Regarding gender differences, there were significant gender differences in the 1999 cohort but these seemed to be washed out in the 2009 cohort. On the whole, more male students in both cohorts perceived they would actively engage in future civic activities related to the CONVEN and the PROTE dimensions, but less involved in social movement-related activities (UNCONVEN) when compared with the female students. This result was consistent with the international literature.

4.2.3 An assessment of the contribution of schools to students' future civic engagement

In this section, the three dimensions (CONVEN, UNCONVEN, and PROTE) of future civic engagement were used as outcome variables. The dependent variables were three school variables (CURRI, OCCLIM and SCHPART). The analyses in this section addressed RQ 2:

What is the role of schools in the change in students' attitudes toward future civic engagement from 1999 to 2009?

The section starts with the results showing any school differences on students' expectation toward future civic engagement. Then, the extent to which the three school variables predicted the three dimensions of expected future civic engagement at the school and student levels of both cohorts is presented.

4.2.3.1 Impact of the school on students' expectation toward future civic engagement

Given the nested nature of the data (including schools and individual students), it was necessary to investigate the three dimensions of future civic engagement at the school and student levels using a two-level analysis. The magnitude of the school impact was indicated by the intra-class correlation coefficient. The intra-class correlation coefficient refers to the ratio of the school-level variance to the sum total of the school- and student-level variances. The larger the value of the intra-class correlation coefficient, the bigger difference exists between schools, whereas the smaller the value of the intra-class correlation coefficient, the smaller difference exists between schools (Goldstein, 2010).

The results of the school-level variance of each dimension of civic engagement for each cohort are shown in Table 23. The size of the intra-class correlation coefficient for each dimension for each cohort suggested that schools of both 1999 and 2009 cohorts exerted very similar effects. The intra-class correlation coefficient was small in size and ranged from 1.6% (99_PROTE) to 3.9% (99_UNCONVEN) for the 1999 cohort, and 0.9% (09_PROTE) to 5.0% (09_UNCONVEN) for the 2009 cohort. This result suggested that only a very slight difference among the tested schools existed (n = 150 for the 1999 cohort and n = 18 for the 2009 cohort). This finding confirmed the previous political socialization and civic education studies (e.g., Isac, Maslowski, Creemers, & Werf, 2013; Kennedy, Mok, & Wong, 2011; Mirazchiyski, Caro, & Sandoval-Hernandez, in press), that is, a slightly difference exists among schools in terms of students' attitudes toward future civic engagement.

Table 23. *School- and student-level variances of CONVEN, UNCONVEN, and PROTE of the 1999 and 2009 cohorts*

Model	(1)	(2)	(3)	(4)	(5)	(6)
	99_CONVEN	**09_CONVEN**	**99_UNCONVEN**	**09_UNCONVEN**	**99_PROTE**	**09_PROTE**
<u>Fixed Effects:</u>						
Constant	-0.857**	-0.924**	-0.231**	0.098	-3.526**	-5.420**
	(0.035)	(0.081)	(0.033)	(0.090)	(0.055)	(0.132)
<u>Random Effects:</u>						
Sch-level variance	0.103**	0.066	0.092**	0.090	0.165**	0.069
	(0.021)	(0.038)	(0.018)	(0.048)	(0.053)	(0.102)
Stu-level variance	2.726**	1.582**	2.22**	1.703**	9.634**	8.003**
	(0.055)	(0.092)	(0.045)	(0.100)	(0.196)	(0.468)
Intra-class Corr	0.030	0.040	0.039	0.050	0.016	0.009

Note 1: * Significant at 5 % level; **Significant at 1 % level. Standard errors are printed below the estimates and in brackets.

Note 2: Sch-level variance = School-level variance; Stu-level variance = Student-level variance

Note 3: The results were obtained from the average of the results from the five analyses of the five sets of plausible value scores

4.2.3.2 Impact of school variables on predicting students' expectation of future civic engagement at both school and student levels

The school predictors (CURRI, OCCLIM and SCHPART) were added to the model, and the

coefficients of school variables were tested for any statistical significance. The following four models were created in predicting each dimension of the construct of civic engagement: (1) two-level constant slope null model of the 1999 cohort (Model 1); (2) two-level random slope model with the random effects of three school predictors at the school level of the 1999 cohort (Model 2); (3) two-level constant slope null model of the 2009 cohort (Model 3); and (4) two-level random slope model with the random effects of three school predictors at the school level of the 2009 cohort (Model 4). The results are presented in the subsequent section.

Predicting students' expectation of future Conventional Participation (CONVEN)

The results of the two-level random slope analysis are presented in Table 24. For the 1999 cohort, the three school variables were statistically significant predictors of CONVEN, which accounted for 33.51% of the variances. However, for the 2009 cohort, only two significant explanatory variables were present, CURRI and SCHPART, and accounted for 10.20% of the variances (Table 25). As shown in Table 24, the variances for the intercept and the slope of Model 2 (1999 cohort) were both statistically significant. Therefore, the effect of school variables differed from school to school. The overall regression line had an intercept of - 0.829 (SE = 0.023), a slope of 0.283 (SE = 0.022) for CURRI, a slope of 0.329 (SE = 0.022) for OCCLIM, and a slope of 0.198 (SE = 0.021) for SCHPART. The significant variances suggested that the school regression lines had significantly different intercepts (variance = 0.020, SE = 0.009) and different slopes on CURRI (variance = 0.018,

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SE = 0.008) and OCCLIM (variance = 0.028, SE = 0.008), but not on SCHPART (variance = 0.006, SE = 0.007). Overall, the covariance between the intercept and slope was not statistically significant. When Model 2 (1999 cohort) was compared with the null model (Model 1), a deviance shrinkage occurred from 19314.830 to 17481.006. The decreased value was significant because it was much greater than 30.575 (df = 15). Hence, Model 2 (1999 cohort) was a better fitting model than the null model (Model 1). For the 2009 cohort, only two statistically significant school variables predicting CONVEN, as shown in Model 4, were observed. The overall regression line had an intercept of -1.249 (SE = 0.076), a slope of 0.237 (SE = 0.043) for CURRI, and a slope of 0.192 (SE = 0.062) for SCHPART. Given that no significantly different intercept and different slopes were observed, no differential school effect was found. When Model 4 (2009 cohort) was compared with the null model (Model 3), a significant deviance shrinkage occurred. The decreased value was 75.702, which was greater than 30.575 (df = 15). Therefore, Model 4 (2009 cohort) was a better fitting model than the null model (Model 3).

Table 24. *School variables predicting the CONVEN for both cohorts of students*

	1999	1999	2009	2009
	Model 1	Model 2	Model 3	Model 4
Fixed Effects				
Constant	-0.857**	-0.829**	-0.924**	-1.249**
	(0.035)	(0.023)	(0.081)	(0.076)
School factors				
CURRI		0.283**		0.237**
		(0.022)		(0.043)
OCCLIM		0.329**		0.085
		(0.022)		(0.049)
SCHPART		0.198**		0.192 **
		(0.021)		(0.062)
Random Effects				
School- level variance				
Intercept ($\beta 0$)	0.103**	0.020**	0.066	0.056
	(0.021)	(0.009)	(0.038)	(0.041)
CURRI_slope ($\beta 1$)		0.018**		0.003
		(0.008)		(0.012)
OCCLIM_slope ($\beta 2$)		0.028**		0.006
		(0.008)		(0.014)
SCHPART_slope ($\beta 3$)		0.006		0.019
		(0.007)		(0.024)
Student- level variance	2.726**	1.861**	1.582**	1.424**
	(0.055)	(0.039)	(0.092)	(0.085)
Deviance	19314.830	17481.006	1999.755	1924.053
Deviance difference		1833.824**		75.702**
(compared with null model)				
Total variance explained		33.51 %		10.20 %

Note 1: * Significant at 5 % level; **Significant at 1 % level.   Standard errors are printed below the estimates and in brackets.

Note 2: None of the covariance between intercept and slope was statistically significant (at 5%). For more details, please

   refer to Appendix K.

Note 3: The results were obtained from the average of the results from the five analyses of the five sets of plausible value scores

Table 25. *School- and student-level variances accounted for the two cohorts of students using school variables as predictors for CONVEN*

Models	School-level variances	Student-level variances	Total variances
1999 cohort			
Model 2	2.93 %	30.58 %	33.51 %
2009 cohort			
Model 4	0.61 %	9.59 %	10.20 %

Note : The results were obtained from the average of the results from the five analyses of the five sets of plausible value scores

Predicting students' expectation of future unconventional participation (UNCONVEN)

The results of the two-level random slope analysis are presented in Table 26. The three school variables were statistically significant predictors of UNCONVEN for both cohorts of students, which accounted for 35.29 % of variances in the 1999 cohort and 16.06 % of variances in the 2009 cohort (see Table 27).

From Table 26, it is observed that the variances for the intercepts and the slopes of Model 2 (1999 cohort) were both statistically significant, and the effect of school variables differed from school to school. The overall regression line had an intercept of - 0.208 (SE = 0.021), a slope of 0.255 (SE = 0.020) for CURRI, a slope of 0.297 (SE = 0.021) for OCCLIM, and a slope of 0.189 (SE = 0.022) for SCHPART. The significant variances suggested that the school regression lines had significantly

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different intercepts (variance = 0.018, SE = 0.008) and significantly different slopes on CURRI (variance = 0.015, SE = 0.007), on OCCLIM (variance = 0.027, SE = 0.007), and on SCHPART (variance = 0.021, SE = 0.008). Overall, the covariance between intercepts and slopes was not statistically significant. The comparison between Model 2 (1999 cohort) and the null model (Model 1) implied a significant deviance shrinkage from 18296.990 to 16379.402. The decrease in value was much greater than 30.575 (df = 15), thus indicating Model 2 (1999 cohort) was a better fitting model than the null model (Model 1).

For the 2009 cohort, the three school variables were statistically significant predictors of the UNCONVEN dimension as shown in Model 4 (2009 cohort). The overall regression line had an intercept of - 0.231 (SE = 0.082), a slope of 0.292 (SE = 0.050) for CURRI, a slope of 0.093 (SE = 0.046) for OCCLIM, and a slope of 0.201 (SE = 0.054) for SCHPART. No differential school effects were found due to the lack of significant random intercepts or random slopes. However, Model 4 (2009 cohort) was still a better fitting model than the null model (Model 3) as a significant deviance shrinkage occurred from 2046.834 (Model 3) to 1947.962 (Model 4) and the decreased value was much greater than 30.575 (df = 15).

Table 26. *School variables to predict the UNCONVEN of both cohorts*

	1999	1999	2009	2009
	Model 1	Model 2	Model 3	Model 4
Fixed Effects				
Constant	-0.231**	-0.208**	0.098	-0.231**
	(0.033)	(0.021)	(0.090)	(0.082)
School factors				
CURRI		0.255**		0.292**
		(0.020)		(0.050)
OCCLIM		0.297**		0.093**
		(0.021)		(0.046)
SCHPART		0.189**		0.201**
		(0.022)		(0.054)
Random Effects				
School- level variance				
Intercept (β 0)	0.092**	0.018**	0.090	0.048
	(0.018)	(0.008)	(0.048)	(0.031)
CURRI_slope (β 1)		0.015**		0.000
		(0.007)		(0.000)
OCCLIM_slope (β 2)		0.027**		0.000
		(0.007)		(0.000)
SCHPART_slope (β 3)		0.021**		0.000
		(0.008)		(0.000)
Student- level variance	2.22**	1.478**	1.703**	1.457**
	(0.045)	(0.031)	(0.100)	(0.085)
Deviance	18296.990	16379.402	2046.834	1947.962
Deviance difference		1917.588**		98.872**
(compared with the null model)				
Total variance explained		35.29 %		16.06 %

Note 1: * Significant at 5 % level; **Significant at 1 % level. Standard deviations are printed below the estimates and in brackets.

Note 2: None of the covariance between intercept and slope was statistically significant (at 5%).

    For more details, please refer to Appendix K.

Note 3: The results were obtained from the average of the results from the five analyses of the five sets of plausible value scores.

Table 27. *School- and student-level variances accounted for the two cohorts of students using school variables as predictors for UNCONVEN*

Models	School-level variances	Student-level variances	Total variances
1999 cohort			
Model 2	3.20 %	32.09 %	35.29 %
2009 cohort			
Model 4	2.34 %	13.72 %	16.06 %

Note : The results were obtained from the average of the results from the five analyses of the five sets of plausible value scores

Predicting student expectation of future illegal protest activities (PROTE)

The results presented in Table 28 suggested that only two school variables were statistically significant predictors of PROTE for the 1999 cohort (Model 2), which accounted for 10.86 % of variances (Table 28). Model 4 (2009 cohort) indicated that none of the school variables were statistically significant predictors of PROTE as shown in Table 28. For the 1999 cohort, the variances at intercepts, but not the slopes, were statistically significant (Table 28), implying a lack of differential effect for school variables across schools. Compared with the null model (Model 1), Model 2 (1999 cohort) had significant deviance shrinkage from 25568.080 to 25117.312 (a reduction of 450.786, df = 15), suggesting that Model 2 was a better fitting model. However, for the 2009 cohort, the two-level random slope model (Model 4) was not a significantly better fitting model as evidenced by the non-significant deviance shrinkage (a reduction of 6.259, df = 15).

Table 28. *School variables that predict the PROTE of both cohorts of students*

	1999	1999	2009	2009
	Model 1	Model 2	Model 3	Model 4
Fixed Effects				
Constant	-3.526**	-3.451**	-5.420**	-5.334**
	(0.055)	(0.061)	(0.132)	(0.158)
School factors				
CURRI		0.230**		-0.132
		(0.041)		(0.115)
OCCLIM		0.420**		0.169
		(0.041)		(0.106)
SCHPART		0.075		-0.182
		(0.045)		(0.125)
Random Effects				
School- level variance				
Intercept ($\beta 0$)	0.165**	0.273**	0.069	0.065
	(0.053)	(0.063)	(0.102)	(0.100)
CURRI_slope ($\beta 1$)		0.000		0.000
		(0.000)		(0.000)
OCCLIM_slope ($\beta 2$)		0.045		0.000
		(0.026)		(0.000)
SCHPART_slope ($\beta 3$)		0.037		0.000
		(0.027)		(0.000)
Student- level variance	9.634**	8.636**	8.003**	7.923 **
	(0.196)	(0.180)	(0.468)	(0.463)
Deviance	25568.080	25117.312	2965.017	2958.758
Deviance difference		450.786**		6.259
(compared with empty model)				
Total variance explained		11.28 %		1.05 %

Note 1: * Significant at 5 % level; **Significant at 1 % level. Standard deviations are printed below the estimates and in brackets.

Note 2: None of the covariance between intercept and slope was statistically significant (at 5%) except Cov ($\beta 0$, $\beta 2$). For more
details, please refer to Appendix K.

Note 3: The results were obtained from the average of the results from the five analyses of the five sets of plausible value scores

Table 29. *School- and student-level variances accounted for the two cohorts of students using school variables as predictors for PROTE*

Models	School-level variances	Student-level variances	Total variances
1999 cohort			
Model 2	1.10 %	10.18 %	11.28 %
2009 cohort			
Model 4	0.05 %	1.00 %	1.05 %

Note : The results were obtained from the average of the results from the five analyses of the five sets of plausible value scores

4.2.3.3 **Summary of findings from the assessment of the contribution of schools to students'**

future civic engagement

The small size of the intra-class correlation coefficients indicated that there was only a slight difference among the tested schools in both 1999 and 2009 cohorts in terms of students' attitudes toward future civic engagement. The function of the three school variables differed for the two cohorts of students. For the 1999 cohort, the school variables were able to explain the three dimensions of civic engagement both at the school and student levels. However, in the 2009 cohort, the three variables were only able to explain two dimensions (CONVEN and UNCONVEN) with variances at the student level. Furthermore, a differential school effect was observed as demonstrated by the presence of random intercept and random slopes to explain the CONVEN and

UNCONVEN dimensions in the 1999 cohort. Conversely, no such effect was detected in the 2009 cohort. The amount of variance explained for the 2009 cohort was much smaller than that of the 1999 cohort. None of the school variables were significant predictors of the PROTE dimension in the 2009 cohort. This finding suggests that over time, schools in Hong Kong have played a relatively less influential role in promoting students' expectations toward future civic engagement.

4.2.4 Results from focus group interviews

This section presents the results from the focus group interviews. These results provide complementary evidence in relation to RQ 2. In particular, the interviews explored the current role of schools in promoting students' attitudes toward civic engagement. Four focus group interviews were conducted. The findings of the interviews are not generalized to all secondary school students in Hong Kong. However, the responses offer insights into the perception of local adolescents about their participation in different forms of civic engagement and the political socialization patterns in a school setting. These results provide some potential explanations for the quantitative findings in the previous sections. Appendix H provides a summary of those findings.

The focus group interviews were conducted in June 2011 to obtain the students' views on civic engagement. See Appendix F for the full version of the interview guide. Four sample schools were selected. The characteristics of each sample school were shown in Table 3 (p. 100) in Chapter 3.

Specific codes were assigned to each of the four schools: A, B, C, and D for the first, second, third and fourth schools, respectively. A total of 18 students participated in the interviews. One student arrived late and missed the opportunity to answer questions 1 to 7. All interviewees were Form Three students (around 15 years old), 10 of whom were females and 8 were males. As indicated earlier, all the names used in this study were pseudonyms.

The results were divided into two parts. The first part focused on understanding the behaviors and values of students toward civic engagement. The second part explored the contextual factors found in the schools which contributed to civic engagement. A summary of these results appeared in Au and Chow (2012).

4.2.4.1 Students' civic engagement

Students' attitudes toward civic engagement

Students from all target schools indicated their willingness to engage in community services, such as selling flags (7 out of 17 interviewees), visiting elderly homes (2 out of 17), and participating in activities organized by government or NGOs [e.g., The Hong Kong Federation of Youth Groups, St. John's Ambulance, Caritas Group, and Community Youth Club (8 out of 17)]. All students engaged

in voting and election activities for the school student unions or class organizations.

To explain their civic engagement preferences, all students indicated their lack of experience in joining radical political activities, such as the June Fourth Memorial meeting, the 1st of July parade, and other political demonstrations or protests. The researcher asked about their willingness to initiate any political discussion in class by asking the question, "Which current issues, political or social, would you prefer to discuss more? Why?" A total of 14 out of 17 interviewees preferred to discuss social issues that affect their livelihood (e.g., issues related to the increase of bus fare, the minimum wage policy, and the implementation of the new curriculum on moral and national education) rather than political ones. Aside from this, the finding implied that majority of the students were less interested in joining radical political activities or discussing political affairs. Some of the students believed that the political issues were too distant from their experience and complained that some of the political issues, such as the Diaoyu Islands incident controversies, were difficult to handle, and some political issues were extremely sensitive. They also mentioned that their parents were uninterested in political issues, and that they themselves found political news to be boring and lengthy.

However, one student expressed an opposite view by stating her willingness (Student 4 from School D) to discuss political issues with her father:

"I prefer to discuss political issues ... with my father. I am quite subjective in discussing the current issues. For example, when I discuss issues concerning China affairs, I will blame the faults of other countries. But my father will give me counter idea by saying that the Chinese government has its own faults. The PRC also censor news and suppress people's opinions. I think both China and the other countries also hide their faults. So, I like to discuss political issues with my father."

Significant others, including family members, are important factors that influence students' preference for political discussion or even political participation (Flanagan, 2004). This finding was supported by Leung (2006) who reported the presence of socializing agents in the socializing process within contexts that embedded and influenced students. Tedin (1974, 1980) also suggested that the influence of parents was more important given that political communication was more highly developed in the family rather than in peer groups. For instance, Student 4 from School D was mainly encouraged by her father to participate in political discussion, and this evidence was supported by previous research findings (e.g. Tedin, 1974, 1980).

In summary, the interviews indicated that students preferred social rather than political forms of civic engagement. Such findings were consistent with the results from the secondary data analysis in section 4.2.2. Students of the 2009 cohort had higher scores in the UNCONVEN dimension than those in the 1999 cohort. The findings from focus group interviews also indicated that students

preferred to participate in more peaceful means of future civic engagement, such as participating in social services to help the needy or to engage in community services.

Students' perception on the values of civic engagement

All students from the four target schools indicated that they enjoyed participating in community services and found the activity to be meaningful when they were asked about the values of civic or political participation. They shared similar reasons:

Student 3 from School A:

> *I sold flags for the needy as it is meaningful. Furthermore, I also visited the elderly homes and had performance for them.*

Student 1 from School B acknowledged that volunteering to help the poor was a meaningful task.

> *… The form teacher will tell us the social problems … in the society. How miserable the poor are, especially the new immigrants. That is the reason why I choose to … to be a volunteer to take care of the poor. I think it is meaningful.*

Student 2 from School C expressed similar views:

> *I like to visit the elderly homes. I think it is meaningful. And, together with my friends to participate in social services, I will be happier.*

Students from School D indicated that, in addition to the meaningful values of social service, their own character motivated them to participate in social service.

Student 1:   I think it's because of my personality. I like to help others. If nobody does the service but I am interested in doing that, then I will be willing to join it.

Student 4:   I join the social services because I can help others. Second, I can learn more from doing this. For instance, I can help the children. I will know what their needs are …. Through this, it will help me to grow.

Student 3:   I also join it through the school. I think if I am able to help others, it is very meaningful.

Student 1:   I think I enjoy doing it. I am born to be interested in doing that.

In explaining their reasons for participating in community service, all interviewees cited the meaning of social service engagement as the most significant reason for their participation. Students used a constructivist approach to justify the meaning in community service participation, and preferred to attribute intrinsic values rather than extrinsic motivation as the more important reason for their participation (Jones & Hill, 2003). A total of 13 out of 17 interviewees indicated the encouragement of teachers as the second important reason. Other reasons were attributed to the influence from peers, gaining credit for extra-curricular activities, entertainment, and accumulating good experiences. Positive experiences in social and community service participation might reinforce future engagement in social services.

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4.2.4.2 School contextual factors

In the subsequent section, students' perceptions on the influence of school variables (i.e. students' school participation, intended civic curriculum, and classroom climate) on civic engagement were presented.

a. *Student participation in school life*

Students' confidence and ability to change school policies are good predictors of their future political efficacy as adults in society (Burns, Schlozman, & Verba, 2001; Kahne & Sporte, 2008; McFarland & Thomas, 2006; Youniss & Levine, 2009; Youniss & Yates, 1997, 2000; Zaff et al., 2003). Therefore, students' opinions on their confidence to change school and government policies in the future were explored.

Efficacy in changing school policy

A total of 14 out of 17 interviewees claimed that they had the confidence and ability to change school polices. Interviewees from Schools B and D showed the highest confidence or efficacy to change school policies through student unions. They cited some successful examples, such as replacing new hot water bags in the sick room and placing six bottles of anti-mosquito liquid in

School B, and providing umbrellas in the southern gate during rainy days as well as offering Secondary 4 History as an optional subject in school year 2011–2012 in School D. The students expressed their confidence to change school policy because they believed in democracy. Considering the students' right to freedom of speech, school authorities expressed their willingness to listen to them provided that their requests were reasonable and appropriate.

Interviewees from School D expressed the following opinions:

Student 1:   *If what we suggest is reasonable and appropriate, the school will listen and make necessary changes.*

Student 2:   *We live in a democratic society. In school, we also have democracy. The school will hear [the] students' voice. As what (Student 1) said, if our opinions are reasonable and appropriate, the school will listen to us.*

Student 3:   *… A school can stand because it has students. So, the school will listen to students' opinions.*

Student 4:   *We have the SU and it works for the goodness of the students. … It will reflect our opinions to the school. For instance, the school did not allow students to eat in the classrooms in the past. The SU reflected our opinions (as we prefer to have eating in the classrooms). At last, the school listened to our pleas.*

According to the interviewees from School B, democracy and freedom of speech enabled them to believe that they possessed the efficacy and confidence to change school policies. They shared the following views:

Student 2: *(In the society) We have democracy. Whenever we have problems, we can make complaints. We also have freedom of speech. So, in a school, the teacher can educate us about this. The government can allow us to voice out [our opinions]. The school can also teach us this. As we have freedom of speech, we can reflect our opinions. So, this makes our school to have progress.*

Student 3: *In Hong Kong, everybody is equal. I also believe that the school shares the same belief. Everyone is equal and has freedom of speech. We can freely to express our opinion.*

Student 4: *Well. We can make use of some influential bodies like Student Union, or to have Student Post and to write letters to reflect our views. I think it would be much better than just using a single individual's opinion. These bodies can help us to change our school.*

Belief in democracy and freedom of speech enabled students to actively participate in school affairs. They expressed their views through student bodies. For example, fifteen out of 17 interviewees expressed their willingness to be united as a group through the student union to voice their opinions. They considered this approach to be more powerful. As individuals, they also conveyed their desire to act, such as writing proposals to school principals to change school policies.

Efficacy to change government policy

The students were asked whether they would be able to influence or change government policies

when they became adults. A total of 10 out of 17 interviewees expressed moderate to little confidence to change government policy. Six out of 17 interviewees denied their confidence or ability to change government policy. Majority of the interviewees had a less optimistic view regarding their capacity to influence the government in the future. Students from School B explained their reasons as follows.

Student 2: *Yes. I also think there is some influence. Yet, this kind of influence is small… very small. First of all, supposed that we are more familiar to others in school (so, we can influence the school policy easier). However, when we are in a society, we may not know the others.*

Student 1: *In the society, there are so many people.*

Student 2: *If there are some changes, it changes slowly. It is a long path. The issues may not be dealt with quickly.*

Student 4: *… The government can selectively accept their (people's) opinions and then to implement the plans… Apparently, the government is willing to accept our opinions. In reality, it may not practice that. It seems they talk in this way but act in another way. Therefore, our influence to the society is very small… Yes. The government will selectively choose to listen to some opinions. So, we do not have sufficient ability to change the government.*

Their responses indicated that even when students had the confidence and successful experiences to influence school policies, they still had less confidence to influence government policies in the future as adult citizens. This finding could be attributed to their belief that the society was more

complicated than schools. Hence, unifying the effort of citizens to influence the government became a more difficult task. Students also believed that the HKSAR government was not sufficiently democratic because they used the term "selectively accept" to describe government efforts to collect public opinions in the consultation processes.

Student 2 from School D expressed another reason that weakened their confidence to change the government policy.

> *Student 2:* *If you want to reflect your opinions in the society, you need to be brave enough to do so. In school, we are in a familiar environment. When we voice out, we may not influence others that much (only within school context). However, in the society, when we voice out, many people will hear it. They may pose our opinions in the internet. Therefore, we need to think very carefully when we express our views. I don't have the confidence to voice out opinions (in the public).*

Some students attributed their weaker political efficacy to influence government policy to their fear of taking responsibility for their opinions.

b. *Open classroom climate*

Substantial Western literature has revealed the positive effects of an open classroom climate on

students' civic development (Campbell, 2008; Hooghe & Quintelier, 2011). The interview questions were related to student views on civic topics for classroom discussion, open classroom climate, and pedagogy.

Discussion of current issues during lessons

A total of 16 out of 18 interviewees reported that current issues were often discussed in lessons, such as Liberal Studies (100%), Chinese History (50%), History (50%) and Geography (50%) as well as in other free lessons. Some students discussed the current issues during recess and after school. Fifteen out of 18 interviewees preferred to discuss social issues (e.g., the proposal of the government to distribute $6,000, the implementation of moral and national education as a compulsory subject, and so on) rather than political issues (e.g., political election campaign, the Diaoyu Islands incident, and so on). However, several students were aware that current issues could be both political and social in nature depending on the perspective used to analyze the issue. For example, minimum wage could be a controversial social issue because it affected the living standard of the grassroots working class. However, it was also a political issue because political parties would use that issue to criticize government decisions.

Pedagogy of teachers and the classroom climate

All interviewees agreed that their teachers used a more open and democratic teaching style in Liberal Studies, which enabled them to freely express their opinions. They also reported that they used multi-perspective thinking in analyzing issues. However, one interviewee (Student 3 from School B) expressed that poor class discipline often hindered the proper functioning of a fruitful discussion.

To deal with controversial issues, teachers appeared to be rational, neutral, and willing to accept views from different perspectives; they also used more democratic means to manage divergent views. Then, the teachers guided the students to integrate their opinions from different perspectives to reach a consensus. Most of the interviewees agreed to the methods suggested by their teachers.

Student 2 from School A:

> *Usually, the teacher will describe the conflicts in a rational way. He/she will not make any personal judgment on it. Just use a logical way to list out possible solutions and let us reach a conclusion to resolve a conflict.*

Students from School C also shared similar experience as follows:

> *Student 1:   The teacher will give us two sides of the picture. Then, let us have*

discussion. He will lead us to reach a conclusion.

Student 1:   *Yes. The teacher will explain the idea of 'pros' group to the 'cons' group.*

Then (the teacher will) reverse the step. Let us see both sides.

Student 5:   *The teacher may reach conclusion from both sides and make the*

comparison.

Researcher: *How about the conflicting views are very different ? How to resolve*

them ?

Student 1:   *By voting. Use a democratic way to solve the conflicts.*

Student 1 from School B had similar experience in dealing with conflicts during discussion:

Yes…. The teachers' role is very important. They may let us cool down and then

consider both sides (of the issue) very objectively. We will not be biased to any one

side. They will encourage us to give more opinions.

Students' responses showed that teachers played a significant role in resolving conflicts or

controversial issues. They motivated students to adopt an open attitude and multi-perspective

thinking to understand an issue. When asked about the openness of their classroom environment, all

interviewees confirmed that their classrooms were sufficiently open for discussions regarding

current political and social issues. The following transcripts indicated how teachers facilitated the

class to adopt an open and democratic climate. Some teachers even discussed politically sensitive

issues such as the June Fourth Incident in class.

Students from School B:

> Student 2:   *Our classroom is open enough. Teachers let us express opinions, train us to have confidence to express our views.*
>
> Student 3:   *... Teachers may spend some time to discuss issues with us during lessons.*
>
> Student 4:   *Yes. (Our classroom is) Open enough. ⋯ during the lessons, we may discuss this issue (the June Fourth Incident), get to know about the history of it and how the government dealt with that and so on. The teachers give us some "space" to consider the issue and make [our own] judgment.*

The positive effects of democratic and open classroom climate were supported by a local study conducted by Sun, Shek, and Siu (2008). Their findings indicated that the first successful factors were positive school ethos and teachers' positive beliefs in students' potential. Moreover, they argued that the improved learning experiences of the students in school or in the classroom could be attributed to an open classroom climate, which was characterized by a free, democratic, and open atmosphere wherein students could freely express their views with mutual respect and multi-perspective thinking. The findings of the focus group interviews also confirmed the results from the Rasch analysis in section 4.2.1.3 as it indicated that students from both cohorts consistently agreed teachers respected their opinions and encouraged them to express their opinions during class. They felt free to express opinions even when their opinions were different from others, implying that the students perceived their classrooms were open enough to enable them to express

their independent opinions freely.

c. *Civic curriculum*

Previous literature reported a strong connection between civic courses and students' civic participation (Gimpel, Lay, & Schuknecht, 2003; Torney-Purta, 2002). Regarding the influence of civic curriculum on students' civic development, the current study asked open-ended questions related to civic curriculum, civic topics, and the civic skills of students.

Civic skills

The most common civic skill students learned in class was the use of multi-perspective thinking to make interpretations. A total of 9 out of 18 interviewees regarded this skill as the most common one. Civic lessons required students to conduct more discussions; hence, students should formulate their opinions by adopting views from various perspectives. Other common civic skills included the following: analyzing problems using logical or critical thinking, creating constructive and harmonious discussions, respecting the views of others, controlling emotions to make rational decisions, organizing views, and preparing good presentations.

Civic knowledge / topic

Nine out of 18 interviewees believed that the existing civic knowledge and topics were insufficient, because the curriculum did not include current news, and teaching time was limited. A student from School A even complained that civic knowledge would not have an effect on their civic behaviors if they were not provided with opportunities to attain meaningful civic experiences. However, the schools provided different emphases, based on the respondents' answers when they were asked about the civic topics they had learned. School D emphasized national social affairs, such as the problems of mainland pregnant women, fuel resources problems of PRC, and so on. Students from School B emphasized topics related to current social affairs, and School A emphasized moral virtues and civic behaviors such as respect, politeness, and so on.

Students from School A said:

> *Student 2:* *I think we have learnt enough about civic 'right' and 'responsibility'.*
>
> *Student 3:* *We have learnt a lot about some virtues like respect, politeness and so*
> *on. … We also learn to use a proper manner to manage affairs or to*
> *deal with others.*

Students from School B expressed these opinions:

> *Student 3:* *… Whenever we discuss current issues, they must be something very*

> *[close] to us. We may face new current issues every day. So, ... What I*
> *can conclude is that there are many topics we can deal with. These*
> *topics help us understand the community we live in.*

Student 2: *We have new affairs. New policies issued every day. Every year, there*
are a lot.

Student 4: *The teachers can openly discuss these issues with us.*

Student 3: *We may discuss some issues affecting our family members, such as*
minimum wage and so on. We want to express our opinions. We are
lucky that our teachers are willing to discuss the current issues with us.

The students suggested the inclusion of civic topics in the curriculum. Two target schools (50%) suggested the inclusion of more topics on current national issues, two target schools (50%) suggested the addition of topics related to international issues and their respective historical background. Furthermore, there were three target schools (75%) suggested the inclusion of more topics on current news. The students were also eager to learn more about environmental issues, such as global warming and topics related to the different types and functions of NGOs and other charity organizations.

4.2.4.3 Summary of the findings from focus group interviews

The findings of the four focus group interviews were helpful in understanding how a small sample of Hong Kong students (n = 18) created meaning from multiple processes from their participation in

school activities, classroom activities, pedagogies and civic curriculum to political socialization. Evidence from this study supported that political socialization is an active rather than a passive process. This finding is consistent with previous research (Leung, 2006; Leung & Yuen, 2009a) and lends support to the findings from the secondary data analysis of the present study. Students from the 2009 cohort preferred to participate in social movement-related activities, but not so much in protest activities.

Meanwhile, the findings from the focus group interviews on the role of the school in promoting students' civic engagement were also positive. Students interacted with socialization agents (e.g., teachers, peers, and parents) to construct their political realities. Teachers had a significant role in facilitating a democratic and open classroom climate by encouraging students to use multi-perspective thinking and to engage in free discussion. However, the present study also indicated that students who possessed confidence and civic efficacy in changing school policies might not perceive that they possessed sufficient confidence and political efficacy to change government policies as adult citizens in the future. Perhaps, this crucial finding explained why the school of the 2009 cohort had played a less influential role in promoting students' expected future civic engagement. The implications of this qualitative study are discussed in Chapter 5.

Chapter Five

DISCUSSION

This chapter comprises six sections, which begins with a presentation of research findings drawn from both quantitative and qualitative studies, in relation to the different forms of future civic engagement, school contextual factors, and gender issues. The data were interpreted with reference to the social, political, and educational contexts, particularly to the development of civic education in Hong Kong. The research contributions are then assessed based on the theoretical framework of the 'Octagon' political socialization model (Torney-Purta et al., 2001) regarding the school contextual influences on human development among adolescents. The chapter ends with a discussion of the potential implications for educational practice and government policy, as well as directions for future research.

5. 1 Introduction

This study extends previous research on civic engagement, its measurement and conceptualization, and school-level influences on civic development among adolescents in Hong Kong. It builds on the works of Fairbrother (2003, 2008, 2010), Fairbrother and Kennedy (2011), Kennedy (2007, 2010), Kennedy and Chow (in press), Kennedy, Huang, and Chow (2012), Lee (1999, 2004, 2008), Leung

(2006), Leung and Yuen (2009a, 2009b), and Leung, Yuen and Ngai (in press). A mixed-method design was adopted using secondary data analysis of student survey responses and focus group interviews to understand students' perceptions of future civic engagement. The present study contributes to the body of literature on adolescent political socialization (e.g., Beaumont, 2010; Beaumont et al., 2006; Colby et al., 2007; Hahn, 2010; Torney-Purta, Amadeo, & Andolina, 2010; Zukin et al., 2006), especially in relation to students in the unique context of Hong Kong.

Adolescence is an important period that prepares individuals to become active and responsible citizens in the future. The assumption is that good citizens are not born, they are taught. Thus, the key issue here is to identify the ecological factors in the broad social and political infrastructure of Hong Kong and the extent to which it influences students to develop commitment and understand their identities as good, active, and participatory citizens. As schools play a crucial role in meeting the developmental needs of adolescents, the key contextual factors within school settings are worthy of investigation.

The present study used the "Octagon" model of political socialization (Torney-Purta et al., 2001), derived from the Bronfenbrenner's ecological systems model (1988, 1989, 2005) and supplemented by the situated learning model of Lave and Wenger (2002), in order to understand the proximal processes within the school context. The results indicated that school contextual factors influence different aspects of future civic engagement in different ways across time. Furthermore, these

school factors predicted students' expectations of future conventional and unconventional participation from 1999 to 2009. The research findings supported those of previous studies relating to the influence of both formal and informal curricula within school settings on the civic outcomes of students (e.g., Andolina et al., 2003; Au & Chow, 2012; Campbell, 2005, 2007; Ekman, 2006; Flanagan et al., 1998; Gilleece & Cosgrove, 2012; Hahn, 1998, 2010; Ho, Alviar-Martin, Sim & Yap, 2011; Isac et al., 2013; Lee, 1999; Mapiasse, 2007; Print, Ornstrom & Nielsen, 2002; Sun, Shek & Siu, 2008; Vieno et al., 2005). For instance, positive civic outcomes, such as trust in government, voting behavior, students' confidence in school participation and positive attitudes toward immigrants, are related to an open and democratic classroom climate (Torney-Purta & Barber, 2005). Furthermore, valuing school participation is associated with the students' belief that the school is an effective community. Such valuation supports the view put forward by Lave and Wenger (2002) that students develop a sense of belonging through social processes within their schools.

5.2 Summary and interpretations of findings from quantitative and qualitative analyses

The summary of the research findings of this study is presented in two parts. The first part addresses RQ 1, and the presentation of results is related to the changes in the students' attitudes toward future civic engagement. The second part addresses RQ 2, and explains the changes in students' attitudes toward future civic engagement in relation to the school context.

5.2.1 Measuring changes in civic engagement: 1999 – 2009

Students' attitudes toward expected future civic engagement: 1999 - 2009

This study attempted to understand adolescent attitudes toward expected future civic engagement through a standard international civic engagement measure based on the Political Action Scale (PAS) of the IEA CivEd Study (1999). The scale was used to examine the future political and social involvements of the students in the community. Following the IEA CivEd Study, validation procedures were conducted using Rasch measurement. The three factors identified from the 12 items in this study (i.e. Conventional Participation (CONVEN), Unconventional Participation (UNCONVEN), and Protest Activity (PROTE)) confirmed the findings of Schulz and Sibberns (2004: 117). The idea underlying future CONVEN relates to the citizens' behaviors associated with compliance to social norms or democratic duties (Torney-Purta et al., 2001). These are exemplified by voting in the national elections, supporting or joining political campaigns or political parties, and even candidacy in local or national assemblies (Isac et al., 2013; Schulz & Sibberns, 2004). The dimension of future UNCONVEN is more concerned with citizens' democratic rights and active participation in the society to improve one's own life circumstances and that of others. Some examples include volunteering to help the poor or the elderly in the community, raising funds for a social cause, and collecting signatures for a petition or participating in any non-violent protest (Isac

et al., 2013; Schulz & Sibberns, 2004). Meanwhile, the dimension of PROTE refers to the use of violent and illegal means of civic engagement, such as spray-paint protest slogans on walls or blocking traffic as a form of protest, to influence the government to change its policies (Schulz & Sibberns, 2004).

The factor structure of the Political Action Scale (PAS) has been discussed in the literature. Kennedy (2007) used the international samples from the 1999 IEA CivEd Study and reported a four-factor structure based on exploratory factor analysis. This structure appears to be conceptually sound. Labeling the subscales was based on theoretical considerations. These include the following: "the importance of political rights," "the importance of political obligations," "the importance of voluntary activities," and "the importance of protest activities." Schulz (2005) also identified four factors, which include "electoral participation," "political action," "social movement," and "protest." The present study used samples of Hong Kong students from the 1999 and 2009 cohorts. A three-factor structure was consistently identified in both cohorts. Such findings matched the original design of the IEA CivEd Study which implied that Hong Kong students' conception of future civic engagement matched that of the calibrated international samples rather than the samples used by Kennedy (2007) and Schulz (2005). To conclude, Hong Kong students of both cohorts considered future civic engagement as a multidimensional construct comprising three dimensions.

The changing attitudes toward future civic engagement: 1999–2009

Results from the Rasch analysis indicated that the patterns of item endorsement along the logit scale of the two cohorts were similar in many ways. In relation to the dimension of CONVEN, students of the 1999 cohort found that the most difficult items to endorse were related to a more active form of political participation, such as joining political parties and preparing to be candidates for local or city office in the future. The same finding was revealed in the 2009 cohort, as the student responses formed a cluster at the top position of the item maps. Conversely, students of both cohorts exerted more willingness to perform some conventional political duties in the future, such as voting in the national election and obtaining information about candidates before voting, as reflected by the bottom location of the items in the item maps of the two cohorts. Students perceived that they would easily conform to the adult social norm by assuming democratic duties to vote in the future. This important finding was consistently shown in the 1999 and 2009 cohorts. The results from the Rasch latent regression analysis also indicated no statistical significant difference between the two cohorts of students in terms of CONVEN.

However, the *ICCS 2009: Hong Kong Report* indicated that Hong Kong students' intention to vote in elections still slightly below the international mean. For instance, the Hong Kong score for expected adult electoral participation is 48 (0.3) versus the international mean of 50 (0.1), while the Hong Kong score for expected adult participation in political activities is 47 (0.2) versus the

international mean of 50 (0.0) (Lee et al., 2009). Perhaps, the school authority and the government need to do more to ameliorate the present situation.

Regarding UNCONVEN, as indicated from the item maps, both cohorts of students consistently indicated that they would like to engage in voluntary, community service or to take up actions to improve one's own life circumstances and that of others as they found these items much easier to endorse. Nevertheless, students of both cohorts were less willing to engage in certain non-violent protests to improve their life circumstances, such as participating in demonstrations or rallies, to compel the government to solve community and social problems.

Some differences were observed between the two cohorts. Students of the 2009 cohort endorsed UNCONVEN more strongly than those of the 1999 cohort. A study of the underlying meaning of the items that measured UNCONVEN showed that students of the 2009 cohort expected to participate in more community services and they had relatively more positive expectations of future civic engagement by choosing peaceful means to express their concerns toward the government and the community than those in the 1999 cohort.

Second, more students in the 1999 cohort tended to choose protests to express their attitudes or political preference in the future, compared to those in the 2009 cohort. Results from the Rasch analysis of the items of the PAS showed that students might spray-paint protests on walls, choose to

block traffic, or to occupy public buildings as a form of protest, although only very few students in both cohorts chose violent means to express their political discontents. The findings of this study are similar to those reported in the *ICCS 2009: Hong Kong Report* (Lee et al., 2009). The report showed that Hong Kong students attained a relatively lower score than the international mean in terms of their expected participation in future legal or illegal protest. Overall, there is a consistent finding in the present study that Hong Kong students in the past decade generally did not favor the use of violent means to express their discontent.

Findings from the qualitative focus group interviews were consistent with the survey results: students preferred to engage in social or community service rather than political activities. The interviewees were asked whether they were willing to initiate any political discussion in class, and 14 out of 17 interviewees preferred to discuss social issues that affected their livelihood (e.g., issues related to the increase of bus fare, the minimum wage policy, and the implementation of the new curriculum on moral and national education) rather than political ones (e.g. to join political demonstrations like the June Fourth Incident). A majority of the students were less inclined to join radical political activities or discuss political affairs in most of the PSHE lessons. Some interviewees thought that the political issues were too distant from their experience or too sensitive to be discussed openly. For instance, the issue of the Diaoyu Islands incident was beyond their ability to comprehend. Others regarded political news was boring and lengthy. Several interviewees were uninterested in the political news because of the influence of significant others (e.g., their

parents) (Au & Chow, 2012). This result was consistent with Tedin's (1974, 1980) view that parental rather than peer influence was dominant in political communication during adolescence.

Changes in gender differences in future civic engagement: 1999–2009

The findings of this study are consistent with international research findings that boys in Hong Kong were more likely to engage in political activities and join political parties, write letters to newspaper, or join protest activities, whereas girls were more willing to engage in community service or show concern for community needs (Au, 2013; Barber & Torney-Purta, 2009; Flanagan et al., 1998; Kennedy, 2007; Lee et al., 2009; Richardson, 2003). This gender difference was observed in both cohorts in the current study.

Despite the similar pattern of gender differences shown in both cohorts, more gender differences were observed in the 1999 cohort than in the 2009 cohort. Gender differences were statistically significant in the three dimensions of expected future civic engagement in the 1999 cohort, whereas no such difference was found in the 2009 cohort. Moreover, in the 1999 cohort, the gender differences were particularly related to CONVEN (e.g., more boys like to write letters to a newspaper about social or political concerns than girls) and PROTE (e.g., more boys than girls choose to engage in illegal forms of protest like spray-paint or to occupy buildings). Nevertheless, in the 2009 cohort, neither boys nor girls strongly endorsed violent protests as a means to express

their political preferences in the future. Furthermore, gender differences were not statistically significant in the three dimensions of future civic engagement in the 2009 cohort, suggesting that both boys and girls perceive themselves to have more equal roles in civic engagement. They were more open and willing to participate in civic activities, regardless of the nature of different types of civic activities in the recent cohort.

In fact, the concept of gender equality was more widely recognized among Hong Kong students, as supported by the recent findings in *ICCS 2009: Hong Kong Report*, given that the rating on measuring attitudes toward gender equality was above the international mean (Lee et al., 2009). The new findings may challenge the traditional views that females are generally less politically and civically engaged (Delli Carpini & Keeter, 2000; Gronlund & Milner, 2006), and that the traditional political socialization processes only favored males (Alozie et al., 2003). In explaining the finding that no gender differences were found in the recent cohort, perhaps, it may be due to some changes in the past decade. For instance, the setting up of Equal Opportunities Commission in 1996 which promoting equal opportunities to gender equality and equal opportunities for ethnic minorities and people with disabilities, the introduction of gender equality topics in civic education from 1995 onwards and equal education opportunities to pursue further education may explain the recent phenomena of gender equality (Au, 2013).

In conclusion, the changes in students' attitudes toward future civic engagement across the past decade may be due to changes in civic environment at the micro (e.g., the influence from school and peers) and macro levels (e.g., from cultural beliefs, social customs, and economic values). This explanation is suggested by the political socialization model of civic education proposed by Torney-Purta et al. (2001). The model highlights the role of the environment in socializing adolescents with civic values, skills, and knowledge. Within the school context, students' perceptions of their role in influencing school policies, to foster a democratic classroom climate to perpetuate open discussions on controversial political and social issues, and to implement official civic curriculum (e.g., *Guidelines on Civic Education in Schools*, 1996; *Learning to learn: The Way Forward in Curriculum Development*, 2001; the *Revised Moral and Civic Education Curriculum Framework*, 2008) can be considered as influential factors. Consequently, an issue arises in relation to the degree of influence that schools wield in the political socialization process. This issue is addressed in the subsequent section.

5.2.2 Do schools have a role in students' expectation of future civic engagement?

Between-school effect

Political socialization works within systems (Torney-Purta et al., 2001). The present study used multi-level modeling analysis to examine the effect of the school context via three variables

(intended civic curriculum, open classroom climate, and students' perception on the value in school participation) on the students' expected future civic engagement in both cohorts. A consistent finding was that there was the little variation among schools with respect to students' future engagement in Hong Kong. This finding is consistent with Kennedy, Mok and Wong (2011), who examined schools in Asian region and with research conducted in the West (e.g., Isac, Maslowski, Creemers, & Werf, 2013; Mirazchiyski, Caro, & Sandoval-Hernandez, in press).

The homogeneous school culture can, perhaps, explain the small or even non-significant between-school effects. Benninga and Quinn (2011) explained that education leaders shared similar beliefs, allocating most of the resources to academic basics (e.g., language and math subjects) rather than preparing students for citizenship. This preference is reflected in the goals of the annual school plan, as well as the three-year goals of major concerns from schools with more allocations of instruction time, funding, manpower or other resources in the academic aspects. If such practice is common among Hong Kong schools, then it may help explain the small intra-class correlation coefficient for both cohorts. The homogeneous school culture could be further explained by the phenomenon of the Confucian heritage culture, which emphasizes moral, instead of civic values, and academic achievement. Such culture is characterized by an overemphasis on assessment, a centralized school system, and a pyramidal education structure (Watkins & Biggs, 2001: 3).

Second, the small between-school effect can be attributed to the uniform practice among schools by implementing the official civic curriculum (CDC, 1996, 2001, 2002, 2008). Before Hong Kong's Handover, schools implemented the *Guidelines on Civic Education in Schools* (CDC, 1996), which placed more emphasis on civic values with six foci, including education for democracy, education for rule of law, human rights education, nationalistic education, global education, and education for critical thinking (Leung, Chai & Ng, 2000). Since the millennium onward, the government has placed more emphasis on moral, instead of civic education (Leung & Yuen, 2009b; Leung, Yuen & Ngai, in press). Moral and civic education is one of the four key tasks (CDC, 2001) which is considered as an important official guide given to schools for developing students holistically through the cultivation of positive values and civic attitudes. In 2002, CDC also urged the schools to nurture in their students five priority values, namely, perseverance, respect for others, responsibility, national identity, and commitment to society and nation. Similarly, the *Revised Moral and Civic Education Curriculum Framework* (2008) also promoted moral values and character development at the school level. The official civic curriculum placed more emphasis on moral education and de-politicization. Perhaps, this explains why schools placed less emphasis on nurturing their students' future civic engagement.

Isac, Maslowski, Creemers, and Werf (2013) used a different perspective to explain the small difference among schools. Perhaps, schools were under similar sources of influences. Isac et al. (2013) summarized the influences as mainly from individual student factors (e.g. gender,

socio-economic status, immigrant status, educational aspiration, background, motivation, opportunities they have to learn to discuss and practice democracy outside school) and other factors from the community (e.g., mass media, government policies, and popular culture). An increasing number of recent studies support this view (see Schulz et al., 2010; Torney-Purta et al., 2001; Wilkenfeld, 2009).

Students' civic experiences in school

In the within-school context, results from the multi-level modeling analysis showed that a consistent significant school impact on students' civic engagement was found in both cohorts. For instance, the formal civic curriculum, open and democratic pedagogy, and informal or hidden curriculum through student participation in extra-curricular activities or student bodies to effect changes in school policies seem to have crucial roles in students' civic development. However, the present study suggests that such school effect seemed less influential in the 2009 cohort. In the 1999 cohort, the school variables accounted for approximately 34% of the variance to predict student perception of Conventional Participation (CONVEN), whereas in the 2009 cohort, the school factors accounted for approximately 10%. To predict Unconventional Participation (UNCONVEN), the school factors accounted for 35% of the variance in the 1999 cohort, compared with approximately 16% of variance in the 2009 cohort. To predict student perception of Protest Activity (PROTE), the school factors accounted for 11% of the variance in the 1999 cohort, but no

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significant variance was observed in the 2009 cohort. The decreased impact of school factors in the 2009 cohort can be attributed to various reasons, including the de-politicization and moral emphasis in the official civic curriculum (Lee, 2004, 2005; Leung & Ng, 2004; Leung & Yuen, 2009b, Leung, Yuen & Ngai, in press), the changes in political socialization within other systems, and so on. For example, Harell et al. (2008) examined the effects of technological advances (e.g., the use of blogs or e-mails) on civic outcomes. Isac et al. (2013) studied the different aspects of influence on civic engagement other than the school system. Kennedy, Mok, and Wong (2010) also explored the effects of political socialization through the families of students. All these studies suggested that political socialization also occurred outside the school. Future studies could, therefore, examine the impacts of different systems on adolescent expectations toward different types of future civic engagement. However, the results of the present study indicated that the school continues to have a significant role in the promotion of different types of civic engagement. In line with this, the subsequent section presents a discussion based on the political socialization model (Torney-Purta et al., 2001) with reference to school contextual influences to the students' expectations on future civic engagement.

a. **Civic curriculum**

With regard to the explanatory models proposed in section 4.2.3 of Chapter 4, the variable civic curriculum has a relatively more important role in influencing student attitudes toward their future

civic engagement, as compared with other school factors such as open classroom climate and student perceptions on the effectiveness of participation in effecting changes to school policy. The civic curriculum is a significant predictor of all types of civic engagement in the 1999 cohort and of two types of civic engagement in the 2009 cohort. In line with the previous studies (e.g. Gimpel et al., 2003; Niemi & Junn, 1998; Torney-Purta, 2002), the present study provides empirical evidence on the importance of civic courses or lessons in the future civic engagement of the students.

Rasch analysis of students' self-report on the civic curriculum topics they have studied showed that both the 1999 and the 2009 cohorts encountered civic topics or skills as part of the civic curriculum. The students were least exposed to the topics on patriotism and loyalty toward their mother country or government. This finding can be easily explained in the case of the students in the 1999 cohort who only spent two years under Chinese sovereignty. However, the level of endorsement was the same for both cohorts, although the 2009 cohort students were living as Chinese citizens for 12 years. These findings were complemented by the results of focus group interviews conducted in the middle of 2011. Half of the interviewees suggested the need to have more civic topics concerning current national issues (e.g. the problems caused by mainland pregnant women to Hong Kong and fuel resources problems of PRC). Moreover, 75% of the interviewees suggested the need to have more topics on current news in their present civic curriculum. Hong Kong students seemingly lacked sufficient exposure to elements of national education, which can possibly explain the

concerns of the HKSAR Government to propose the implementation of moral and national education as an independent subject (HKSAR Government, 2011).

The second finding that deserves our attention is the response of students in the 2009 cohort that they had not learned enough about the importance of the voting system in the national and local elections, as reflected in the Rasch analysis. Findings from focus group interviews also revealed the students' concern about the Hong Kong government as they perceived the government was not democratic enough. One of the interviewees even raised a worry that the government only selectively chose to listen to opinions that favoured its policies. Furthermore, students felt that they had inadequate knowledge of the democratic voting process for their representatives or about the mechanisms of the voting system and consultation procedures of the government. Such interpretation may help explain the quantitative findings that students aspired to obtain more knowledge about voting in building up a democratic government.

Although students expressed their concerns on the inadequate knowledge regarding patriotism and political structures, the opposite is true in the case of environmental protection. From the observation of the item maps, students in both cohorts indicated that environmental topics were the easiest for them to endorse because of the previous efforts on environmental education (CDC, 2002a, 2002b, 2008).

Similarly, the students of both cohorts found that they had not learned enough civic skills to solve problems in the community. This could be attributed to their younger age, limited experiences, and meager exposure to community needs. Among the civic skills that students found easy to learn were cooperating or working in groups with other students, which is a result of their work in group projects on civic-related topics or humanities subjects. Another civic skill that was considered easy to learn was understanding people who had different ideas, which can be explained by the training of multi-perspective thinking or empathy in class. In addition, the interviewees in the qualitative study reported that the most common civic skills were applying multi-perspective thinking, using logical or critical thinking to analyze problems, and respecting the views of others in creating a more constructive and harmonious discussion. Overall, the findings from both Rasch measurement and qualitative interviews highlighted several civic skills that facilitate an open and democratic culture in a civic classroom.

b. Classroom climate

This study adds to the growing body of evidence regarding the importance of a classroom climate to develop positive attitudes toward future civic engagement (e.g., Campbell, 2005, 2007; Chai, Galloway, & Lee, 2010; Ekman, 2006; Hahn, 1998, 2010; Lee, 1999; Mapiasse, 2007; Print, Ornstrom, & Nielsen, 2002; Sun, Shek, & Siu, 2008; Torney-Purta & Barber, 2005). Based on the explanatory models in Chapter 4, results from multi-level modeling analyses showed that an open

classroom climate was a significant predictor of the three types of civic engagement in the 1999 cohort, but was a significant predictor only of UNCONVEN in the 2009 cohort. Schools must thus exert more effort in developing a more open and democratic classroom climate in the future.

Based on Rasch analysis, the Open Classroom Climate Scale (OCCS) showed a similar pattern of distribution in both cohorts. For instance, students in both cohorts reported that the easiest item to endorse was teachers respecting their opinions and encouraging them to express themselves during class. Aside from this pattern, students consistently cited the ability to freely express their opinions in class even when their opinions differed from most of the students, and their teachers presented several sides to an issue to explain them in class. The *ICCS 2009: Hong Kong Report* showed a similar result (Lee et al., 2009: 27).

Meanwhile, the Rasch analysis also revealed that students from both the 1999 and 2009 cohorts expressed difficulty in openly disagreeing with their teachers on political and social issues during class. This finding was consistent with Hahn's research (Hahn, 2010: 321). When compared with students from Hong Kong, the United States and Australia, relatively fewer Hong Kong students indicated they 'often' had open disagreement with their teachers about political and social issues. Furthermore, they also indicated less ease in raising current political events for discussion in class. It seems that there were some hindrances in creating a genuinely open and democratic classroom in the Hong Kong context compared to contexts in Australia and the United Sates. Under the influence

of Chinese culture, especially in the Confucian heritage classroom, students perceive teachers as knowledge authority and role models, and thus, students are reluctant to challenge their teachers (Watkins & Biggs, 2001).

The findings of the qualitative interviews in the current study further substantiate the role of teachers in classrooms. Most interviewees agreed that teachers had significant roles in creating a democratic and open classroom. Teachers often adopted an open attitude when presenting different perspectives on the same issue to students. Students were free to express their views and reach a consensus. All interviewees agreed that discussing current political and social issues was possible in their classrooms. For instance, in Liberal Studies classes, students were able to express themselves freely and to use multi-perspective thinking to analyze some politically sensitive issues, e.g. the June fourth Incident and so on. When dealing with conflict, teachers appeared to be rational and neutral, consulted views from different perspectives, and used more democratic means to manage divergent opinions. This finding confirms those of Campbell (2005, 2007), Ekman (2006), Hahn (1998, 2010), and Sun, Shek, and Siu (2008) that an open classroom climate facilitates open inquiries that, in turn, encourages participatory civic behaviors among students.

Second, from the focus group interviews, it was made clear that teachers could be effective role models who can practice democracy in the classroom. Therefore, the attributes of effective civic teachers are worth identifying. The qualitative focus group interviews revealed that teachers cared

for their students, were willing to spend time to discuss issues with students, were rational, objective, calm, open-minded, receptive to different styles, and were knowledgeable, willing to share knowledge using different perspectives.

c. Students' school participation

Several studies support the view that students' self-efficacy through school participation helps develop positive attitudes toward future civic engagement (e.g., Burns, Schlozman, & Verba, 2001; Kahne & Sporte, 2008; McFarland & Thomas, 2006; Youniss & Levine, 2009; Youniss & Yates, 1997, 2000; Zaff et al., 2003). In the present study, results from multi-level modeling analyses demonstrated that student perception of the value of school participation was a significant predictor of CONVEN and UNCONVEN in both cohorts. However, PROTE could not be significantly predicted by student perception of school participation in both cohorts. Moreover, the positive results of multi-level modeling analysis suggested that students' higher efficacy in school participation is related to their expectations of further active participation in future civic or political activities. This suggests that students' self-efficacy is related to their future civic engagement (e.g., Pasek et al., 2008).

Conversely, students felt more confident in engaging in group activities as part of school participation, as indicated by the distribution of items of the School Participation Scale (SPS) in the

item-person map of both cohorts. Items related to group participation (e.g., item "J2" – "Many positive changes happen in this school when students work together") were located at the bottom of the item maps in the 1999 and 2009 cohorts, suggesting that the students of both cohorts considered items related to united or group effort to change school policies as the easiest to endorse. Meanwhile, items related to school participation by individual effort (e.g., item "J7" – "When school problems are discussed, I usually have something to say") were clustered at the top of the item maps, indicating that students considered acting individually to change school policies as less easy to accomplish. Overall, the findings revealed that students preferred the united versus single effort in solving school problems, and such attitude remained stable across the decade. Interview data also confirmed these findings. Most of the participants (88%) in the focus group interviews preferred to work through student bodies to influence school policies, because they believed that a united effort was more powerful than working alone. For instance, the interviewees indicated that they had success in changing school policies in areas related to school facilities and formal curriculum through the efforts of Student Unions. Beliefs in democracy and freedom of speech were also believed to enable students to participate actively in school affairs.

To conclude, school contextual factors accounted for more of the variance in student attitudes toward future civic engagement in the 1999 cohort than in the 2009 cohort. It seems that the effect of school factors is seemingly less pronounced in the 2009 cohort. Perhaps, it might be due to the de-politicization measures in official civic curriculum from millennium onward as well as other

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non-school factors. Interview data from students collected in 2011 suggested that the influences of significant others at home, the community, mass media, news, and so on were important sources of non-school influence. Therefore, future efforts should place more emphasis on the effectiveness of curriculum reform on students' civic attitudes and their expectations on future civic engagement, as well as external sources of influence on student attitudes toward future civic participation.

5.3 Implications from the research findings

5.3.1 Implications for the theoretical framework

The theoretical framework of this study, derived from developmental theory, focused on development as a function of interactions between an individual and his environment. The research findings supported Bronfenbrenner's ecological systems theory (1989, 1998, 2005). A school is a microsystem acting as a community of practice (Lave & Wenger, 2002), in which adolescents learn and develop civic skills through social processes and interaction with other peers. For instance, promoting procedural values in classroom discussion as one of the core civic skills (Crick and Porter, 1978) that help develop open-minded students who are willing to compromise or tolerant different opinions from others. Furthermore, students should be encouraged to participate actively in student affairs and organize student bodies, in order to develop their self-efficacy to make decisions and change school policies. These processes and interaction develop among students a

sense of belonging in their schools. Empirically, this sense of belonging is related to civic participation in some studies (e.g., Kahne & Sporte, 2008). Grossman (2010: 23) also agreed that the classroom is "a community of practice." Learning is a form of social participation, and students construct their identity through active practice in class activities. This kind of classroom provides students with opportunities through which to develop citizenship competencies. The importance of participating in democratic processes should be more explicit in schools, in order to prepare students to construct meanings and enhance learning related to civic participation in schools or even experiences outside the school. In fact, the curriculum reform adopted since 2009 also promoted such direction. For instance, the practice of Other Learning Experiences (OLE) in the New Senior Secondary Curriculum encourages students to apply classroom learning in their community. Meanwhile, students could utilize their experiences from the community back to the classroom.

According to Bandura's social cognitive theory (Bandura, 1986; Wilkenfeld, Lauckhardt, & Torney-Purta, 2010), greater exposure to successful models can increase self-efficacy. The survey research considered peers and teachers as sources of vicarious learning. Peer influence is a potent source of influence during adolescence. Moreover, students perceive their peers as their models, and tend to make decisions that conform to the views of their peers. Similarly, the present study reported that students agreed they had an open and democratic classroom climate, and their teachers were also open to them. However, the qualitative interviews reported that students' parental socialization was another source of influence affecting students' civic attitudes and preferences

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toward political and social issues. Students aged 14 to 15 years old are at the preadolescent stage. Hence, political socialization within families also plays a crucial role in influencing adolescents because they are not mature enough to be fully independent from their parents. Second, civic efficacy is an attitude and a belief that participation makes a difference and serves as a motivational precondition for civic engagement (Levinson, 2010). Thus, an individual has a part in initiating changes in school (Beaumont, 2010). Chung and Probert (2011) provided empirical evidence that the previous civic participation experiences of 129 African American young adults were related to their motivation to engage in future civic activities. A more open and democratic school culture facilitates students' positive perception of the situations in their immediate environment, thereby promoting active student participation. All these factors help students develop positive civic outcome expectancy. This positive perception perpetuates and affects the political participation of these students as they grow into mature citizens in the future (Chung & Probert, 2011: 232).

Schools have played a crucial role in promoting political socialization, which enables adolescents to develop civic identity. Civic identity is related to adolescent expectations for future civic participation. Furthermore, the processes and relationship among school contextual factors that predict students' expectations of their future civic engagement also confirmed the situated learning model proposed by Lave and Wenger (2002). However, the present study showed that the school factors accounted for a relatively small amount of variance in the 2009 cohort to predict students' perception of future civic engagement, suggesting that other factors outside the school context

cannot be ruled out. The influences of significant others in families, mass media, and the public probably have played relatively more significant roles. Systematic research based on the political socialization model of Torney-Purta (2001) can simultaneously investigate the impact of different systems on adolescent civic development in the Hong Kong context.

5.3.2 Implications for assessment and measurement theory

International large-scale assessments, such as the IEA CivEd Study (Torney-Purta et al., 2001) are based on cross-country comparison. National-level data are available for secondary data analysis (Torney-Purta et al., 2001). The present study showed how secondary data analysis can be used and developed into valid and reliable scales at the national level. The Rasch rating scale model (Andrich, 1978) was used to conduct validation studies. The Hong Kong data sets from the 1999 IEA CivEd study and the 2009 CivEd Study (Kennedy & Chow, 2009) were used to validate the PAS and the three other scales. Such analyses have not been conducted previously. The validation procedure of the present study involved the establishment of a baseline model of students' expectations for future civic engagement using data from the 1999 cohort and then comparing that model with data from the 2009 cohort. Such measurement has resulted in a more comprehensive study of students' civic engagement in the past decade, as well as comparative analyses on an international level. This study thus complements current research based on secondary data analyses (e.g., Kennedy, 2010a; Kennedy, 2010c; Kennedy & Chow, in press; Kennedy, Huang, & Chow, 2012). Furthermore, the

construction of "plausible value" scores from the two data sets of the present study was innovative, and the results generated from multi-level modeling analysis were found to be more accurate and reliable.

The uniqueness of this study lies in its use of a mixed-method design that employs both quantitative and qualitative data to assess the role of the school in promoting students' civic engagement. Evidence drawn from both the 1999 and 2009 surveys provided a valuable, relevant, and updated source that could meet the needs of schools and policy makers. The subsequent focus group interviews were designed to enrich the interpretation of the statistical analyses results. These interviews also identified the limitations in the findings from the secondary data analysis. The combination of quantitative methods and qualitative descriptive data provided a more detailed analysis of the role of the school based on the contextual variables on students' expected future civic engagement. This study contributes to the body of political socialization studies that employed mixed-method design (e.g., Beaumont et al., 2006; Colby et al., 2007; Hahn, 2010; Torney-Purta, Amadeo, & Andolina, 2010; Zukin et al., 2006).

5.3.3 Implications for educational practice

The subsequent section provides suggestions for school authorities and educators in school curriculum, intervention programs, pedagogy to promote civic engagement, and teacher training programs.

a. Suggestions for school-based curriculum

Schools have a significant role in promoting student expectations for future civic engagement, yet such role is less influential in the 2009 cohort. A recent study by Fairbrother (2010) revealed the ineffectiveness of citizenship education practice in Hong Kong. The civic teachers attributed the practice of civic education as "unorganized, unsystematic, ad hoc, and neglectful of a clear progression of intended outcomes" (Fairbrother, 2010: 82-83). Furthermore, government policy was also inconsistent because of political considerations. Hence, schools must undergo several changes to continue their role to prepare students to become active and participatory citizens in the future. This section addresses the role of the school in practicing school-based civic education. The discussion is based on the key findings of the Rasch analysis and the focus group interviews, in relation to the curriculum reforms from 2009 onwards, such as the introduction of Liberal Studies, as one of the core subjects in the NSS Curriculum, and the practice of OLE, as a complement to the core and elective subjects. The discussion provides justifications for the need of curriculum reforms and gives suggestions to civic teachers.

Other Learning Experiences (OLE) is designed to cater to the developmental needs of adolescents as well as to help them adopt healthy lifestyles, and cultivate positive attitudes. An expected outcome of OLE is to prepare students to become active, informed, and responsible citizens through moral and civic education (EDB, October 2010). Schools prefer to implement school-based civic curriculum through formal curriculum (e.g., Form Teacher Periods, Religious or Ethics lessons, Life Education) and informal curriculum (e.g., civic activities, national tours, community or volunteer services). For instance, students can collect information on current affairs for PSHE or civics lessons. This learning arouses their concern for society and fosters in them a multi-perspective view of the problems and the capacity to apply critical judgment in examining these problems. Furthermore, participation in community services enables students to develop their civic identity and attitude. Unlike the ordinary practice of academic learning, the OLE practice justifies the learning needs through social participation (Lave & Wenger, 2002). Thus, civic education in the future can emphasize direct participation in school or community activities. Students can bring their experiences and the knowledge they gained from community service back to classrooms for discussion, sharing, and critical reflection. This sharing of experiences facilitates students' holistic civic development (e.g., including development in civic values, affection, and knowledge).

Second, as reflected from the results of item maps of the Open Classroom Climate Scale (OCCS) of both cohorts, Hong Kong students consistently found that openly disagreeing with their teachers

regarding political and social issues and raising current political events for discussion in class were items that were difficult to endorse. Under the influence of Chinese culture, students perceive teachers as a knowledge authority and are thus reluctant to challenge their teachers. To cultivate an open and democratic classroom climate, in which teachers encourage and support students to discuss political and social issues freely in the class would be a possible solution. The introduction of Liberal Studies as a compulsory subject in HKDSE from 2009 onwards could fulfill those needs. As reflected in the objectives and content of the subject, one of the aims is to assist the students to develop positive values and attitudes toward life, thereby developing them into informed and responsible citizens of society, the country, and the world. According to the *Liberal Studies Curriculum and Assessment Guide* (CDC, 2007), curriculum content should enable students to develop their multiple identities, responsibilities, and commitments as citizens through various modules [e.g., Module 2: Hong Kong Today, Module 3: Modern China, and Module 4: Globalization]. Teachers could design topics from those modules to motivate students or to draw their awareness to local and international news or other political issues. Political discussion in an open and democratic classroom is related to higher levels of future civic engagement (Richardson, 2003). Civic skills can be promoted through different forms of discussion. Holding seminars, deliberations and other forms of discussion (Parker, 2008), as well as using issue-centered content in discussion (Hahn, 2010) are some suggestions that can be employed by civic teachers in Hong Kong. Furthermore, previous research indicated that students benefited from a supportive classroom with an open and democratic climate (Campbell, 2005, 2007; Hooghe & Quintelier, 2011;

Torney-Purta & Barber, 2005). The practice of democratic pedagogy and political discussion could become curriculum goals of Liberal Studies.

b. Suggestions on intervention programs in civic education

Regarding the declining influence of the role of schools in students' attitudes toward future civic engagement indicated in the present study as well as the *ICCS 2009: Hong Kong Report* (Lee et al., 2009), intervention programs with an emphasis on raising civic efficacy, civic knowledge, and improving students' civic skills are suggested to ameliorate the situation.

Pasek et al. (2008) suggested that schools should have intervention programs that promote students' civic engagement. Their findings indicated that intervention programs can increase students' civic knowledge. Furthermore, the effectiveness of these programs is related to the presence of a moderator (i.e., internal efficacy) to predict students' civic outcomes. This effectiveness can be improved by encouraging students to participate more in school activities or engage in volunteer service, thereby creating successful or positive experiences. Hart and Gullan (2010) argued that the feelings of efficacy were crucial to students' later civic participation. Additionally, many positive findings are related to the effectiveness of civic courses or civic intervention programs, providing suggestions for educators and school authorities to design an effective civic curriculum to prepare students to become active and participatory citizens in the future. An emerging consensus in the

West suggests that three main elements are necessary in implementing an effective citizenship education program (Crick & Lister, 1979; Crick, 1998; Kerr & Ireland, 2004; Cleaver & Nelson, 2006). These elements, including values, skills and knowledge (Ross, 2008: 495), are the main objectives of the civic curriculum.

As regards civic values, schools can cooperate with the government and education authorities to promote core values through the official civic curriculum. These core values include civic values related to human rights, democracy, and rule of law, as proposed by the *Guidelines on Civic Education in Schools* (1996). The core values related to morality and character, such as perseverance, respect, responsibility, national identity, integrity, love and care (CDC, 2008), and the values suggested by the *Basic Law Learning Package* (CDC, 2012) and the proposed *Moral and National Education Curriculum* (CDC, 2011). Crick and Porter (1978) suggested the promotion of procedural values (e.g., respect for truth and reasoning, open-mindedness, willingness to compromise, tolerating differences, and welcoming diversity in expressing opinion) in an open and democratic classroom. These procedural values work more effectively in a Social Studies classroom, as demonstrated in Western literature (Hahn, 2010). Similarly, practicing procedural values is helpful in building genuinely open and democratic classrooms in the PSHE and Liberal Studies subjects in Hong Kong (Au, 2013; Au & Chow, 2012).

Regarding civic knowledge, the importance of citizen participation and the rights of an individual in society or country are core civic topics aside from helping students develop a sophisticated understanding of the processes and implications of citizen responsibilities. The civic curriculum should include various civic topics, including local, national, and international issues. The present study shows that students from both cohorts in this study consistently found that they had the least exposure to civic topics related to patriotism and loyalty to country. Thus, improvements in national education can help students gain better understanding of their roles, rights, and responsibilities as Chinese citizens. Schools can fulfill the civic mission by developing a participatory culture that provides students with more opportunities to experience democratic principles and processes in their daily lives. Within such an environment, schools can develop students into Chinese citizens who practice critical thinking and possess democratic minds (Leung et al., 2012).

Students in both cohorts reported that they felt free to discuss civic topics in class, as their teachers respected their opinions. Similar findings were obtained from the focus group interviews. That is students felt more confident when speaking in class and yet felt less so to speak in front of the public (Au & Chow, 2012). Active and participatory citizens can articulate their opinions properly and decide for the good of society. This study suggests that students should be provided with more training at the secondary school level to express their opinions through interflow programs or in the public. As suggested by Teitelbaum (2010), students should be encouraged to develop critical civic literacy to express their views toward their immediate social environment and the government. These students could train to provide suggestions to improve the community and even the world. Peterson (2009) proposed three civic skills essential to deliberative democratic communication.

These skills are civic listening, civic empathy, and internal-reflection. Communication skills, including formulating and articulation of opinion in oral or written forms, are seemingly a focus of intervention programs on civic education.

c. Suggestions on pedagogy to promote civic engagement

In the present study, both Rasch measurement results related to open classroom climate and the findings of focus group interviews indicated that students preferred to have a more democratic classroom with liberal and open-minded teachers. Many previous studies lend support to the positive effects of the democratic form of pedagogy in civic education (e.g., Torney-Purta, Richardson & Barber, 2005).

Teachers and students have their own roles in creating a democratic and open classroom. Teachers are effective role models who can demonstrate the practice of democracy to their students. Kirshner (2007) emphasized that any civic engagement program should be carefully mentored by an adult (i.e., civic teacher) who could provide training, guidance, and support to the students. They could use a scaffolding approach to support the students to reach higher levels of civic skills development. For example, teachers could teach students the benefits of collective action and ways of interacting with those in power. In turn, students can be more active and critical, practice independent thinking, willingly engage in discussion, adopt procedural values, participate in school activities, and show

concern for school policies. Therefore, the practice of critical and democratic pedagogy is an effective pedagogy for citizenship education.

As suggested by the findings of the focus group interviews, the practice of experiential learning with critical reflection is another effective pedagogy for civic education (Leung, 2006; Leung & Yuen, 2009a, 2009b). Students can relate classroom learning to practice in social settings. Consequently, students combine knowledge and practice in the civic classroom, thus enriching their experiences in social service as well as arousing their concern for community needs. The effectiveness of experiential learning is supported by evidence from previous longitudinal studies (Burns, Schlozman & Verba, 2001; Youniss & Levine, 2009; Youniss & Yates, 1997, 2000), which reported that early exposure of adolescents to community service and civic experience is perpetuated in adulthood.

d. Suggestions on teacher training

Aside from giving curriculum training to civic teachers to help them deliver the civic curriculum in multiple ways, other essential elements must be included in the teacher training program. They are topics related to developing attributes, ways to facilitate democratic and open classroom climate, and knowledge that meet the needs of students' civic development.

Leung (2006: 65) identified the characteristics of civic teachers and found that they should be "open minded, being very knowledgeable, willingness to care and to participate in societal issues, willingness to care for students and courage." The present study confirms previous research findings: teachers were caring to students, willing to spend time to discuss issues with students, rational, objective, calm, open-minded, receptive to different styles, and willing to share knowledge using different perspectives (knowledgeable). Therefore, teacher training programs should include topics on building effective civic competence among prospective teachers.

Other topics, such as the use of democratic pedagogy, should be included in similar programs. Teachers are encouraged to use a more student-centered approach in designing their classroom activities. Such suggestions are also found in Kennedy's study (2010b). The IEA CivEd Study (Torney-Purta, 2001: 162–164) showed that a student-centered mode of teaching practice was preferred by Hong Kong teachers in the 1999 study (i.e., all the ratings were above the international mean). However, the teachers also preferred to employ more direct instructional methods. The recent *ICCS 2009: Hong Kong Report* (Lee et al., 2009) showed that teachers were more confident in teacher-directed practice, such as conducting lectures although they were also willing to use more student-centered classroom practices. Teachers felt more comfortable using teacher-directed pedagogy and less confident when they had less control of the teaching practice. With the introduction of curriculum reform and the adoption of new subjects such as Liberal Studies in 2009, new teaching strategies and pedagogies that favor a student-centered mode of teaching practice

becomes highly important to teachers. Hence, more training on building the efficacy of teachers in using a student-centered approach and democratic pedagogy are prerequisites to building an open and democratic classroom.

Lastly, as indicated in the present study, students favor knowledgeable civic teachers, viewing them as effective role models in responding to current issues. Civic teachers can be open to current affairs and develop knowledge related to history and issues at the local, national, and international levels.

5.3.4 Implications for government policy on civic education

Various changes have occurred at the macro level in the past decade, such as the global civic development concern of UNESCO, the handover of Hong Kong to PRC, the administrative reforms of the HKSAR Government to cope with the changes, the Government policies on educational reforms and promoting equal gender opportunities, closer cooperation between Hong Kong and PRC, political reforms related to the direct election of prospective councilors of the Legislative Council or Chief Executive of the HKSAR Government in 2012, and the growing gap between the rich and the poor in Hong Kong society.

Meanwhile, micro changes occurred within schools, including the practice of school-based curriculum, school-based assessments, and changes in pedagogies related to curriculum reforms. All

these rapid changes largely explain the changes over the past decade in terms of the civic behaviors, attitudes, beliefs, and even the expectations of adolescents regarding their future civic engagement as adults. The findings in this study indicated that the school played a lesser role in promoting civic engagement in the recent cohort. The government can increase its efforts to promote students' civic engagement in many ways.

The Education Bureau (EDB) of HKSAR has implemented reforms related to civic education and has continuously encouraged civic teachers to deliver citizenship education in multiple ways (Fairbrother, 2010; Fairbrother & Kennedy, 2011). For instance, the CDC encouraged schools to adopt the Life Event Approach with authentic learning using multi-perspectives, in order to understand current and important issues in moral and civic curriculum (Chai, Galloway & Lee, 2010: 53). The EDB can exert more efforts to promote national education as the present study indicated that students of both cohorts felt that they did not learn enough in the current civic curriculum. Aside from the efforts of the EDB, the government can also promote national education in different ways (e.g., through direct subsidy, cooperation with the NGOs, organizing campaigns related to national education or national tours). Thus, the Government can extend its support through formal, informal, and non-formal education.

Second, this study found that students wanted to learn more about the importance of voting, the operation of the election system, and the accountability of the consultation system in the

government, which they believed, would help them build their confidence in influencing government policies. Students' external political efficacy has been found to be related to their trust in the government (Hart & Gullan, 2010: 79). Therefore, the government can develop the political efficacy of adolescents on two levels. At the community level, the government can improve the legitimacy of consultation by establishing more democratic processes to encourage citizens to express their ideas through consultations. Second, the government needs to educate the public on the importance of election to prepare its citizens for universal suffrage at the local and national levels. At the school level, the government can implement educational reforms to encourage school authorities to build a democratic environment and allow students to test the consultative processes in student bodies or in deciding on school policies. Thus, students' political efficacy and trust toward the government may be enhanced.

5.4 Limitations of the study

First, the Political Action Scale (PAS) used in this study focused on measuring adolescents' expectations of their attitudes toward future civic engagement but not on their current civic attitude. Such measurement has limitations in terms of predictive validity. Adolescents aged 14 to 15 years may not be mature enough to reflect and be critical toward the dynamics of civil society. They may not fully understand their rights and responsibilities to the government and the community. Thus, the self-report of their expectations for future civic engagement might be biased by social

desirability (Mirazchiyski et al., in press). A follow-up longitudinal study is suggested, based on the results of the study, to assess respondents' actual future civic engagement as adults in civil society. Another solution is to conduct subsequent focus group interviews to gain an in-depth understanding of the views of adolescents.

Second, future civic education studies should collect more data of the tested variables of the present study so as to ensure success in conducting more advanced data analysis and to increase the reliability of the measures. For instance, the 2009 cohort had a data set of 602 cases from 18 schools. Perhaps, more school data would allow the detection of more significant random effects with advanced secondary data analyses.

Third, as this study examined the associations among different school variables on civic engagement, we could not draw any causal inferences with respect to the effectiveness of the school on various types of civic engagement. Furthermore, reciprocal relationships might not be detected because only the unidirectional associations between the hypothesized predictors and the outcome variables were investigated. This restriction could underestimate the real influence of the schools.

The limitations discussed in this section provide opportunities for future research. The following section suggests directions for future research related to the theoretical framework and research methodology.

5.5 Directions for future research

First, the Political Action Scale (PAS) used in this study is a valid and reliable measure of students' perceptions of their expectations for future civic engagement. The ICCS 2009 also re-used most of the items in the scale. Therefore, future researchers can be confident to continue using the scale to generate new research related to future civic engagement. This study examined the associations between students' perceptions of future civic engagement and the current school factors. The present study is based on cross-sectional data. Future research can employ a longitudinal approach to investigate the causal relationship between the school contextual factors, especially the classroom context, and current or future civic engagement of students.

Second, systematic experimental studies could be introduced to assess the effects of NSS curriculum reforms (2009) in promoting students' attitudes toward future civic engagement. For instance, more research could be done to assess the effectiveness of studying Liberal Studies and the practice of OLE to promote students' future civic engagement.

Third, students' attitudes toward future civic engagement could change because of the macro- and micro-level changes that continue to occur within the political socialization model (Torney-Purta, 2001). Regarding our findings that the school exerted lesser influence in the promotion of students'

future civic engagement in the 2009 cohort, an examination of other systems within the political socialization model (Torney-Purta, 2001) can serve as a future research direction. Such research can help identify the process within each system and the interactions between the individual and systems on political socialization among adolescents in the Chinese context. Furthermore, the attitudes of Chinese students toward future civic engagement are also worth comparing with those of Western students in order to reveal the generalization and uniqueness of the concept of civic engagement in different contexts.

5.6 Conclusion

The period from 1999 to 2009 is a unique decade in Hong Kong history. During this historical period, Hong Kong witnessed remarkable political and socio-economic changes that occurred in both local and global arenas. Thus, it is important to study changes in students' attitudes toward future civic engagement. In the present study, such attitudes were assessed using Rasch measurement, and the changes were shown across the 1999 and 2009 cohorts. It was found that students of the 2009 cohort were more willing to engage in Unconventional Participation. However, students of the 1999 cohort were relatively prone to consider using Protest Activity to express their political preference in the future, though their endorsement was not strong. Furthermore, more gender differences were observed in the 1999 cohort than that in the 2009 cohort. To account for such changes, the present study attempted to use the political socialization model (Torney-Purta et

al., 2001) to explain the role of the school. The results indicated that secondary schools played a significant role in the political socialization of adolescents during their transition from childhood to adulthood. Schools provide opportunities for students to practice democratic processes through a supportive learning environment. The positive role played by schools also helps nurture adolescents and prepare them for future active citizenship. However, such potential impact has decreased in recent years, as reflected by this study. Thus, suggestions were made to the civic educators to deliver a civic curriculum that includes more topics on the national level, and to practice democratic pedagogy in PSHE, Liberal Studies, and Civic classroom. The HKSAR government can also implement policies to encourage schools to develop stronger links with their respective communities and implement reforms to strengthen the role of schools in preparing students to be active participatory citizens in the future.

Notes:

1 The eight KLAs are Chinese language education, English language education, Mathematics education, Science education, Technology education, Personal, Social and Humanities education, Art education, and Psychical education.

2 The four KTs are Moral and Civic Education, Reading to Learn, Project Learning, and Information Technology for Interactive Learning.

3 OLE is a key feature of the New Senior Secondary Curriculum. Schools offer opportunities for their students to gain learning experiences in five areas. Within the five areas, Moral and Civic Education and Community Service are two major areas to obtain experience directly relevant to civic engagement.

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Appendix A – Items of Political Action Scale (IEA CivEd Study, 1999) to be used in ICCS (2009)

M1	Vote in national elections / voting	ICCS HK report (2009) Q.32 HK students' expected adult electoral participation & adult participation in political activities (b)
M2	Get information about candidates before voting in an election	ICCS HK report (2009) Q.32 HK students' expected adult electoral participation & adult participation in political activities (c)
M3	Join a political party	ICCS HK report (2009) Q.32 HK students' expected adult electoral participation & adult participation in political activities (e)
M4	Write letters to a newspaper about social or political concerns	ICCS HK report (2009) Q.31 HK students' expected participation in future legal / illegal protest (a)
M5	Be a candidate for a local or city office	ICCS HK report (2009) Q.32 HK students' expected adult electoral participation & adult participation in political activities (g)
M6	Volunteer time to help [benefit] [poor or elderly] people in the community	ICCS HK report (2009) Question 14 (d)
M7	Collect money for a social cause	ICCS HK report (2009) Question 14 (e)
M8	Collect signatures for a petition	ICCS HK report (2009) Q.31 HK students' expected participation in future legal / illegal protest Q.31 (e)
M9	Participate in a non-violent [peaceful] protest march or rally	ICCS HK report (2009) Q.31 HK students' expected participation in future legal / illegal protest Q.31 (d)
M10	Spray-paint protest slogans on walls	ICCS HK report (2009) Q.31 HK students' expected participation in future legal / illegal protest Q.31 (g)
M11	Block traffic as a form of protest	ICCS HK report (2009) Q.31 HK students' expected participation in future legal / illegal protest Q.31 (h)
M12	Occupy public buildings as a form of protest	ICCS HK report (2009) Q.31 HK students' expected participation in future legal / illegal protest Q.31 (i)

Appendix B – Comparison Table : Official curriculum versus the IEA Civics Curriculum Scale

Items of the IEA Civics Curriculum Scale	Four Key Tasks – Achieving Learning to Learn – 3A Moral and Civic Education (2002)	Moral and Civic Education Curriculum Framework Revised Version (2008)	New Moral and National Education Curriculum Proposed Version (2011)
K1 – In school, I have learned to understand people who have different ideas	* One of the five priority values/attitudes: respecting others * Key Stage 3: Social life	Civic skills to express care and concern to others, Value education	Cultivate positive values and attitudes: respect for others & care for others / Personal & Social Domains
K2 – In school I have learned to co-operate (work together) in groups with other students	* One of the five priority values/attitudes: respecting others *Life Education/ cross-curricular projects	Life education	Cultivate positive values and attitudes: respect for others & care for others / Personal & Social Domains
K3 – In school I have learned to contribute to solving problems in the community (society)	* Civic ,Consumer, Media, Legal, Health Education * Key Stage 3: Life in the community	Social issues to solve problems in society in Learning and Teaching resource package	Identity building in different domains including family, **society,** nation and the world
K4 – In school I have learned to be patriotic and loyal (committed) citizen of my country	* One of the five priority values / attitudes: national identity * Key Stage 3: Life in the community	National edu e.g. "Passing on the Torch" programmes & other Learning and teaching resource package	Identity building in different domains including family, society, **nation** and the world / National Domain
K5 – In school I have learned how to act to protect the environment	* Environmental Education * Key Stage 3: life in the community & Issues for Life Event Approach	Environmental education Concept of sustainable development	Identity building in different domains including family, society, **nation and the world** / National Domain
K6 – In school I have learned to be concerned about what happens in other countries	* Key Stage 3: Life in the community * Issues for Life Event Approach	Biographies of Great people in other countries but not on current issues or social issues	Identity building in different domains including family, society, nation and the **world** / Global Domain
K7 – In school I have learned about the importance of voting in national and local elections	* Civic Education * Key Stage 3 : School life e.g. participating in election of class association	Basic Laws, Human Rights education	Identity building in different domains including family, society, **nation and the world** / National & Global Domains

Items of the IEA Curriculum Scale	PSHE Key Learning Area Curriculum Guide (Primary 1 – Secondary 3) (2002)	Liberal Studies Curriculum & Assessment Guide (2007)
K1 – In school, I have learned to understand people who have different ideas	Strand 1: Personal and Social Development (Stage 1-3) Skills: understand others Values: treasure good relationship with others	Module of Personal Growth and Inter-personal Relationship
K2 – In school I have learned to co-operate (work together) in groups with other students	Strand 1: Personal and Social Development (Stage 1-3) Skills: understand others Values: treasure good relationship with others	Group project (junior form) Independent Enquiry Study (senior form)
K3 – In school I have learned to contribute to solving problems in the community (society)	Strand 6: Social systems & Citizenship (Stage 3) Values: respect for and uphold the rule of law, willing to solve problems at local / national level	Issue based study (social issues of the local community)
K4 – In school I have learned to be patriotic and loyal (committed) citizen of my country	Strand 3: Culture & Heritage (Stages 1-3) Values: to appreciate and respect Chinese and local culture Strand 6: Social systems & Citizenship Values: to develop local and national identities	Module of Modern China
K5 – In school I have learned how to act to protect the environment	Strand 4: Place and Environment (Stages 1-3) Values: caring for and improving the environment	Module of Globalization, Public Health
K6 – In school I have learned to be concerned about what happens in other countries	Strand 6: Social systems & Citizenship (Stage 2) Values: to show concern for national and global communities	Module of Globalization and Hong Kong Today
K7 – In school I have learned about the importance of voting in national and local elections	Strand 6: Social systems & Citizenship (Stage 3) Skills: to develop civic competency to participate in local affairs	Module of Hong Kong Today

Appendix C – Scales used from IEA CivEd Study (1999) in the thesis

School participation scale

Listed below you will find some statements on students' participation in school life.

Please read each statement and select the box in the column which corresponds to the way you feel about the statement.

		Strongly disagree	disagree	agree	strongly agree	don't know
		1	2	3	4	0
J1	Electing student representatives to suggest changes in how the school is run [how to solve school problems] makes schools better	☐	☐	☐	☐	○
J2	Lots of positive changes happen in this school when students work together	☐	☐	☐	☐	○
J3	Organising groups of students to state their opinions could help solve problems in this school....................	☐	☐	☐	☐	○
J4	If members of my class felt they were unfairly treated, I would be willing to go with them to speak to the teacher	☐	☐	☐	☐	○
J5	Students acting together [in groups] can have more influence on what happens in this school than students acting alone [by themselves]	☐	☐	☐	☐	○
J6	I am interested in participating in discussions about school problems...	☐	☐	☐	☐	○
J7	When school problems are being discussed I usually have something to say..	☐	☐	☐	☐	○

Appendix C

Chinese version of School Participation Scale

J部份：學校 以下是一些有關學生參與學校生活的陳述。 請細閱下列各項，選出你的同意程度，並在適當的空格加上「 」號。

		非常不同意	不同意	同意	非常同意	不知道
		1	**2**	**3**	**4**	**0**
J1	選出學生代表去提出學校問題的解決方法能令學校有更好的發展	☐	☐	☐	☐	○
J2	若學生團結貪來，我們的學校會有很多正面的改變	☐	☐	☐	☐	○
J3	組織學生小組，提出意見，能幫助解決我學校的問題	☐	☐	☐	☐	○
J4	若我的同班同學受到不公平的對待，我願意與他／她們一貪把這件事告知老師	☐	☐	☐	☐	○
J5	學生的團結行動比個別的更能影響這間學校的發展	☐	☐	☐	☐	○
J6	我有興趣參與有關學校問題的討論	☐	☐	☐	☐	○
J7	當討論學校問題的時候，我通常都會有意見發表	☐	☐	☐	☐	○

Appendix C

Civic Curriculum Scale

In this section we would like to know what you have learned in school.

Please read each statement listed below and select the box in the column which corresponds to the way you feel about the statement.

	strongly disagree	disagree	agree	strongly agree	don't know
	1	2	3	4	0
K1 In school I have learned to understand people who have different ideas..	□	□	□	□	○
K2 In school I have learned to co-operate [work together] in groups with other students	□	□	□	□	○
K3 In school I have learned to contribute to solving problems in the community [society].........................	□	□	□	□	○
K4 In school I have learned to be a patriotic and loyal [committed] citizen of my country	□	□	□	□	○
K5 In school I have learned how to act to protect the environment	□	□	□	□	○
K6 In school I have learned to be concerned about what happens in other countries	□	□	□	□	○
K7 In school I have learned about the importance of voting in national and local elections.........................	□	□	□	□	○

Appendix C

Chinese version of Civic Curriculum Scale

K部份：學校課程 在這部份，我們希望知道你在學校裏的學習情況。 請細閱以下各項，選出你的同意程度，並在適當的空格加上「 」號。

		非常 不同意	不同意	同意	非常 同意	不知道
		1	**2**	**3**	**4**	**0**
K1	在學校裏，我學會了解與我意見不同的人	□	□	□	□	○
K2	在學校裏，我學會與其他同學合作	□	□	□	□	○
K3	在學校裏，我學會為解決社區問題而作出貢獻	□	□	□	□	○
K4	在學校裏，我學會成為一個愛國和忠於國家的市民	□	□	□	□	○
K5	在學校裏，我學會如何保護環境	□	□	□	□	○
K6	在學校裏，我學會關心其他國家的時事	□	□	□	□	○
K7	在學校裏，我學會在全國和地區選舉中投票的重要性	□	□	□	□	○

Appendix C

Political Action Scale

Listed below are several types of action that adults could take: **When you are an adult, what do you expect that you will do?** *Tick one box in each column for each action to show how likely you would be to do it.*

		I will certainly not do this	I will probably not do this	I will probably do this	I will certainly do this	don't know
		1	2	3	4	0
M1	Vote in national elections	☐	☐	☐	☐	○
M2	Get information about candidates before voting in an election	☐	☐	☐	☐	○
M3	Join a political party..	☐	☐	☐	☐	○
M4	Write letters to a newspaper about social or political concerns...	☐	☐	☐	☐	○
M5	Be a candidate for a local or city office.....................	☐	☐	☐	☐	○

Listed below are several types of action that you as a young person could take during the next few years: **What do you expect that you will do?**

		I will certainly not do this	I will probably not do this	I will probably do this	I will certainly do this	don't know
		1	2	3	4	0
M6	Volunteer time to help [benefit] [poor or elderly] people in the community.......................................	☐	☐	☐	☐	○
M7	Collect money for a social cause	☐	☐	☐	☐	○
M8	Collect signatures for a petition	☐	☐	☐	☐	○
M9	Participate in a non-violent [peaceful] protest march or rally	☐	☐	☐	☐	○
M10	Spray-paint protest slogans on walls.......................	☐	☐	☐	☐	○
M11	Block traffic as a form of protest	☐	☐	☐	☐	○
M12	Occupy public buildings as a form of protest	☐	☐	☐	☐	○

Appendix C   Chinese version of Political Action Scale

M部份：政治行動 --   以下是一些成年人可能會做的事。當你成年後，你預料自己會做這些事情嗎？ 請選出你會做這些事的程度，並在適當的空格加上「   」號。

		我一定不會做這件事	我可能不會做這件事	我可能會做這件事	我一定會做 這件事	不知道
		1	**2**	**3**	**4**	**0**
M1	在選舉中投票	☐	☐	☐	☐	○
M2	在投票之前，收集有關候選人的資料	☐	☐	☐	☐	○
M3	加入政黨	☐	☐	☐	☐	○
M4	去信報紙表達自己對社會或政治的關心	☐	☐	☐	☐	○
M5	成為區議會或立法會選舉的候選人	☐	☐	☐	☐	○

以下是一些你在未來數年可能會做的事，你認為自己會做這些事情嗎？ 請選出你會做這些事的程度，並在適當的空格加上「   」號。 如果你不明白句子的意思，請在最後一欄的圓圈內加上「   」號。

		我一定不會做這件事	我可能不會做這件事	我可能會做這件事	我一定會做 這件事	不知道
		1	**2**	**3**	**4**	**0**
M6	自願獻出時間去幫助社區內的窮人或老人	☐	☐	☐	☐	○
M7	為社會的需要籌款	☐	☐	☐	☐	○
M8	為請願行動收集簽名	☐	☐	☐	☐	○
M9	參與和平示威、遊行或集會	☐	☐	☐	☐	○
M10	用漆油將示威的口號噴於牆壁上	☐	☐	☐	☐	○
M11	阻擋交通，作為示威手段	☐	☐	☐	☐	☐
M12	佔據公眾的建築物，作為示威手段	☐	☐	☐	☐	☐

Appendix C

Open Classroom climate Scale

The next part of the questionnaire includes some statements about things that happen in your school. When answering these questions think especially about classes in history, civic education or social studies [other civic-related subjects].

Please read each statement and select the box in the column which corresponds to the way you feel about the statement.

		never	rarely	sometimes	often	don't know
		1	2	3	4	0
N1	Students feel free to disagree openly with their teachers about political and social issues during class	☐	☐	☐	☐	○
N2	Students are encouraged to make up their own minds about issues	☐	☐	☐	☐	○
N3	Teachers respect our opinions and encourage us to express them during class...	☐	☐	☐	☐	○
N5	Students feel free to express opinions in class even when their opinions are different from most of the other students..	☐	☐	☐	☐	○
N7	Teachers encourage us to discuss political or social issues about which people have different opinions ..	☐	☐	☐	☐	○
N8	Teachers present several sides of [positions on] an issue when explaining it in class..............................	☐	☐	☐	☐	○
N9	Students bring up current political events for discussion in class.....................................	☐	☐	☐	☐	○

Appendix C

Chinese version of Open Classroom Climate Scale

N部份：課室　以下是一些可能會在你學校發生的事例。當回答這些問題時，請試想歷史科、公民教育科或社會等學科的課堂情況，然後選出你認為最能形容你學校的一項。　請細閱以下各項，選出你的同意程度，並在適當的空格加上「　」號。

		從不	很少	間中	經常	不知道
		1	**2**	**3**	**4**	**0**
N1	在課堂上，學生可自由公開地不同意老師對政治或社會問題的看法	☐	☐	☐	☐	○
N2	學校會鼓勵學生對社會問題要有個人的看法	☐	☐	☐	☐	○
N3	在課堂上，老師會尊重和鼓勵我們表達意見	☐	☐	☐	☐	○
N5	即使與大部份的同學意見不同，學生可自由地表達自己的意見	☐	☐	☐	☐	○
N7	老師會鼓勵我們討論具爭議性的政治或社會問題	☐	☐	☐	☐	○
N8	在課堂上，當老師解釋某個問題的時候，他／她們會提出數個不同的觀點	☐	☐	☐	☐	○
N9	在課堂上，學生會提出及討論近期發生的政治事件	☐	☐	☐	☐	○

Appendix D – Table of Matching the Open Classroom Climate Scale with items of ICCS (2009)

Open Classroom Climate Scale		
	Items	Literature Review
	N1 -- Students feel free to disagree openly with their teachers about political and social issues during class	ICCS HK report (2009) Q.16 HK student perceptions of openness in classroom discussions question a
	N2 -- Students are encouraged to make up their own minds about issues	ICCS HK report (2009) Q.16 HK student perceptions of openness in classroom discussions question b
	N3 -- Teachers respect our opinions and encourage us to express them during class	ICCS HK report (2009) Q.16 HK student perceptions of openness in classroom discussions question c
	N5 -- Students feel free to express opinions in class even when their opinions are different from most of the other students	ICCS HK report (2009) Q.16 HK student perceptions of openness in classroom discussions question e
	N7 -- Teachers encourage us to discuss political or social issues about which people have different opinions	ICCS HK report (2009) Q.16 HK student perceptions of openness in classroom discussions question f
	N8--Teachers present several sides of [positions on] an issue when explaining it in class	ICCS HK report (2009) Q.16 HK student perceptions of openness in classroom discussions question g
	N9-- Students bring up current political events for discussion in class	ICCS HK report (2009) Q.16 HK student perceptions of openness in classroom discussions question d

Appendix E – Table of Matching the School Participation Scale with items of ICCS (2009)

School Participation Scale Items	Literature review
J1 – Electing student representatives to suggest changes in how the school is run [how to solve school problems] makes schools better	ICCS HK Report (2009) Hong Kong students' perceptions of the value of participation at school Q. 19 – question a
J2 – Lots of positive changes happen in this school when students work together	ICCS HK Report (2009) Hong Kong students' perceptions of the value of participation at school Q. 19 – question b
J3 – Organising groups of students to state their opinions could help solve problems in this school	ICCS HK Report (2009) Hong Kong students' perceptions of the value of participation at school Q. 19 – question c
J4 – If members of my class felt they were unfairly treated, I would be willing to go with them to speak to the teacher	
J5 – Students acting together [in groups] can have more influence on what happens in this school than students acting alone [by themselves]	ICCS HK Report (2009) Hong Kong students' perceptions of the value of participation at school Q. 19 – question e
J6 – I am interested in participating in discussions about school problems	
J7 – When school problems are being discussed I usually have something to say	
ICCS mean = 50 (0.0) Hong Kong mean = 48 (0.3)	

Appendix F – Interview Guides

<u>Civic Engagement</u>

Q1. Which kinds of civic activities offered by the community you would like to participate ? What motivates you to join the activities ?

Q 2. Can you prioritize the importance of the civic activities ?

Q. 3 Why do you have such sequence ?

Q. 4 When you are in school, which kinds of civic activities you would like to join ?

<u>Student's participation in school life</u>

Q. 5 Do you think you have the confidence or ability to change things at school ? (as a person or as a group)

Q. 6 If yes, what are the reasons to make you believe that you have the ability or confidence to change the school ?

Q. 7 How might this influence your confidence about your ability to change things in your community or in the government ?

<u>Classroom Climate</u>

Q. 8 Do you often have discussion on current issues during lessons ?

Q. 9 Which current issues, political or social, you would prefer to discuss more ? Why ?

Q. 10 Do you think your teacher encourage students to freely express their views ? Do you think your teacher encourage students to use multi-perspectives to express their views ?

Q. 11 How does your teacher (s) deal with conflicting views ?

Q. 12 Do you think your classroom is open enough to discuss current issues ? Why ? Can cite any examples to support your view ?

<u>Civic Curriculum</u>

Q. 13 What sort of special skills you learnt in civic class ? Name three most common skills you have learnt ?

Q. 14 Do you think you have learnt sufficient civic knowledge or topics from the civic class ?

Q. 15 If not, can you suggest any civic knowledge or topic you want to cover in the civic curriculum ? Why ?

Appendix G : Consent letters
Letter to principal

<div align="right">15th June, 2011</div>

15th June, 2011

Dear Principal,

We are conducting a study about the role of Hong Kong schools in promoting students' civic engagement. The title of the project is: "The Role of Hong Kong schools in Promoting Students' Civic Engagement: An Assessment of the Contribution of Classroom climate, School Participation and Civic Curriculum". The purpose of the study is to assist educators in improving the teaching environment so as to promote students' civic engagement.

As regards to this, four students (two boys and two girls from Form Three classes) of the participated schools are invited to have a focus group interview. Students are encouraged to share their civic experience and their views on how the school environment and teaching in classroom affecting their civic engagement. The interview will last no more than 45 minutes and will be conducted outside of class time at a place and time agreed upon with your teachers and students, such as the library or media center. It will be conducted in July after the final examination. The interview sessions will be audio-recorded.

Benefits from this study include:

1) Suggestions on future improvements to civic education

2) Feedback from this research in written form will be sent to the principal of your school for reference

Information from the focus group interviews will be kept strictly confidential and will be available only to the research team. Your students' responses will not have any impact on his/her class standing or classroom evaluations. Participation is voluntary and your students may decline to answer questions or can completely withdraw from the study at any time. A copy of the interview questions are attached for your reference.

As the researcher of the study, Ms. Au Wai Chun, Cherry, doctoral candidate at the Hong Kong Institute of Education, will be happy to answer any queries you might have about the study. Her mobile phone number is 9160-9157. Enquiries related to ethical issues of the focus group interview can be directed to Ms. Cherry Ng, HREC Secretary (Tel. 2948 6318/ email: cherryng@ied.edu.hk). This work is being conducted under the supervision of Prof. Kennedy, Kerry John, Associate Vice President (Quality Assurance), Dean of Education Studies and Chair Professor of Department of Curriculum and Instruction of HKIEd and Dr. Leung Yan Wing, Associate Director of the Centre for Governance and Citizenship, HKIEd.

Thank you for your attention.

<div align="center">Yours sincerely,</div>

<div align="center">_____</div>

<div align="center">Ms. Au Wai Chun, Cherry</div>
<div align="center">EdD Candidate, HKIEd</div>

Appendix G -- Consent letters
Letter to parents

2011 年 4 月 27 日

貴家長：
<u>有關「中學公民教育研究」學生訪談</u>
本人是香港教育學院博士生侯選人，現正進行一項有關中學生的公民教育研究。本研究的目的是了解中學生參與公民活動的情況。此外，透過量化和質化的研究，探討中學生的學校參與、課室氛圍及公民教育課程對中學生的公民參與之積極程度。

本研究已透過香港教育學院管治與公民研究中心副總監梁恩榮博士邀請　　貴校的四位中三同學接受小組焦點訪談，以理解學生對參與公民活動的看法。已徵得學校同意，現來函邀請　　貴子弟參加是次訪談，詳情現暫定如下：

　　　　日期：　　2011 年 6 月下旬至 7 月初
　　　　時間：　　下午二時至三時或放學後 (約四十五分鐘)
　　　　地點：　　學校課室

本訪談之內容及相關資料，只用作研究，所有個人資料將會保密。如對是次訪談有任何疑問，歡迎致電或電郵聯絡本人(電話：9160-9157 / 電郵：<u>waichunau7@yahoo.com.hk</u>) 。如閣下對這項研究有任何不滿,可隨時與香港教育學院<u>人類實驗對象操守委員會</u>秘書吳惠霞女士聯絡(地址:香港教育學院研究與發展事務處 D4-1/F-21 室轉交)。

並祝　　　日安

歐惠珍女士
香港教育學院
博士生侯選人

訪談內容

<u>公民參與</u>

1. 你喜歡參與那種公民活動？有甚麼因素引動你參與？
2. 從你所參加的公民活動中，請排列出優先次序。
3. 你為何作出此排序？
4. 在校內，你參加那類公民活動？

<u>學校參與情況</u>

5. 你認為有足夠的能力或信心去改變學校的發展嗎？(作為個人/作為羣體...)
6. 有甚麼原因/理由去相信自己/羣體有足夠的能力或信心去改變學校的發展？
7. 你這種的改變能力是否影响你有改變社區或政府的信心？(很多影响 / 很少影响 / 沒有影响)

<u>課室氣氛</u>

8. 你是否經常在班中討論事時議題？
9. 那類時事議題 (例如：政治性或社會性) ，你會較多討論？為甚麼？
10. 你認為老師鼓勵同學自由表達 / 從不同角度表達意見？
11. 老師怎樣處理意見分歧？
12. 你認為課室內是否有足夠的開放程度討論時事議題(包括政治性和社會性的) ？何以見得。你可否舉例子說明。

<u>公民課程</u>

13. 在公民課中，你學懂了那幾類的學習技巧？請說出三項。
14. 你認為自己在公民課是否學了足夠的公民知識或課題？
15. 假若不足夠，可否建議那些公民知識或課題需要加在公民課程內？為甚麼？

完

Appendix H – A summary report of focus group interviews conducted in June, 2011

Sample schools:

- In total, there were 4 sample schools
- 3 in New Territories and 1 in Kowloon
- 3 with religious background and I without religious background
- All co-ed schools
- 2 Band 1 schools, 1 Band 2 school and 1 Band 3 school.
- All subsidized schools
- A specific code was given to each of the four schools: A for the first school, B stands for the second one, C and D stand for the third and fourth school respectively.

Sample students:

- All F. 3 students
- 10 females and 8 males (Among them, there was one late comer and the student missed to answer questions 1 to 7.)

Civic Engagement

Q1: Which kinds of civic activities offered by the community you would like to participate ? What motivates you to join the activities ?

- school affairs, CYC, visit the orphanage, visit the elderly homes (2 /17 – 12 %), get to know the community, selling flags (7 / 17 -- 41%), charity race, take care of the poor and to join activities organized by NGOs (8 / 17 – 47 %) join St. John ambulance, join community service, join social service in general
- 1 out of 17 interviewees indicate no joining of any civic activities (no time)
- All students indicate no joining of any political activities except discussion in LS lessons or talks in assembly.   But, the school did not organize any political activities.

Q 2. Can you prioritize the importance of the civic activities ?

On the whole, all students (100 %) would like to join social services rather than political activities. Among the social services, they prefer to sell flags, visit elderly home, take care of the elderly, join activities organized by government or NGOs, then voting or election in class.

Q. 3 Why do you have such sequence ?

Students prefer to join social services because:

1. teacher encouragement (3 out of 4 target schools – 75%)
2. meaningful (2 out of 4 target schools – 50 %)
3. peer influence (1 out of 4 target schools – 25 %)

4. to gain OLE hours (1 out of 4 target schools – 25 %)
5. for entertainment to spend time (1 out of 4 target schools – 25 %)
6. to have good experience (1 out of 4 target schools – 25 %)

Q. 4 When you are in school, which kinds of civic activities you would like to join ?

SA: Do social services / vote for the SU

SB: Join the SU/ vote for SU / hear talk related to protecting human rights

SC: Vote for SU

SD: Join some election activities e.g. SU, Clubs, class association (to vote and to be voted)
Be volunteer to serve the choir, orchestra and drama group

Conclusion :   All the interviewees would like to join the Student Union and vote for the
Student Union

Student's participation in school life

Q. 5 Do you think you have the confidence or ability to change things at school ? (as a person or as a group)

SA: 3/4 (75%) - agree to have the confidence and ability to change school policies

SB: 4/4 (100%) - all agree to the statement to change the school

SC: 3/5 (60%) - agree to the statement to change the school

SD: 4/4 (100%) - all agree to have the confidence and ability to change school policies

Conclusion: 14/17 students agree that they had the confidence or ability to change things at
school. (82%)

Q. 6 If yes, what are the reasons to make you believe that you (or as a group) have the ability or confidence to change the school ?

SA: 50 % (Yes - have the ability to change the school / active students can do it)
50 % (No – it is not easy to change the school)

SB: 100 % (Yes - because they have democracy / freedom of speech to reflect our opinion / exert
pressure to school to make progress / SU can change the school)

SC: 100 % (Yes. As individual, he / she can write proposal to principal to change.

As a group: through SU to change school policy. e.g. the use of microwave oven / change the blackboards during summer vacation)

SD: 100 % (Yes. if the request is reasonable and appropriate, the school will change / School has democracy and the school agree to the request of SU, e.g. students can eat in classroom)

Conclusion: It is through the Student Union to change school (15/ 17 interviewees – 88 %). Schools have democracy and agree to the students' request (9 / 17 interviewees – 53%)

Q. 7 How might this influence your confidence about your ability to change things in your community or in the government ?

SA: 4 / 4 (100 %) Yes. United effort / political parties → change the government

SB: 5 / 5 (100 %) No. Moderate influence to little influence : some changes but slowly / The government choose to listen to some opinion / people do not have enough ability to change the government policy.

SC: 2 / 4 (50 %) No → cannot change the government (e.g. the public housing policy → the government still cannot control the prices of houses)
2 / 4 (50 %) Yes → there are channels to change the government , e.g. through local district councilors / legislative councilors / ombudsman to voice out their complaints

SD: 3 / 4 (75 %) No → reasons: not united / not brave enough to voice out to criticize public policies / only have influence on minor issue or not significant issues / not so easily to change

Conclusion: 10 out of 17 interviewees (and 3 out of 4 target schools) do not have strong confidence to change the government (range from moderate influence to no influence). There is only one school (1 out of 4 target schools) show confidence to change things in community or in the government

Classroom climate

Q. 8 Do you often have discussion on current issues during lessons ?

SA: 100%   (Yes → Geography, Chinese History, LS lessons)

SB: 100%   (Yes → Chinese Language , LS lessons)

SC: 50 %   (Yes → LS lessons)
   50 %   (No → write notes in class rather than to have discussion as their classmates were too
              radical / the class was too noisy)

SD: 100 % (Yes → LS, Chinese History, History, Reading period, Geography, free lessons/
                              Even outside classroom during recess and after school)

Conclusion: 16 out of 18 (88 %) interviewees often have discussion on current issues during lessons. The subjects are: LS (100%) / Chinese History (50 %) / History (50 %) /   Geography (50 %) / Even use free lessons or outside classrooms to have discussion on current issues

Q. 9 Which current issues, political or social, you would prefer to discuss more ?   Why ?

SA: social issues (4 / 4 - 100 %) / no political issues
   Reasons: political issues were too far away from us (1 / 4 - 25 %)

SB: social issues (5 / 5 - 100%)
   Reasons: 1. political issues were too distant from them (2 / 5 – 40 %)
            2. parents do not encourage them (1 / 5 – 20 %)
            3. political issues → too sensitive (1 / 5 – 20 %)

SC: social issues (2 / 4 – 50 %)
   poltical issues (1 / 4 – 25 %)
   both social and political issues (1/4 – 25 %)
   Reasons: 1. Interested in topics that worth discussion
            2. topics near to our living
            3. political news were boring and lengthy
            4. would like to discuss political issues because he / she like to discuss controversial
               issues

SD: social issues   (4 / 5 – 80 %)
   political issues (1 / 5 – 20 %)
   Reasons: 1. would like to discuss social issues that near to us (our living) / will affect our
               parents' livelihood   / issues that directly affect us
            2. one student (20 %) would like to discuss political issue because he / she like to

discuss political issues with his / her father (*the influence of significant others*)

Conclusion: 15 / 18 interviewees (83 %) prefer to discuss social issues rather than political issues.

Reasons for choosing social issues are : more interesting / very near to us (our living) / affect our parents

Reasons for not choosing political issues are : too distant from us / some issues are too sensitive / parents may not like it / the political news are boring and lengthy

Q. 10 Do you think your teacher encourage students to freely express their views ?
Do you think your teacher encourage students to use multi-perspectives to express views ?

Multi-perspective thinking

SA: Yes—100%   (LS, Chinese History, History lessons)

SB: Yes – 100% (LS lessons)

SC: Yes – 100% (LS, Chinese language, History lessons)

SD: Yes – 100% (LS lessons)

Freely to express the views

SA: Yes – 100%

SB: Yes – 100% (LS, Chinese Language, free lessons, during recess

SC: Yes – 100 %   (mainly in LS lessons)

There were some worries as the classroom climate may not be favourable (e.g. the girls felt that the

boys were too radical or noisy during discussion)

SD: Yes – 100% (teachers will ask quiet students questions / teachers' encouragement / no model

Answer / LS papers are difficult to marked)

Conclusion: 100 % students agree that teachers encourage students to have multi-perspective thinking and to be freely to express their views, especially in Liberal Studies lessons. However, there was one student (17 out of 18 interviewees – 94 %) worried that the democratic classroom climate might be spoiled by the boys as they were very radical and too noisy to express their opinions.

Q. 11 How does your teacher (s) deal with conflicting views ?

SA: solve in a rational way / use a logical way to list out solutions to let students to reach a

conclusion

SB: let students cool down / express their view/ no biased on any sides

SC: let us to understand both sides of the picture / by voting → majority win

SD: narrow the difference on two different sides / understand views of opposite sides / let us make integration of views and reach conclusion / teachers try to make no biased and pre-judgments

Q. 12 Do you think your classroom is open enough to discuss current (political and social) issues ? Why ? Can cite any examples to support your view ?

SA: 100 % Yes

SB: 100% Yes

SC: 100 % Yes -- yet, with discipline problems → spoil the atmosphere or classroom climate

SD: 100 % Yes – wanted to have more lessons for discussion

Conclusion: 100 % students commented that their classrooms are open enough to have discussion on current issues.

Civics curriculum

Q. 13 What sort of special skills you learnt in civic class ? Name three most common skills you have learnt ?

SA: Control our emotion and make rational decision (4 / 4 interviewees)
    Respect others opinion (4 / 4 interviewees)
    Know how to listen / develop our own view / critical (4 / 4 interviewees)

SB: how to analyze problems (2 / 5 interviewees) / multi-perspective thinking (2 / 5 interviewees) / critical / logical thinking / organize views and presentation (1 / 5 interviewees)

SC: multi-perspective thinking (3 / 4 interviewees) / discussion skills / how to deal with divergent views / how to reach conclusion (1 out of 4 interviewees)

SD: multi-perspective thinking (4 / 5 interviewees) / learn to respect other's view / how to convince others to believe your views (1 out of 5 interviewees)

Conclusion: multi-perspective thinking (9 / 18 interviewees – 50 %)

> respect others' opinions (5 / 18 interviewees – 27%)
>
> critical thinking (5 /18 interviewees – 27 %)
>
> how to analyze problems (2 / 18 interviewees – 11%)

Q. 14 Do you think you have learnt sufficient civic knowledge or topics from the civic class ?

SA: 3 / 4 (75 %) -- sufficient knowledge (yet, does not get enough chances to practice / civic knowledge does not affect civic behaviour)

SB: 2 / 5 (40 %) -- sufficient

   3 / 5 (60 %) -- not enough

   Reasons : Many current issues or issues related to our living cannot be fixed as topics in Civic class

SC: 4 / 4 (100 %) – sufficient

SD: 5 / 5 (100 %) – not enough

   Reasons :

1. Many current news from the world , need to be up-dated
2. Civics curriculum is not up-dated as the world is changing
3. Lessons and teaching time is limited

Conclusion: Half of the students (9 / 18 interviewees – 50 %) regarded that the present civic knowledge and topics is insufficient. The main reasons are the curriculum is not up-dated enough to include the current news and the teaching time is limited.

Q. 15 If not, can you suggest any civic knowledge or topic you want to cover in the civics curriculum ? Why ?

SA: get more chances to practice civic knowledge / get to know more about China issues / more analyze skills / Learn to know more about the background of international issues

SB: the topic of global warming (environmental issues) is not deal with sufficiently/ topic related to current issues and latest news / issues about PRC e.g. national education are not sufficient

SC: current issues to be covered in civics curriculum

SD: wanted to study more topics about current news /

Topics about helping others or organizations of the voluntary services /

Topics related to international political issues /

Topics related to international military affairs

Conclusion: Topics most interviewees would like to study are:

              Current news (3 out of 4 target schools)

              Topics about China issues (2 out of 4 target schools)

              Topics about international issues (2 out of 4 target schools)

End of the report

Appendix I -- Description of the mean and standard deviation of the plausible values scores of the three dimensions of civic engagement: CONVEN, UNCONVEN and PROTE of the 1999 and 2009 cohorts

1999 cohort

Constructs	No. of items	Min.	Max.	Mean	SD
3 dimensions of PAS					
CONVEN	5	-6.51	4.61	-0.86	1.68
UNCONVEN	4	-5.65	4.87	-0.23	1.52
PROT	3	-13.73	6.19	-3.51	3.13

2009 cohort

Constructs	No. of items	Min.	Max.	Mean	SD
3-dimensions of PAS					
CONVEN	5	-4.97	2.79	-0.92	1.28
UNCONVEN	4	-4.00	4.72	0.11	1.34
PROT	3	-14.11	4.11	-5.41	2.84

Note: The presented results were from taking the average of the results from the five analyses of the five sets of plausible value scores

Appendix J -- Correlation matrix of the plausible value scores of the three dimensions of civic engagement and three school variables of the 1999 and 2009 cohorts

1999 cohort

Constructs	CONVEN	UNCONVEN	PROTE	CRURRI	OCCLIM	SCHPART
CONVEN		0.832**	0.561**	0.463**	0.477**	0.433**
UNCONVEN			0.501**	0.470**	0.482**	0.444**
PROTE				0.217**	0.249**	0.180**
CRURRI					0.508**	0.604**
OCCLIM						0.494**

2009 cohort

Constructs	CONVEN	UNCONVEN	PROTE	CRURRI	OCCLIM	SCHPART
CONVEN		0.653**	0.222**	0.288**	0.208**	0.265**
UNCONVEN			0.095*	0.359**	0.222**	0.300**
PROTE				-0.060	0.034	-0.072
CRURRI					0.331**	0.452**
OCCLIM						0.273**

Note: ***p < .001, **p < .01, *p < .05.

Note: The presented results were from taking the average of the results from the five analyses of the five sets of plausible value scores

Appendix K -- Results of covariance between intercept and slope of school factors on predicting students' expectation of future civic engagement of both the 1999 and 2009 cohorts

Covariance between intercept and slope of school factors on predicting conventional participation of 1999 cohort and 2009 cohort

	1999	1999	2009	2009
	Model 1	Model 2	Model 3	Model 4
Cov ($\beta 0$, $\beta 1$)		0.001		0.017
		(0.006)		(0.017)
Cov ($\beta 0$, $\beta 2$)		0.001		-0.015
		(0.006)		(0.018)
Cov ($\beta 0$, $\beta 3$)		-0.003		-0.007
		(0.006)		(0.023)
Cov ($\beta 1$, $\beta 2$)		-0.011		-0.005
		(0.006)		(0.010)
Cov ($\beta 1$, $\beta 3$)		0.005		-0.018
		(0.006)		(0.015)
Cov ($\beta 2$, $\beta 3$)		-0.006		-0.002
		(0.006)		(0.013)

Note 1: * Significant at 5 % level; **Significant at 1 % level. Standard errors are printed below the estimates and in brackets.

Note 2: The presented results were from taking the average of the results from the five analyses of the five sets of plausible value scores

Covariance between intercept and slope of school factors on predicting Unconventional Participation of 1999 cohort and 2009 cohort

	1999	1999	2009	2009
	Model 1	Model 2	Model 3	Model 4
Cov ($\beta 0$, $\beta 1$)		0.005		0.000
		(0.005)		(0.000)
Cov ($\beta 0$, $\beta 2$)		-0.005		0.000
		(0.005)		(0.000)
Cov ($\beta 0$, $\beta 3$)		-0.007		0.000
		(0.006)		(0.000)
Cov ($\beta 1$, $\beta 2$)		-0.009		0.000
		(0.005)		(0.000)
Cov ($\beta 1$, $\beta 3$)		-0.003		0.000
		(0.006)		(0.000)

Cov ($\beta 2,\ \beta 3$)		-0.005		0.000
		(0.006)		(0.000)

Note 1: * Significant at 5 % level; **Significant at 1 % level. Standard errors are printed below the estimates and in brackets.

Note 2: The presented results were from taking the average of the results from the five analyses of the five sets of plausible value scores

Covariance between intercept and slope of school factors on predicting Protest Activities of 1999 cohort and 2009 cohort

	1999	1999	2009	2009
	Model 1	Model 2	Model 3	Model 4
Cov ($\beta 0,\ \beta 1$)		0.000		0.000
		(0.000)		(0.000)
Cov ($\beta 0,\ \beta 2$)		0.122**		0.000
		(0.031)		(0.000)
Cov ($\beta 0,\ \beta 3$)		0.005		0.000
		(0.030)		(0.000)
Cov ($\beta 1,\ \beta 2$)		0.000		0.000
		(0.000)		(0.000)
Cov ($\beta 1,\ \beta 3$)		0.000		0.000
		(0.000)		(0.000)
Cov ($\beta 2,\ \beta 3$)		0.021		0.000
		(0.020)		(0.000)

Note 1: * Significant at 5 % level; **Significant at 1 % level. Standard errors are printed below the estimates and in brackets.

Note 2: The presented results were from taking the average of the results from the five analyses of the five sets of plausible value scores

Appendix L -- Program for generating plausible values of six variables (CONVEN, UNCONVEN, PROTE, CURRI, OCCLIM and SCHPART) of the 1999 and 2009 cohorts

```
setwd("C:/1999_pv")     #Read the data
P <- scan("1999_polact_full scale.pls", what="charactor",sep="\t") #3 var
K <- scan("1999_curriculum.pls", what="charactor",sep="\t") #1 var
N <- scan("1999_cclimate.pls", what="charactor",sep="\t") #1 var
J <- scan("1999_school.pls", what="charactor",sep="\t") #1 var
PV <- matrix (NA, ncol=42, nrow=4997, byrow=TRUE,
              dimnames=list(seq(1,4997),
              c("CONVEN1", "UNCOVEN1", "PROTE1", "CURRIC1", "CCLIM1", "SCHPART1",
                "CONVEN2", "UNCOVEN2", "PROTE2", "CURRIC2", "CCLIM2", "SCHPART2",
                "CONVEN3", "UNCOVEN3", "PROTE3", "CURRIC3", "CCLIM3", "SCHPART3",
                "CONVEN4", "UNCOVEN4", "PROTE4", "CURRIC4", "CCLIM4", "SCHPART4",
                "CONVEN5", "UNCOVEN5", "PROTE5", "CURRIC5", "CCLIM5", "SCHPART5",
                "CONVEN_m", "UNCOVEN_m", "PROTE_m", "CURRIC_m", "CCLIM_m", "SCHPART_m",
                "CONVEN_sd", "UNCOVEN_sd", "PROTE_sd", "CURRIC_sd", "CCLIM_sd",
"SCHPART_sd")))
for (i in 1:4997){
  # PV1 to PV5 of all variables
  for (j in 0:4){
  PV[i,1+6*j] <- as.numeric(substr(P[(2+j)+(i-1)*8], 13, 18))
  PV[i,2+6*j] <- as.numeric(substr(P[(2+j)+(i-1)*8], 19, 24))
  PV[i,3+6*j] <- as.numeric(substr(P[(2+j)+(i-1)*8], 25, 30))
  PV[i,4+6*j] <- as.numeric(substr(K[(2+j)+(i-1)*8], 13, 18))
  PV[i,5+6*j] <- as.numeric(substr(N[(2+j)+(i-1)*8], 13, 18))
  PV[i,6+6*j] <- as.numeric(substr(J[(2+j)+(i-1)*8], 13, 18))
  }

  # mean of all variables
  PV[i,31] <- as.numeric(substr(P[7+(i-1)*8], 1, 10))
  PV[i,32] <- as.numeric(substr(P[7+(i-1)*8], 12, 21))
  PV[i,33] <- as.numeric(substr(P[7+(i-1)*8], 24, 32))
  PV[i,34] <- as.numeric(substr(K[7+(i-1)*8], 1, 10))
  PV[i,35] <- as.numeric(substr(N[7+(i-1)*8], 1, 10))
  PV[i,36] <- as.numeric(substr(J[7+(i-1)*8], 1, 10))

  # SD of all variables
  PV[i,37] <- as.numeric(substr(P[8+(i-1)*8], 1, 10))
```

```
    PV[i,38] <- as.numeric(substr(P[8+(i-1)*8], 12, 21))
    PV[i,39] <- as.numeric(substr(P[8+(i-1)*8], 24, 32))
    PV[i,40] <- as.numeric(substr(K[8+(i-1)*8], 1, 10))
    PV[i,41] <- as.numeric(substr(N[8+(i-1)*8], 1, 10))
    PV[i,42] <- as.numeric(substr(J[8+(i-1)*8], 1, 10))
}
write.csv(PV, "PV.csv")


setwd("C:/Dropbox/Projects/Cherry/2009")     #Read the data
P <- scan("2009_polact.pls", what="charactor",sep="\t") #3 var
K <- scan("2009_curriculum.pls", what="charactor",sep="\t") #1 var
N <- scan("2009_cclimate.pls", what="charactor",sep="\t") #1 var
J <- scan("2009_school.pls", what="charactor",sep="\t") #1 var


PV <- matrix (NA, ncol=42, nrow=602, byrow=TRUE,
              dimnames=list(seq(1,602),
            c("CONVEN1", "UNCOVEN1", "PROTE1", "CURRIC1", "CCLIM1", "SCHPART1",
              "CONVEN2", "UNCOVEN2", "PROTE2", "CURRIC2", "CCLIM2", "SCHPART2",
              "CONVEN3", "UNCOVEN3", "PROTE3", "CURRIC3", "CCLIM3", "SCHPART3",
              "CONVEN4", "UNCOVEN4", "PROTE4", "CURRIC4", "CCLIM4", "SCHPART4",
              "CONVEN5", "UNCOVEN5", "PROTE5", "CURRIC5", "CCLIM5", "SCHPART5",
              "CONVEN_m", "UNCOVEN_m", "PROTE_m", "CURRIC_m", "CCLIM_m", "SCHPART_m",
              "CONVEN_sd", "UNCOVEN_sd", "PROTE_sd", "CURRIC_sd", "CCLIM_sd",
"SCHPART_sd")))
for (i in 1:602){
  # PV1 to PV5 of all variables
  for (j in 0:4){
  PV[i,1+6*j] <- as.numeric(substr(P[(2+j)+(i-1)*8], 13, 18))
  PV[i,2+6*j] <- as.numeric(substr(P[(2+j)+(i-1)*8], 19, 24))
  PV[i,3+6*j] <- as.numeric(substr(P[(2+j)+(i-1)*8], 25, 30))
  PV[i,4+6*j] <- as.numeric(substr(K[(2+j)+(i-1)*8], 13, 18))
  PV[i,5+6*j] <- as.numeric(substr(N[(2+j)+(i-1)*8], 13, 18))
  PV[i,6+6*j] <- as.numeric(substr(J[(2+j)+(i-1)*8], 13, 18))
  }
    # mean of all variables
  PV[i,31] <- as.numeric(substr(P[7+(i-1)*8], 1, 10))
  PV[i,32] <- as.numeric(substr(P[7+(i-1)*8], 12, 21))
  PV[i,33] <- as.numeric(substr(P[7+(i-1)*8], 24, 32))
  PV[i,34] <- as.numeric(substr(K[7+(i-1)*8], 1, 10))
  PV[i,35] <- as.numeric(substr(N[7+(i-1)*8], 1, 10))
```

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```
PV[i,36] <- as.numeric(substr(J[7+(i-1)*8], 1, 10))


# SD of all variables
PV[i,37] <- as.numeric(substr(P[8+(i-1)*8], 1, 10))
PV[i,38] <- as.numeric(substr(P[8+(i-1)*8], 12, 21))
PV[i,39] <- as.numeric(substr(P[8+(i-1)*8], 24, 32))
PV[i,40] <- as.numeric(substr(K[8+(i-1)*8], 1, 10))
PV[i,41] <- as.numeric(substr(N[8+(i-1)*8], 1, 10))
PV[i,42] <- as.numeric(substr(J[8+(i-1)*8], 1, 10))
}
write.csv(PV, "PV.csv")
```

Appendix M -- Equations using multidimensional Rasch latent regression analysis

Equations

<u>To assess cohort difference on three dimensions of future civic engagement</u>

CONVEN = - 0.873 + 0.062 * 0 (1999 cohort) + ε   1.1

CONVEN = - 0.873 + 0.062 * 1 (2009 cohort) + ε   1.2

UNCONVEN = - 0.114 + 0.267 * 0 (1999 cohort) + ε   2.1

UNCONVEN = - 0.114 + 0.267 * 1 (2009 cohort) + ε   2.2

PROTE = - 2.820 + -0.947 * 0 (1999 cohort) + ε   3.1

PROTE = - 2.820 + -0.947 * 1 (2009 cohort) + ε   3.2

<u>To assess gender difference on three dimensions of future civic engagement</u>

CONVEN (1999 and 2009 cohorts) = - 0.873 + 0.118 * 0 (Female) + ε 4.1

CONVEN (1999 and 2009 cohorts) = - 0.873 + 0.118 * 1 (Male) + ε 4.2

UNCONVEN (1999 and 2009 cohorts) = - 0.114 + - 0.178 * 0 (Female) + ε 5.1

UNCONVEN (1999 and 2009 cohorts) = - 0.114 + - 0.178 * 1 (Male) + ε 5.2

PROTE (1999 and 2009 cohorts) = - 2.820 + 0.417 * 0 (Female) + ε 6.1

PROTE (1999 and 2009 cohorts) = - 2.820 + 0.417 * 1 (Male) + ε 6.2

<u>To assess gender difference on three dimensions of future civic engagement of</u>

<u>the 1999 cohort</u>

99_CONVEN = - 0.880 + 0.134 * 0 (Female) + ε 7.1

99_CONVEN = - 0.880 + 0.134 * 1 (Male) + ε 7.2

99_UNCONVEN = - 0.109 + -0.195 * 0 (Female) + ε 8.1

99_UNCONVEN = - 0.109 + -0.195 * 1 (Male) + ε 8.2

99_PROTE = - 2.854 + 0.486 * 0 (Female) + ε 9.1

99_PROTE = - 2.854 + 0.486 * 1 (Male) + ε 9.2

Appendix N -- Descriptive statistics of the PAS items in the 1999 and 2009 cohorts

	1999 Mean	1999 SD	2009 Mean	2009 SD
For Questions1 to 5: When you are an adult, what do you expect you will do ? And, for Questions 6 to 12: As a young person could take during the next few years: What do you expect that you will do? (A 4 point scale ranges from '1 – I will certainly not to do this' to '4 – I will certainly do this')				
1. Vote in national election	3.03	0.844	3.01	0.896
2. Get information about candidates before voting in an election	2.67	0.872	2.67	0.982
3. Join a political party	1.92	0.846	1.55	0.786
4. Write letters to a newspaper about social or political concerns	2.27	0.887	1.86	0.888
5. Be a candidate for a local or city office	2.03	0.904	1.56	0.806
6. Volunteer time to help (poor or elderly) in the community	2.88	0.725	2.90	0.873
7. Collect money for social cause	2.89	0.717	2.93	0.848
8. Collect signatures for a petition	2.60	0.824	2.36	1.029
9. Participate in a non-violent protest march or rally	2.36	0.868	2.00	1.011
10. Spray-paint protest slogans on walls	1.65	0.885	1.22	0.529
11. Block traffic as a form of protest	1.61	0.885	1.20	0.505
12. Occupy buildings as a form of protest	1.59	0.901	1.22	0.544

Note: For 1999 cohort, n = 4997; for cohort 2009, n = 602

Appendix O -- Differential item functioning of the items of Political Action Scale

DIF analysis was conducted to assess the model-data fit. Table below lists the maximum differences in the estimates of item difficulties across groups. A difference larger than or equal to 0.5 logits as a sign of substantial DIF (Wang et al., 2006). None of the 12 items of the PAS showed any substantial cohort or gender DIF.

Subscale / item	Cohort	Gender
CONVEN		
m1: Vote in national election	0.48	0.34
m2: Get information about candidates before voting …	0.46	0.05
m3: Join a political party	0.28	0.11
m4: Write letters to a newspaper…	0.29	0.05
m5: Be a candidate for a local or city office	0.44	0.23
UNCONVEN		
6. Volunteer time to help (poor or elderly) in the community	0.26	0.37
7. Collect money for social cause	0.30	0.26
8. Collect signatures for a petition	0.16	0.15
9. Participate in a non-violent protest march or rally	0.39	0.47
PROTE		
10. Spray-paint protest slogans on walls	0.16	0.06
11. Block traffic as a form of protest	0.06	0.02
12. Occupy buildings as a form of protest	0.10	0.04

Note: Substantial DIF refers to a difference in item difficulties larger than or equal to 0.5 logits between groups.
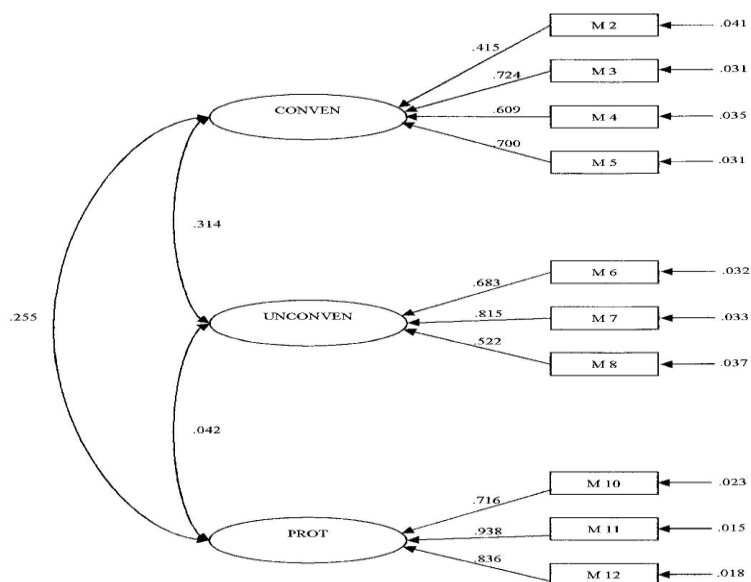
Appendix P – A Three-factor Structure of the Political Action Scale of the 1999 cohort and the 2009 cohort

Figure A

Confirmatory Factor Analysis: 1999 data (n=4997)
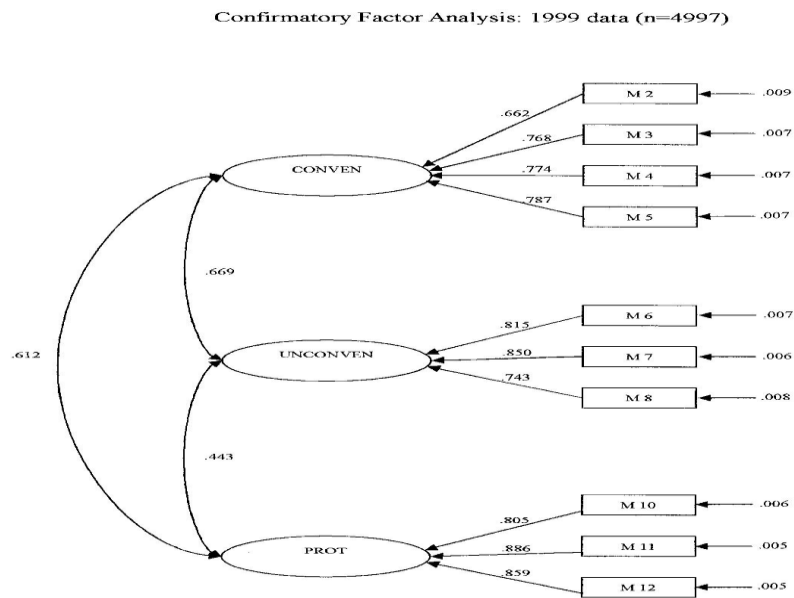
χ^2 (24, n = 4997) = 538.46, p < 0.001, RMSEA = 0.081, NNFI = 0.95, and CFI = 0.96.

Figure B: Confirmatory Factor Analysis: 2009 data (n = 602)

χ^2 (32, n = 602) = 113.55, p < 0.001, RMSEA = 0.065, NNFI = 0.95, and CFI = 0.96.