ABILITY — GROUPING AND SECONDARY STUDENT

ATTRIBUTIONS OF

SUCCESS AND FAILURE IN HONG KONG AND SHANGHAI

A Thesis in

Educational Theory and Policy

by

Aohua Ni

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The thesis of Aohua Ni was reviewed and approved* by the following:

David M. Post  
Professor of Education  
Thesis advisor

Katerina Bodovski  
Associate Professor of Education

Gerald K. LeTendre  
Professor of Education  
Department head

*Signatures are on file in the graduate school.
There are international differences in the degree to which students attribute their failures to internal factors or external factors. These differences appear not only between countries, but also within China and between the school systems of Shanghai and Hong Kong. Many researchers interested in cross-cultural comparison have explored differences in students’ attributional thinking. By contrast with past cross-cultural research, this thesis looks at variations in attributions within contemporary Chinese culture, because students’ school experiences vary widely between Hong Kong and Shanghai. All students are ability grouped in 10th grade in both cities. However, only Hong Kong students are ability grouped in 9th grade, while Shanghai students are expected to attend a neighborhood school. Because the students share a similar cultural background, the thesis explores the possibility that there are differences in their attributions of success and failure caused by differences in ability grouping processes. I first review the education policies of Shanghai and Hong Kong. My policy analysis considers that ability grouping and education system structure can be a possible explanation for the differences in students’ attributions. Then I will use PISA student questionnaire item #44, “Attributions of failure” as an illustration of how students’ attributional differences might be explained by differences in ability grouping between these two cities.
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Introduction

There are international differences in students’ attributions of failure to internal or external factors. Previous researchers interested in cross-national comparison have found differences in students’ attributional thinking. However, most previous comparative researchers used cultural differences to explain attribution differences, claiming it is the culture in which a person is socialized and emerges values that brings the attribution differences (Fry and Ghosh, 1980; Stevenson, Lee, Chen, Stigler, Hsu, Kitamura and Hatano, 1990; Chen and Stevenson, 1995; Li, 2003 etc.). Other researchers considering school systems and students’ attributions and future pathways, tend to ignore the influence of different national ideology on students’ understandings (Kerckhoff, 2001; Mijs, 2016). Synthesizing both of these two literatures, this thesis explores the role of different school systems, especially ability grouping and the accompanying high stakes tests, on students’ attributions within a similar cultural background.

Students’ own understandings of their academic success and failure are worthy of study. Previous researchers agreed that internal attributions were more likely to promote students’ academic progress (Schunk, 1982; Vispoel and Austin, 1995; Liu, Cheng, Chen and Wu, 2009 etc.). Researchers also suggested that how students understood success and failure related their views about social inequalities and stratified social orders (Fave, 1980; Mijs, 2016).

Previous research has noted that there are international differences in students’ attributions of failure to internal or external factors (Mijs, 2016). Extending this past research, in this thesis I find that these differences appear not only between countries, but also within
different cities in a same country. I chose two Chinese cities, Shanghai and Hong Kong, as the two cities for analysis. Shanghai and Hong Kong share very similar cultural traditions and beliefs. However, even in a similar cultural environment, students’ interpretations of attributions may differ greatly between the two cities. Shanghai and Hong Kong’s students have very different school experiences. Shanghai’s primary and middle school enrollment follows the neighborhood school principle. Thus, the grade 9 students in Shanghai’s middle schools are expected to attend a neighborhood school and are assigned without ability grouping practices. By contrast, Hong Kong’s primary students are allocated to secondary schools mainly based on their standardized scores in three examinations taken in primary 5 and primary 6. Thus, Hong Kong’s grade 9 students are ability grouped by their scores in the ability and achievement tests. From grade 9 to grade 10, Shanghai’s students need to take the high stakes test, high school entrance examination to decide which high school they may enter. However, Hong Kong’s grade 10 students usually stay in the same secondary school, following Hong Kong’s implementation of twelve-years of compulsory education. Overall, all students are ability grouped in 10th grade in both cities. However, only Hong Kong students are ability grouped in 9th grade, while Shanghai students are expected to attend a neighborhood school.

In the thesis, I consider the relation between the existence of ability grouping in each grade and city, on the one hand, and students’ attributions of success and failure between the 9th grade and 10th grade level in and between Shanghai and Hong Kong, on the other hand. The purpose is to explore differences in attribution within and across two Chinese cities in order to show a possible role played by different ability groupings in each of these cities. I
consider the possibility that when students share a similar cultural background, then the differences in their attributions of success and failure are likely to be caused by differences in ability grouping processes. Based on Turner’ (1960) contest mobility theory and Blau and Mijs’ (1977, 2016) heterogeneity and homogeneity theory, I expected that students selected by ability grouping and high stakes tests will more likely to learn from the selection process and the homogeneous environment where all the peers are selected from the high stakes test. Thus, these students would be more likely to attribute their academic performance to internal attributions, such as effort and ability.

In this thesis I first review the education policies of Shanghai and Hong Kong. My policy analysis considers that ability grouping and education system structure can be a possible explanation for the differences in students’ attributions. Then I use PISA student questionnaire item #44, “Attributions of failure,” as an example to illustrate how students’ attributional differences might be explained by differences in ability grouping between these two cities.
Research Context

Culture and Attribution

When interpreting students’ explanations for their own academic achievement, cultural differences and institutional differences can both be important factors in the attributions of success and failure (Weiner, 2010). Many researchers interested in cross-cultural comparison find differences in students’ attributional thinking. For example, studies have found differences in the attributional styles of Western and Eastern cultures. Jin Li (2003) found that, as compared to Americans’ “mind orientation” toward learning, Chinese students displayed a “person orientation,” which is more desirable and internalized. Fry and Ghosh (1980) found that, compared to Anglo-Saxon students, Asian students tended to accept responsibility for both academic success and failure, while Anglo-Saxon students tended to accept responsibility only for success but not for failure. Many studies have also shown that Eastern parents and students tend to identify effort as the primary determinant of academic achievement, while Western parents and students emphasize ability more (Lee, Ichikawa, and Stevenson, 1987; Holloway, 1988; Chen et al., 1995; Li, 2002). Chinese and Japanese students and their mothers consider effort as a much greater factor in reasoning the causes of academic success than American students and mothers (Stevenson et al., 1990). The emphasis on effort makes Chinese and Japanese students hold high academic standards and work much harder than American students (Stevenson et al., 1990). Thus, the cultural differences in attributional beliefs can be one explanation for the high academic performance of Chinese students compared to American students (Lee, 2009; Stevenson et al., 1990).

The cultural factor highlights the national discourse on students’ attributions of
academic performance. The cultural divergence and the related different social norms, schematic beliefs can be the possible attributional causes (Weiner, 2010). The Chinese culture strongly emphasizes effort, and students believe that working hard leads to success from a very young age (Li, 2002). This emphasis on effort is not only a belief of Chinese people, but also becomes a norm, a preferred mode of thinking of Chinese people (Leung, 2010). The emphasis on effort is strongly related to Chinese traditional Confucian culture. In Confucianism, individuals are believed to have the ability to self-cultivate and self-perfect. The Confucian culture also emphasizes education more than class origin. The emphasis on education reflects the Confucian belief that every individual can be self-promoted if they make enough effort (Leung, 2010). In western cultures, Covington and Omelich brought up a “self-worth theory” to explain the relationship among effort, ability and academic performance (Holloway, 1988). They argue that, because Americans view effort and ability as inversely related, individuals who work hard are seen as compensating for their low ability (Holloway, 1988). Thus, low-achieving students that are suggested to make more efforts are seen as incapable students. They have to work harder than others to compensate for their insufficient ability.

In this study, I attempt to explore how ability grouping and the accompanying high stakes test influence students’ attributions of success and failure. To improve the validity of cross-national research on academic achievement, Bempechat and Severson (1999) argue that researchers should attend to the cultural context of learning. To improve the validity of the study and to decrease the influence that different cultures have on students’ attributions, I look at variations within contemporary Chinese culture where students’ school experiences differ between Hong Kong and Shanghai. Although we can consider that choosing two
Chinese cities will eliminate cross-national differences, previous researchers have found that within culture differences also exist in students’ attributions (Sit, Braman, Kerr and Lindner, 2011).

In many ways, Hong Kong’s culture is very similar to that of Mainland China. The population of Special Administrative Region (SAR) is primarily made up of ethnic Chinese, with only 2% residents who were born outside of either Hong Kong or China (Wong, 1986). Wong Siu-lun (1986) stated that the Hong Kong Chinese were westernized only in a superficial sense, and a considerable number of Hong Kong Chinese still adhered to the traditional mores on various aspects. In 2011, the Hong Kong population census reported that ethnic Chinese still made up more than 93.6% of the population. The predominantly Chinese social structure remains unchanged, and this structure determines that Hong Kong’s cultural background is strongly bound with Chinese traditional features (Wu, 1997). Cantonese, a major dialect of Chinese, is still Hong Kong’s most important communication languages. The traditional Chinese festivals, like the Spring Festival, Qing Ming and the Mid Autumn Festival are expressly provided as the holidays even in the colonial days (Wu, 1997).

In addition, Hong Kong and Shanghai share very similar cultural values in attribution. Although Hong Kong is a former British colony, traditional values are still very strong and Confucianism left a strong influence (Hau and Salili, 1990). In Hong Kong, influenced by traditional Confucian cultural values of self-cultivation and self-perfection, education is highly valued, and achievement through effort and diligence is highly emphasized. Hong Kong students are expected to work hard even though the probability of high achieving is low (Hau and Salili, 1990). The cultural environment of Hong Kong requires Hong Kong
students to place more importance on effort and to be diligent, independent and competitive (Sit et al., 2011). The similar situation has also been found in Shanghai, a major mainland city, which has been under the Confucian culture’s influence for thousands years. Thus, based on the similar cultural environment of the two cities and the close cultural values in attributions, one can argue that culture is not the main factor that influences students’ attributions of success or failure in Hong Kong and Shanghai. And the cultural similarity makes it possible for us to focus on students’ school experiences to explore students’ attributions of academic success or failure in this study.

The Shanghai and Hong Kong educational context

In 1970, in the policy address, Governor David Trench announced a plan to implement compulsory primary schooling starting in 1971. After the universalization of primary school education, the Hong Kong government focused on the development of secondary school education. In 1974, the Hong Kong Education Commission published *White paper on secondary education in the next ten years*, suggesting expanding the compulsory education to junior secondary school. In 1978, under Governor Murray MacLehose, the plan for nine-years of compulsory education was realized. The secondary school system was five years, consisting of three-year junior secondary schooling and two-year senior secondary schooling. All the secondary schools provided both junior secondary schooling and senior secondary schooling. After the five-year secondary schooling, students could take either a one-year or two-year preparation education for college. Hong Kong was handed back to China in 1997. In 2001, Hong Kong developed a new education guideline, “learning to learn, the way forward in curriculum development”. In 2009, Hong Kong took a new education model, seeking to fit with the Chinese and American system. After the change, Hong Kong
extended compulsory education from nine years to twelve years, including six years of primary education and six years secondary education. All the schools today in Hong Kong are comprehensive schools. Tuition fees were removed in 1978 to make schools more accessible for students. Hong Kong’s six-year secondary education is not divided into middle school education and high school education. All the secondary schools provide junior secondary schooling (grade 7 to 9) and senior secondary schooling (grade 10 to 12) for students.

Hong Kong’s secondary schools are stratified into three bands according to academic ability. The higher band includes the most selective secondary schools. The Hong Kong Education Department allocates students to secondary schools based on student performance in three examinations taken in grade 5 and grade 6 in primary schools. Since parents and students naturally have a strong preference to attend to a higher band school, the competition in primary school is very high. The three examinations in grade 5 and grade 6 are a focus through the whole primary education years. In secondary schools, students are tracked into three bands. And within the school, students are tracked usually by their academic ability into different groups and classrooms. Following the extension of compulsory education to twelve years, there is no examination between junior secondary school and senior secondary school. Hong Kong’s students do not need to take extra examinations to be allocated to senior secondary schools. It is uncommon for Hong Kong’s students to move to a higher band as they move from lower to senior secondary school. However, most students choose to stay in the same school in grade 10 as in grade 9. Thus, most students experience the similar tracked experience in senior secondary school as in lower secondary, and they stay in the same band school. In the last year of senior secondary school (grade 12), students will take Hong Kong
Diploma of Secondary Education Examination, known as HKDSE, for the college entrance.

Shanghai is pioneer of education reform in Mainland China. Since 1989, Shanghai has launched two waves of curriculum reform, one in 1989 and the next one in 1998. By 2008, the new curriculum has been implemented in the whole city (OECD, 2010). Although thorough curriculum reforms took place, these reforms brought few changes to the existing school system and examination system. The compulsory education in Shanghai is nine years, including six-years of primary school education and three-years of middle school education. Then students need to take the city’s high school entrance examination for high school.

For both primary school and middle school, students are allocated based on their home residence, according to the “entering to secondary schools nearby” principle (which I will refer to later as a “neighborhood school” policy). This principle largely influences the house price in Shanghai. Shi Yishao and Wang Yiting (2014) found that the total impact of school factors on housing price was 20.63%, and there was a positive correlation between the house price and the distance from the house to a good neighborhood school. Because Shanghai does not divide students into different levels of middle schools based on their examination performance, Shanghai’s students experience less pressure in primary school level as compared to Hong Kong students.

In middle school, in principle, there should be no ability grouping among and within schools. That means that there is no stratification among middle schools and no “Key” (“Key” will be further explained later) classes within middle school. In the last year of middle school (grade 9), Shanghai’s students prepare for the city’s high school entrance examination. Different from middle school, Shanghai’s high schools are widely ability grouped among schools, classrooms, and between art or science pathways. Shanghai’s high schools are
divided into experimental model high schools and ordinary high schools. Within the school, students are ability grouped usually by their academic ability into key classes (also known as experimental classes) or ordinary classes. Students are allocated to different levels of high schools based on their score in the high school entrance examination. There is a score cut line for each high school, and better high schools require higher scores. Usually, most Shanghai students attend a different high school in grade 10 than grade 9. For the whole high school education, students will learn and prepare for the national college entrance examination. Compared to Hong Kong, Shanghai’s middle schools are less stratified by ability. However, Shanghai’s students experience more examination pressure than do Hong Kong students during the middle school level. Thus, Shanghai’s students experience a change from a no-stratified situation to a stratified situation. By contrast with Shanghai’s students, Hong Kong’s students experience few changes in the stratified situation in senior secondary school compared to junior secondary school.
Literature Review

Attributions for Success and Failure

Educational psychologists term the reasons people give for an outcome in a task, including success or failure in education, as “attributions.” Weiner found that the four main causes for achievement outcomes are ability, effort, task difficulty and luck. Weiner (1985) classified the reasons for success and failure into three dimensions: locus (internal or external), stability and controllability. The causes of outcomes can be grouped into the three dimensions. Effort may be classified as internal, unstable or controllable. These attributional causes and dimensions play important roles in shaping students’ motivation and achievement as an outcome. More controllable attributions such as effort can increase people’s motivation and learning satisfaction. By contrast, more uncontrollable attributions, like luck, cause negative motivation and learning depression. Besides the four causes, social and cultural attributions such as social norms, past success or failure history and schematic beliefs can also be possible causes (Weiner, 1985). The next review part will first look at internal and external attributions, then discuss possible causes related to different attribution patterns. Finally, I look at the relationship between ability grouping and attribution.

Internal and External Attributions

In the locus dimension of attribution, “internal” means assigning the cause of behavior to internal characteristics such as effort or ability rather than outside forces, “External,” by contrast, means assigning the cause of behavior to forces outside of a person’s control, such as luck, guesses, teachers or parents. Theories of attributions have related patterns of attribution to academic achievement (Weiner, 1985). Differences in the tendency to
internalization or externalization cause different academic outcomes.

Researchers have considered external attribution as possible predictors for academic underperformance. Liu et al. (2009) conducted a longitudinal research among 2,000 Taiwanese secondary students from 2001 to 2005, aimed to explore the relationship between students’ educational expectations, academic attributions and academic growth. The results showed that students attributing their achievement to external attributions experienced a lower learning growth rate over time. The results consisted with other researchers that also found attributions to general external factors were negatively related to academic achievement (Georgious, 1999; Laar, 2000). Weiner (1985, 2010) suggested that externalization in academic achievement might decrease a sense of self-efficiency and the expectation for outcomes, thus, influenced the final outcome. Liu et al. (2009) explained that students attributing their success and failure to external factors would not work hard and tend not to invest time in learning.

By contrast with the negative role of external attribution on academic achievement, researchers have found that internal attributions were linked more closely with high-performing students and academic progress. Schunk (1982) found that students who attributed their progress to effort experienced greater academic progress and skill development in mathematics. Liu et al. (2009) found that effort attributions had a positive effect on learning growth rates. Vispoel and Austin (1995), McClure, Meyer, Garisch, Weir, Fischer and Walkey (2011) all found that high-performing students were more likely to attribute their success to internal factors like effort and ability. Liu et al. (2009) explained that students with internal beliefs that effort and ability affected academic outcomes, would work harder than students holding external attributions. Thus, these students could get greater
academic progress and better learning outcomes through their diligence.

Scholars hold mixed opinions on which internal attribution—effort or ability—is most closely associated with achievement progress. Liu et al. (2009) found that students who made effort attributions would score higher than those who made other attributions, including ability. By contrast, other scholars like Vispoel and Austin (1995), O’Sullivan and Howe (1996) found that ability attributions for success and failure led to greater academic progress than effort attributions. To be more specific, some scholars found that students with different achievement goals, mastery or performance, would make different internal attributions. Researchers have showed that students with mastery goals were more likely to make effort attributions for their academic success, while students with performance goals were more concerned about comparison of their ability to other students (Luo, Hogan, Yeung, Sheng and Aye, 2014). Some researchers also found that students’ emphasis on effort attribution or ability attribution would differ by student groups (Nokelainen, Tirri and Valimaki, 2007). Highly and moderately gifted students would attribute ability as a more important factor for mathematics success than effort, while moderately and mildly gifted students would see effort more importantly.

Attributions and Causes

Weiner found four main causes for achievement outcomes: ability, effort, task difficulty and luck. Weiner (1983) identified four causes that might be most relevant to academic settings. In fact, the influences that affect attributions extend beyond the four causes. Scholars found that social attributions from the student’s family, teachers and peers played a definite role in students’ interpreting of academic success or failure (Vispoel and Austin, 1995; Stoebber and Becker, 2008; Liu et al., 2009). Vispoel and Austin (1995) found that
students would list family influence as a cause when interpreting both of their academic success and academic failure. Stoeber and Becker (2008) found that in peer-grouped activities such as soccer, girls tend to strive for perfection. And this desire for perfection was largely related to their self-serving attributions (internal attribution of success). Liu et al. (2009) found that students attributing their achievement to external attributions experience a lower learning growth rate over time. The external attributions considered by Liu et al. (2009) included teacher instruction, parental discipline and help from friends.

Besides social attributions, researchers have shown that individual’s characteristics such as motivation, age and self-concept relate closely with students’ attribution of success and failure. Sit, Braman, Kerr and Lindner (2011) found that both females and males with high academic performance would be more self-oriented and motivated than their average and low-performing peers. These high-performing students would emphasize effort under the influence of traditional Chinese cultural values of collectivism and diligence. The difference in students’ age also caused different attributions. Hau and Salili (1990) found that older students attributed more internal causes and had stronger learning goals than younger students. Bandalos, Yates and Christ (1995) found that women attributing success more to behavioral causes would have high mathematics self-concept than those attributing success to external causes. The situation was the same for men as men attributing success to external causes would have lower self-concept and higher test anxiety.

Culture can also make a big difference in students’ interpretation of attribution. Many cross-cultural studies have found that different cultures tend to place different emphases on the cause of attribution (these differences have been discussed in the previous “cultural and attribution” part). For example, western culture emphasized innate abilities from individuals.
Asian culture emphasized the value of self-improvement, concentrating more on individual’s effort (Liu et al., 2009). Researchers need to pay more attention to cultural differences when doing cross-national comparisons on attribution.

Many scholars have taken educational institutions into account, exploring the relationship between institutional characteristics and students’ attribution of success and failure. For example, students in different school types may attribute success and failure differently. Bempechat, Severson and Boulay (2013) found that African and Latino American Catholic school students were less likely to attribute success in mathematics to external attributions compared to African and Latino American public school students. Foon (1988) explained that types of school attended would affect students’ self esteem, locus of control and affiliation needs; thus, affected students’ attribution styles. Scholars like Asmus (1986) found that grade level could also influence students’ attribution patterns. During students’ later grade levels, students shift in their internal attributions from more internal unstable attributions to more internal stable attributions (Asmus, 1986). The very recent cross-national research by Mijs (2016) also relates educational institutions to students’ attributions for success and failure by exploring the connection between school stratification and students’ attributions. Mijs (2016) found that students in mixed-ability groups were more likely to externalize their failure in mathematics compared to students in ability-tracked groups, who on the contrary, would internalize their failure to their inability to do well in mathematics.

**Ability Grouping and Attribution**

The term ability grouping has been used to refer to the stratified practices –of schools, teachers or education authorities—that purposely group students into classes and schools
based on their academic abilities (Betts, 2011). Ability grouping has always been a controversial issue in education research. Some researchers found that ability grouping helped to promote high achievers’ academic performance as they enrolled in accelerated classes (Kulick, 1991). However, other scholars found that ability grouping would have no effect on secondary students’ achievement (Slavin, 1990). Scholars like Broaded (1997), Lou, Abrami and Spence (2000) supported ability grouping from an instructional rationality perspective. Ability grouping could help to enhance both teaching and learning by facilitating teachers’ and students’ adjustment (Broaded, 1997). Teachers and students could benefit from cooperation and study in the same pace if they were reset in a homogenous ability-grouped environment (Lou, Abrami and Spence, 2000). By contrast, other scholars like Pallas, Entwisle, Alexander and Stluka (1994) opposed ability grouping with the argument that ability grouping was unfair to students in low-ability group as ability grouping could not provide students with equal chances of achievement. And this unfairness would enlarge with the polarization of ability between high and low-ability students (Lou et al., 2000). Although controversial, ability grouping remains the standard in many countries including the two Chinese cities, Shanghai and Hong Kong in the thesis.

In the study related to attributions, most researchers studied the relationship between ability grouping and students’ individual characteristics, for example, self-concept. Scholars believed that being placed in an ability-grouped environment might affect the way students felt about themselves and also affect students’ judgments about their capacities within the domain (Slaughter-Defoe, 1995). For example, students may experience a lowered self-concept when they are placed into the high-ability group. Scholars use the “big-fish-little-pool” effect to explain this change in students’ self-concept (Marsh, 1984).
However, other scholars like Chiu et al. (2008) found that students in the higher tracked courses would report significantly higher self-concept in their mathematics performance and stronger believe on their capabilities. Chmielewski, Dumon, and Trautwein (2013) examined how students in different ability groups within a same school reported their self-concept. They found that students in the high-ability group tended to have more self-concept and more believe on their achievement than students in the low-ability group. These researchers did not examine the relationship between ability grouping and students’ attributions directly. They explored the relationship between ability grouping and attribution-related causes. Because many previous researchers have shown that students’ attributions of success and failure were influenced by these attribution-related causes, it is very likely that students’ attributions were also influenced by ability grouping practices.

The research of Chung and Rudowicz (2003) directly examined the connection between ability grouping and students’ attribution. The research sample came from 2,720 junior high school students in Hong Kong. Chung and Rudowicz (2003) found that students studying in a high band school would make more internal attributions but less external attributions compared to their peers studying in a medium or low band school. The research was based on social capital and cultural capital theory. Chung and Rudowicz (2003) argued that high band schools would provide more social and cultural capital for students. These resources would help to foster social support and aspiration conducive to students’ achievement and belonging; thus, helped to improve students’ self-control, motivation and effort to study and prevented underachievement.

A limitation of the literatures related to ability grouping and attribution is that most researchers have looked at the relationship between ability grouping and attribution related
causes. The hypotheses or findings in these researchers would not include whether or how ability grouping practices could influence students’ attributions. To fill this gap, this thesis attempts to explain that ability grouping practices and the accompanying high stakes test can serve as a possible explanation for students’ different attribution patterns.

Theoretical Framework

The theory of contest mobility by Turner (1960) gives an explanation for individuals’ attribution to internal factors. Turner (1960) identified two ideal-typical normative patterns of upward mobility: the English norm of sponsored mobility and the American norm of contest mobility. Under contest mobility, everyone is believed to be in the same starting line and elite status is the prize in an open contest judged by one’s own efforts and credentials in the end. Sponsored mobility stresses early controlled selection by choosing and recruiting elites based on the supposed merit judged by the established elite or their agents instead of the amount of effort or strategy. However, under contest mobility, the elite status is open and given to those who deserve it, judged by people’s efforts, initiative, enterprise and other credentials that can be recognized by the public. Thus, the norms of social control in the contest-mobility society encourage every individual to compete for the elite position so that people internalize conventional values and cultivate loyalty to the system in the process of pursuing this possibility. Contest mobility gives more chances and less restrictions for people to move upward to the elite class as compared to sponsored mobility. Because chances are open to every individual in the contest-mobility system, individuals will more to see themselves as the main factor for either achievement or underachievement. For example, many high school students in United States are encouraged to work hard to get admitted to universities, but in the end go to community colleges. These students may give sufficient
internalization for the result as they may think that they have not worked hard enough to get
the opportunity for higher education.

The other theory is the heterogeneity and homogeneity theory introduced by Blau (1977)
and developed by Mijs (2016) to fit in the educational setting. Mijs (2016) argued that
“students’ explanations of success and failure are shaped by their selection into and exposure
to a particular educational setting” (p. 3). The education stratification examined by Mijs
referred to the tracking system: whether students were stratified into the mixed-ability
comprehensive schools or the ability-grouped vocational and academic tracked schools. The
selection process by the stratification system would make students to learn that their school
destinations were much determined by their own effort and ability. Mijs argued that students
would share a more homogeneous classroom in terms of both their academic ability and
social background if they were stratified to the vocational or academic tracked groups. And
this homogeneous environment would help students to make more internal attributions. Mijs
explained the function of heterogeneity and homogeneity by stating:

“Educational stratification affects students’ understanding of their academic
performance in two ways: Students’ attributions of their school performance are shaped
through ability tests and teacher advice, on the basis of which they are placed in vocational,
mixed-ability, or academic tracks, and by the (homogeneous or heterogeneous) groups of
students who are their classmates. The more homogeneous their school experiences, the more
likely students are to believe that how one does in school is due solely to one’s own (lack of)
hard work and academic (in) ability. Conversely, the more students are exposed to
heterogeneity in school, the more likely they are to attribute academic failure to a range of
things, including effort, ability, and external factors such as teachers, bad luck, or the home
support a student does or does not receive” (p. 14).

In this thesis, ability grouping refers to the process of allocating students to schools or
school types based on a high stakes ability and achievement test. Specifically, ability
grouping exists when students need to take a high stakes ability test to decide which level of
schools they are going to enter. When students share a similar cultural background, then the differences in attributions may be associated with differences in ability grouping. The purpose of this thesis is to explore differences in attribution within and across two Chinese cities in order to show the possible role played by different ability groupings in each of these cities.

Shanghai’s primary and middle school enrollment is based on neighborhood of the child’s residence. Thus, whether a student can enter a high-qualified school largely depends on the residence, which is also a reflection of the student’s socioeconomic status. This kind of enrollment strategy without ability test reflects Turner’s ideal type of “sponsored mobility, a system, in which elites are more preferred for better education opportunities. However, for high school enrollment, Shanghai’s students need to take the high school entrance examination. Although diverse enrollment strategies exist, this high stakes test is the primary division criterion for students. This high stakes ability test fits the idea of contest mobility. Every middle school graduate in Shanghai has the chance to enter the high-qualified (refers to “experimental model high school” in Shanghai) high schools through their performance in the entrance examination. Students who are not admitted by the experimental model schools will learn from the selection process that this failure resulted from their own personal failure in the examination. Thus, students may give more internal attributions for the result as they may think that they have not worked hard enough. Besides, based on Mijs’ (2016) explanation, in the homogeneous school or classroom that students are selected by the ability test, students will make more internal attributions. Placed in the homogeneous environment where all the peers are selected by their scores in the ability test, Shanghai’s high school
students will more realize the importance of effort and academic ability in determining their performance. From grade 9 to grade 10, Shanghai’s students experience the change in selection process. Therefore I would expect Shanghai’s grade 10 students to internalize their attribution of failure differently than is the case for Shanghai’s grade 9 students.

Hong Kong uses a different allocation process to decide students’ enrollment to secondary schools. One of the main criterions for the allocation is students’ standardized score in the three examinations taken in primary 5 and 6. Hong Kong offers an uninterrupted six-year secondary education, and there is no examination between junior secondary school and senior secondary school. Hong Kong’s students experience a high stakes ability test before their enrollment in secondary schools. However, from grade 9 to grade 10, Hong Kong’s students experience no selection process. Because no ability groupings are changed between grades 9 and 10, we should not expect that Hong Kong’s students would experience the change felt by Shanghai students as they moved from a more heterogeneous school environment to a more homogenous school environment. Therefore, compared to Shanghai’s students, we should expect that Hong Kong’s students would not be deeply influenced by the selection process in their development of ideas about the importance of effort and ability. We should expect less difference in Hong Kong grade 10 and grade 9 students’ internalizations of attribution, because there is no change in ability grouping.
Policy Review

Shanghai’s Education Policy

In 2008 March, in the Eleventh National People’s Congress, Hua Jianmin, the former secretary general of the State Council (also known as the central government), made a report on the institutional reform of the State Council. The reform promoting a realignment of government bodies created a super-ministries system, with the aim of appropriately dividing responsibilities among departments that exercise macroeconomic regulation. To respond to the national reform, the General Office of the CPC (Central Party Consolidation) Central Committee and the State Council published the 2008 No.17 document to guide Shanghai’s institutional reform. Based on the document, Shanghai Education Commission was founded. Shanghai’s government controls Shanghai Education Commission directly. Since its creation, the Shanghai Education Commission publishes annual documents to regulate both the enrollment of students during their compulsory schooling and the enrollment of students from middle school to high school.

Shanghai’s Middle School Enrollment

In 2012, Shanghai Education Commission published the 2012 (No.13) Document, Some Suggestions on Implementing the Compulsory Education Stage School Enrollment Work. In this document, Article 4 announced, “All education administrative departments should take effective measures to truly implement the principle of entering the [student’s] nearby primary and secondary schools. Any recruitment outside the enrollment plan is strictly prohibited in the compulsory education stage schools…” Article 6 announced, “All compulsory education stage schools should not run key classes or experimental classes; should not hold any
examinations to select students; should not group students into different programs or classes by using their test performance…” The document reveals two features of Shanghai’s middle school system. First, there is no examination between primary schools and middle schools in Shanghai. Students are allocated to middle schools based on their home location not their test performance. Second, there is no stratification among Shanghai’s middle schools. All the middle schools are comprehensive schools that will not group students in any forms. In the following, I will give a detailed review of Shanghai’s neighborhood school principle and Shanghai’s “No stratified middle school” principle.

The neighborhood school principle

The idea of enrolling in neighborhood schools has a long history in China. Even 2000 years ago, the ancient book _Xueji_ recorded, “For the ancient schools, a village with 25 families has a school called Shu; a town with 500 families has a school called Yang; a city with 12,500 families has a school called Xu” (Gao, 1982). At that time, the ancient people had the idea of combining the school setting with administrative division. In 1904, the Qing dynasty published Kui Mao Education system, the first education system that was formal implemented in China. The first chapter of Kui Mao Education System wrote, “For every 100 families, there should be one junior school, recruiting children within half-mile.” (Qiu and Tang, 1991) After the foundation of new China, Chinese government confirmed and legitimated the neighborhood school principle.

In 1986, in the Sixth National People’s Congress, China published the _Compulsory Education Law_ to legitimate the universalization of the nine-year compulsory education.

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1 _Xueji_ is an ancient education book, written in the late Warring States Period (BC 403—BC 221). _Xueji_ is the earliest book in the world that specially discusses the education and teaching problems.
Article 9 of the Compulsory Education Law stipulated that local governments at all levels should provide primary schools and middle schools to all aged children, and make sure that those children can enter to the middle schools nearby. In 1992, the state council published the Rules for the Implementation of the Compulsory Education Law, ruling that primary schools and middle schools should be reasonably distributed for aged children to enter to nearby schools. In the same year, the education department brought up Some Suggestions on Further Improving the Quality of the General Secondary Education. This document mentioned that middle school enrollment should implement the neighborhood school principle gradually and also gradually remove the enrollment examination. This document also explained the motivation for the neighborhood school principle. One motive was to relieve primary students from pressure and burden and provide an equal education opportunity to all aged children. The other motive was to improve the efficiency and quality of middle school enrollment.

At the beginning of the 21st century, with the thorough implementation of compulsory education, the value of education was widely recognized and people’s demand for the high-quality compulsory education became stronger (Chen, 2000). However, there remained relatively stronger and weaker middle schools. Some weak nearby middle schools could not meet people’s demand for the high-quality compulsory education. As a result, the implementation of the neighborhood school principle was challenged and there was an increase in the pressure from families to select schools (Chen, 2000). Therefore, in 2006, the Tenth National People’s Congress ratified the Amendment to the Compulsory Education Law, reaffirming the neighborhood school principle. In 2012, the Basic Education Department of the Education Department published Notice of 2012 Work Points, emphasizing to implement
the neighborhood school principle in middle school enrollment over the country. In 2014, the Education Department released *Suggestions on Further Improving the Enrollment from Primary School to Nearby Middle School*, announcing that above 90% primary schools should achieve the goal of sending their graduates to nearby middle schools by 2015. We do not know the percentage attend nearby schools in 2012, at the time of PISA, but it was much larger than in Hong Kong, where all students would have been ability grouped.

In *the Rules for the Implementation of the Compulsory Education Law*, Article 26 stated that, “For the setting of the compulsory education stage schools, government in the administrative division should make an overall plan. The schools should be properly distributed to make it conducive for children to enter to the nearby schools...” According Chen Genfang (2000), the rule defined the neighborhood school principle as an obligation of the government given by the education law. The obligation required the government to distribute compulsory stage schools in a reasonable distance from each student’s legal domicile (Known as “hukou” in Chinese). The principle stated that children had a right to enter to a compulsory school within a reasonable distance (Chen, 2000). Zhang Shuqiang and Cheng Hongyu (2001) interpreted the implementation form of the neighborhood school principle. By using the school district system, government in the administrative division took a certain school as the center and a certain geographic radius as the standard. Students should not enter to the schools outside the school district and the geographic radius, and schools should allocate students within the school district and the geographic radius (Zhang and Cheng, 2001).

Since the principle was adopted 1986, scholars have debated about the “Entering to middle schools nearby” principle. Some scholars hold rather positive attitude on the principle.
For example, Lao Wen (1994) stated that entering to schools nearby was a practical measure and was conducive to promote the balanced development of compulsory education. He believed that the implementation of the principle would gradually improve the school quality and enthusiasm, especially for those weak schools. Scholars like Zhu Ruhua (2005) and Hu Yu’an (1999) supported the neighborhood school principle because they thought the principle was against the phenomenon of selecting schools. Zhu Ruhua (2005) claimed that selecting schools would enlarge the performance gap between students and cause education inequity. She believed that the goal of compulsory education was not to cultivate the elite but to improve the quality of the majority. The neighborhood school principle would help to decrease the performance gap brought by the phenomenon of selecting schools. Hu Yu’an (1999) claimed that the phenomenon of selecting schools affected social justice. Some upper-class parents used their power to make schools to lower enrollment requirements for their children. Therefore, he agreed that the neighborhood school principle was a good attempt to promote education equity and social justice.

By contrast the previously mentioned writers; other scholars questioned the neighborhood school principle. He mei (2004) doubted whether the principle could provide proper education for students. She thought the requirement of entering to nearby schools ignored students’ characteristics and willingness. Thus, students might be allocated to a school that did not match with their own qualifications. Yu jian (2006) admitted some benefits of the neighborhood school principle. He agreed that this principle aimed to achieve education equity and could reduce education cost. However, education resources were unevenly distributed in China. This reality made the neighborhood school principle to become an obstacle for students to get equal education resources. Xu wei (2006) also agreed
that the principle could not reach the real education equity. He thought the real education equity should base on even distributed education resources. Scholars like Xi Xingyu (2010) doubted the principle on the side of migrant workers. The neighborhood school principle is related to the domicile system. Children in the place of domicile have the right to enter to the nearby schools. Thus, under the neighborhood school principle, it is much harder for children of the migrant workers to receive the same compulsory education as their peers.

“No stratified middle school” principle

A small number of privileged “key” schools have existed in China for a long time. Key schools refer to the primary and secondary schools that receive extra investment on construction, teachers and facilities from the nation or the local government (Xu, 2014). Under the situation of lack of education resources, the country centralizes the limited education resources to run a part of key schools (Gong and Xu, 2006). In 1953, the central government decided that the education focus should move from primary schools to middle school, and decided to set up a key school system. In the same year, the education department published Some Suggestions on Focusing on Some Middle Schools. The document established 194 key middle schools, including 10 key schools in Shanghai. In 1962, the education department further published its Notice on Focusing on Running Some Primary and Middle Schools, expanding the number of key middle schools to 487 in 27 provinces. Between 1966 and 1976, because of the Cultural Revolution and the anti-education trend, the key school system was abolished. In 1978, at the end of the Cultural Revolution, the education department introduced The Trail Scheme on Running Some Key Primary and Middle Schools, which resurrected the key school system. In 1980, the State Council approved the Decision on Running key Schools by Stages, taking the key school system as a
strategic measure. The document announced that the goal of running key schools was to cultivate talents quickly, improve the education quality and to play an exemplary role of encouraging the development of ordinary schools. The education department reaffirmed the importance of key school system in 1983, and announced that key schools should gradually become the regional educational center for teaching and research activities. Key schools have a higher social status than ordinary schools and key schools have a greater ability in accumulating fund and social resources (Gong and Xu, 2013). Key schools receive much more investment on teachers and facilities than ordinary schools (Xu, 2014). Key schools stress the quality of students by selecting the students with higher test scores (Zhang, 1997). Thus, from the establishment of the key school system, the educational gap between key and ordinary schools became bigger and bigger.

After several years of the full implementation of the key school system, as the system exposed some problems such as unequal education opportunities, people began to question the key school system (Xu, 2014). In 1986, the Compulsory Education Law stipulated that local governments at all levels should provide primary schools and middle schools to all aged children, and make sure that those children can enter to the middle schools nearby. The proposal of the neighborhood school principle was an attempt to reform the key school system (Xu, 2014). In 1988, the State Education Commission published Notice on printing and distributing the summary of experience exchange meeting of middle school education workers. This document mentioned that the education focus for middle school should move from key schools to weak schools to promote a balanced education development. In 1996, the State Education Commission published Some Suggestions on Regulating the Behavior of Running Schools in the Current Compulsory Education Stage, emphasizing that there should
be no key class in compulsory education schools. In 2006, the Amendment to the Compulsory Education Law affirmed, “All the government and education department should promote a balanced development among compulsory education stage schools. Schools should not be divided into Key schools and ordinary schools. Within the schools, classes should be divided into Key classes and ordinary classes...” This Amendment was the first time to question the legitimacy and to seek the abolition of the key school system (Xu, 2014).

Most scholars supported the removal of key schools and key classes in the compulsory education schools. Zhang Yanling (1997) believed that the abolition of the key school system would not lower the middle school education quality. On the contrary, excellent students could be distributed to all middle schools. Thus, the key school abolition would help to improve teachers’ teaching enthusiasm and improve the overall education quality. Gong Meijun and Xu guifang (2013) further claimed that, because most of the key schools were located in the urban area, the key school system enlarged the education gap between rural and urban regions and causes education inequity for the rural students. The abolition of the key school system would promote a balanced development of compulsory education.

**Shanghai’s situation**

In 1996 March, the Eighth National People’s Congress published the Ninth Five-Year Plan for National Economic and Social Development to propel the socialist modernization during 1996 and 2000. For the education goals, the plan stated that governments and education administrative departments should universalize compulsory schooling and accelerate the educational system reform. To respond to the national plan, in 1996, Shanghai began to take a pilot middle school enrollment reform in four districts (Jingan, Jiabei, Luwan and Pudong) (Fu, 1997). The reform had two main goals. One goal was to implement the
neighborhood school principle; the other goal was to cancel key middle school. In 1997, the middle school enrollment reform was promoted in the whole city (Fu, 1997).

Concluding from a large sample size survey taken in Shanghai in 1996 and 1997, Fu Jianlu (1997) stated that the middle school enrollment reform could release the pressure of both primary and middle school students and encouraged students’ study motivation. Most leaders of the education administrative departments supported the reform. However, students and their parents preferred a united enrollment examination more. Jiang yan (1996) admitted that the middle school enrollment reform in Shanghai was a great progress of the society and an inevitable trend of the education development. But he also suggested that government should pay more attention to those weak neighborhood schools and to develop private schools to provide citizens a more balanced and diverse compulsory schooling.

In Shanghai, all the public middle schools follow the neighborhood school principle. Beside the neighborhood school principle, there are other ways for students to enter middle schools. For example, private middle schools are excluded from the neighborhood school principle. In Shanghai’s 2012 (No.13) Document Some Suggestions on Implementing the Compulsory Education Stage School Enrollment Work, Article 16 announced, “After the enrollment plan was approved by the district education administrative department and was reported to Shanghai’s Education Commission, private middle schools with boarding conditions can recruit students across the school district…” Shanghai’s private middle schools have the right of independent recruitment. Private middle schools select students’ resumes first, and then organize students for interviews and recruit students at last.

According to official statistics of Shanghai’s Education Commission, in 2012, there were a total of 754 secondary schools (for both middle and high schools), including 106
private schools. Thus, most middle schools in Shanghai are public schools that follow the neighborhood school principle. Besides, Shanghai’s 2012 (No.13) Document stated that private middle schools should not use any examination to recruit students, and the interview content should not relate to any subject knowledge. Shanghai’s Education Commission also published 2012 (No.34) Document, *Notice on printing and distributing the 2012-year curriculum plan of Shanghai primary and secondary schools*. According to the No. 34 document, all the middle schools should follow the same curriculum plan and all middle schools should not use teaching materials that were not reviewed and approved by National primary and secondary school teaching material approval committee or Shanghai’s primary and secondary school teaching materials review committee. Thus, private middle schools cannot select and group students by academic ability. Private schools follow the same curriculum plan as the public middle schools. According to the *Compulsory Education Law*, private middle schools are considered as the compulsory education schools and cannot be categorized into key schools. Therefore, most students are allocated to the non-stratified middle schools following the neighborhood school principle. For the small number of students that enter private middle schools, these students are also recruited to the non-stratified middle schools.

**Shanghai’s High School Enrollment**

In 2012, Shanghai Education Commission published the 2012 (No.20) Document, *Some Suggestions on the 2012 Entrance Examination Work of the Senior High School*. Article 3.1 announced, “The score of high school entrance examination is the main standard to judge whether students have achieved the graduation requirements of middle school. And the score
is one of the main standards for high school admission”. Article 4.3 stated, “…For students entering vocational schools, the city’s Education Examination Office will select and admit these students based on their examination scores from a high to low standard…”

Article 4.2, 4.3 explained the special enrollment system of the city’s experimental model high school. First, experimental model high schools can use “early admission”, which accounts for 40% of the school’s whole enrollment plan. In “early admission”, middle school can recommend excellent students to several experimental model high schools. Students who are not recommended by middle schools can also recommend themselves to several experimental model high schools. These recommended students are evaluated and interviewed by the experimental model high schools. Then the experimental model high schools will independently select students and give early admission to the selected students. Students who are recommended by middle schools have a bigger chance to get selected. If the students are selected by several experimental model high schools, they can only choose one final school for early admission. After early admission, students still need to take Shanghai’s high school entrance examination. Students’ examination scores should not be less than the city’s minimum score cut line for early admission. Or, students cannot enter the experimental model high school that has given them early admission. Second, experimental model high schools can use “zero voluntary admission”. Typically, Shanghai high schools recruit most students within the school district. “Zero voluntary admission,” allows the city’s experimental model high schools to recruit students from the whole city. Article 4.3 stated that “zero voluntary admission” should account for at least 15% of the school’s whole enrollment plan. Under “zero voluntary admission”, experimental model high schools give specific enrollment plans to each school district. According to the plan, experimental model
high schools admit students based on their zero volunteer and their examination scores from a high to low standard. Students will compete with their peers in the same school district for the enrollment spot. Article 4.3 announced, “‘Zero voluntary admission’ is contributes to promoting the balanced development of compulsory education, and to promoting the development of basic education in suburban areas”. Beside “early admission” and “zero voluntary admission”, “quota allocation” is also used in Shanghai’s experimental model high schools. “Quota allocation” allows Shanghai’s experimental model high schools to give specific enrollment plans to middle schools. Article 4.3 stated that experimental model high schools should assign 18% of the school’s whole enrollment plan to middle schools. The 18% enrollment plan will be proportionally distributed to every middle school. Experimental model high schools admit students based on their examination scores from a high to low standard. Students need to compete with their peers in the same middle school for the enrollment spot. The three enrollment plans of “early admission”, “zero voluntary admission” and “quota allocation” make up 73% of the school’s whole enrollment plan. The score cut line for “early admission”, “zero voluntary admission” and “quota allocation” are lower than the city’s unified score line. Thus, experimental model high schools can use the three special measures to expand the scope of enrollment to the whole city. And experimental model high schools can book high performing students and guarantee their spots by adopting the lower score cut line.

The document reveals two features of Shanghai’s high school system. First, Shanghai’s middle school students need to take the high school entrance examination to enter high school. Students’ examination score is the primary standard to select students. Second, Shanghai’s high schools are stratified into academic tracking and vocational tracking. For
students on academic tracking, they are assigned to experimental model high schools and ordinary high schools based on their examination scores. Experimental model high schools can use three special enrollment measures to recruit more high performing students. In the following, I will review Shanghai’s high school entrance examination and Shanghai’s “Stratified high school” principle.

High school entrance examination

High school entrance examinations appeared in China in the early 1980s. However, before 1998, there were very few published documents or literatures that discussed high school entrance examination. In 1985 May, the CPC Central Committee and the Sate Council held a national education work conference in Beijing. In the conference, president Deng Xiaoping called for the development of education, especially primary and secondary education. Then the conference decided to publish *CPC Central Committee’s Decision on the Reform of Education System*. The document discussed the implementation of compulsory schooling step by step. First, in cities and some economically development areas in the coastal and central provinces, the goal of universalizing middle school education was to be accomplished by 1990. Second, for medium economically development towns and rural areas, which accounted for one half of the nation’s whole population, the primary goal was to universalize primary school education. After the universalization of primary school education, these places should attempt to universalize middle school education and vocational education by 1995. Third, for economically backward regions, these areas should actively implement compulsory education in different degrees with the nation’s support. Therefore, the nation’s education plan for basic education in the 1990s was to accomplish the goal of universalizing primary school education, and then to universalize middle school education and promoting
high school education step by step (Cao, 1998). The nation’s education focus on universalizing compulsory education may explain the lack of research on secondary schooling and on their entrance examination in the early and middle 1990s.

The 1998 National Education Development Statistics Bulletin published by Education Department in 1999 May claimed that the population coverage rate of compulsory education was 73% in the end of 1998. Thus, in the late 1990s, the majority of the nation achieved the goal of universal nine years of compulsory education. The education focus then turned to promote high school education. Since 1998, China conducted three reforms on high school entrance examination. With the thorough implementation of Quality Education and New Curriculum Reform, reforms on high school entrance examination got wide attention (Liu, 2011). The reform on high school entrance examination changed the previous admission method of just looking at scores and promotes diverse enrollment strategies. The reform thus contributed to promoting Quality Education and New Curriculum Reform in the middle school level and to promoting students’ all round development (Liu, 211).

The first reform happened between 1998 and 2001. In 1998, the Education Ministry published Guiding Opinions on the Pilot Work of the Reform on High School Entrance Chinese Examination, deciding to start a pilot reform in seven regions. The document put the middle school graduation examination into the high school entrance examination in order to reduce the number of examinations. This document offered some specific principles on the

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2 Quality education (first mentioned in 1993) refers to the education model that aims to promote students’ overall quality, including moral quality, intellectual quality, scientific quality, physical quality, aesthetic quality and practical skills. The Education Ministry considers quality education is beneficial for both the students and the nation’s long-term development.

3 New Curriculum Reform (1999) refers to the eighth curriculum reform, which aims to reform the course plan to promote students’ overall quality. It is a measurement to achieve quality education.

4 Suzhou in Jiangsu province, Jingmen in Hubei province, Putian in Fujian province, Yantai in Shandong province, Liaoyuan in Jilin province, Minhang district in Shanghai, Shunyi district in Beijing.
question types, marking process of the high school entrance Chinese examination. For example, the document specified that the Chinese examination should not include tricky or strange questions, and the questions should help students to display creativity. The seven regions should develop a certification system for the examination-involved staffs to assure the fairness of the examination. The 1998 pilot reform on high school entrance Chinese examination opened the way for the nation’s overall reform on high school entrance examination (Liu, 2011). Then in 1999 and 2000, the Education Ministry published its Guidance on the Reform of Middle School Graduation and High School Entrance Examination to spread the examination reform to the whole nation. The 1999 version established the guiding ideology for the reform. The reform should promote Quality Education and build scientific evaluation system to help to reform the classroom teaching, release students’ heavy burden and promote students’ overall development. Based on the ideology of the 1999 version, the 2000 version added some specific measures on the examination. For example, the examination questions were to connect the social realities with students’ academic life. The questions were to focus on testing students’ ability of using the basic knowledge and skills in analyzing and solving practical problems. In this stage, the examination reform only appeared in the Chinese subject in a very small number of regions. Generally, the reform was policy conception and was not put into reality.

Then in 2002, the Education Ministry published its Notice on Actively Promoting the Reform of Evaluation and Examination System in Primary and Secondary Schools, starting the second reform on high school entrance examination. Between 2002 and 2007, the reform began to be implemented in some representative regions. For the first time, the 2012 document decided to change the use students’ entrance examination scores as the only
admission criterion for high school enrollment. Besides the examination score, the document encouraged high schools to look at students’ other records such as public welfare activities, sports and cultural activities to make a comprehensive evaluation on students. The document also asked to promote the quota allocation system and recommendation system to develop diverse types of enrollment strategies. In 2004, the reform was first implemented in 17 regions. Until that time, the reform on high school entrance examination was transformed from a policy vision to the practical reality (Liu, 2011). From 2005, the representative regions that adopted the reform expanded from 17 regions to 50 regions.

In 2008, the Education Ministry published *Opinions on Deepening the Reform on High School Entrance Examination*, deciding to expand the reform to the whole nation. The document signaled that the reform on high school entrance examination had entered a new stage. This document gave very specific regulations on high school entrance examination, middle school students’ evaluation and high school enrollment work. For high school entrance examination, the document wrote that the examination should properly reduce test subjects, and take multiple test forms including written test, listening test, opening test, and experimental operations. The examination should test students’ comprehensive ability, including their hands-on ability and creativity. For high school enrollment work, the document announced that high schools should take students’ examination score as the main criterion as well as considering students’ evaluation and comprehensive ability. Diverse enrollment strategies like recommendations and interviews would be consistently promoted to expand high schools’ enrollment autonomy. The three reforms have guided the high school entrance examination and high school enrollment work until today.

In 1998, four districts (minhang, Jing’an, jiabei, qingpu) in Shanghai first began to
cancel their middle school graduation examinations, and they put the graduation examination into high school entrance examination. The new high school entrance examination was implemented in the whole city from 1999. Fu Jianlu (1999) stated that the motivation for putting the two examinations together was to reduce students’ academic burden. In a 1998 survey, although more than half of the student thought that the one examination would help to reduce their pressure, most teachers and school administrative leaders believed that two examinations could help to select students and improve teaching quality (Fu, 1999). In 1998, Shanghai was the first batch of regions that took the pilot reform on high school entrance Chinese examination. In 2004, Shanghai was one of the 17 regions that first used the second examination reform to promote diverse enrollment strategies. In 2012, Shanghai students needed to take eight subjects in the entrance examination. Chinese, mathematics, English, physics, chemistry and physical subjects were counted by scores with a total of 630 points. Experimental operation and ideological and ethical subjects were ranked using qualitative assessments (for example, “good,” or “average”). For high school enrollment, although the entrance examination score was the primary criterion, three enrollment plans of “early admission”, “zero voluntary admission” and “quota allocation” were used to achieve a diverse enrollment. The reform on high school entrance examination got massive support from scholars. Jiang Jinqian (2000) thought that the previous admission method overly stressed the effect of scores, and did not meet the admission principle of all round development. He also believed that the diverse enrollment strategies could help to exploit students’ potentials and improve schools’ autonomy. Yin da and Tian Jianrong (2012) stated that the reform met the socialist key value “people oriented”, which respected the differences in students’ characteristics and helped to promote individualized education.
“Stratified high school”

The CPC Central Committee’s Decision on the Reform of Education System published in 1985 not only began the implementation of compulsory schooling step by step, but also discussed speeding up the development of vocational education. One article in this document supported vocational education, requiring the employing unit to give priority to the graduates of vocational education. This document sets up the principle that school education starts to stratify from the secondary school level (He, 2009). In 1991, the State Council published its Decision on Vigorously to Develop Vocational Education to improve both the quantity and quality of vocational education. Through this document, the CPC Central Committee established a number of key secondary vocational schools, and to improve the salaries of vocational school teachers. In 1996, the establishment of Vocational Education Law determined the legal status of vocational education. In 1996, the proportion of students in secondary vocational schools made up 56.77% for the whole high school students, reaching the highest peak since 1985 (He, 2009). Since 1997, under the global economic crisis, many enterprises had to restructure or shut down, compressing the job market for vocational graduates. Besides, the view of emphasizing academic schooling instead of vocational schooling was valued. As a result, the nation declined financial support for vocational education, and the development of vocational education was in crisis (He, 2009). The number of vocational students fell.

In 2002, the nation decided to support vocational education again. Between 2002 and 2005, the State Council published three documents to speed up the development of vocational education. These documents announced that the proportion of students in vocational schools should account for at least half of the whole high school students. The
research team on the reform of secondary vocational education stated in their 2013 report that there were at least two drives to promote vocational education. First, the economy entered a stage of intensive development, which needed vocational education to provide more qualified workers and scientific techniques. Second, vocational education became a breakthrough point for the universal of high school education, and vocational education became an inevitable choice to meet students’ diverse learning demands.

Today, Shanghai supports the development of vocational education. In 2006, Shanghai’s government published *Decision on Vigorously Develop Vocational Education* (No. 10). The document stated that the government would invest 34% of the city’s education fund to vocational education in 2010. In 2012, Shanghai had 101 full-time secondary vocational schools, including 57 key vocational schools. In 2012, according to Shanghai’s 2012 (No. 20) Document, Shanghai’s students could choose to enter academic tracking or vocational tracking. For students entering vocational schools, the city’s Education Examination Office will select and admit these students based on their examination scores from a high to low standard.

Besides different tracks at the high school level, high schools are stratified into experimental model high schools and ordinary high schools. The experimental model high schools are known as key high schools in the beginning (key schools are discussed in the previous part). Beginning in 1953, the key school system was established in China. But starting in the 1980s, key schools were gradually phased out at the primary school level. With the universal of compulsory education and the thorough implementation of the neighborhood principle, key schools were almost abolished in middle schools in the late 1990s. However, key schools never disappeared at the high school level. In 1994, the State
Council published *Opinions of the State Council on the Implementation of the “Outlines of China’s Education Reform and Development”*, suggesting to build some experimental model high schools all over the country for the first time. The document announced that experimental model high schools were to be the pilot of the nation’s education reform. The new features of experimental model high schools included developing quality evaluation for students and teachers, promoting boarding system, developing diverse outside-classroom activities and promoting education internalization. In 1995, the State Education Commission published *Notice on the Assessment and Acceptance of about One Thousand Experimental Model High Schools*. In this document, the State Council established one thousand experimental high schools in three batches around 1997. Then, in 2001, the State Council reemphasized that all provinces needed to build and examinee experimental model high schools in its *Decision of the State Council on the Reform and Development of Basic Education*. In 1999 April, Shanghai started to establish experimental model high schools. In 2012, Shanghai had 56 experimental model high schools. The number increased to 58 in 2015.

Xie Limin stated that the new features of experimental model high schools could help to build a more harmonious relationship between teachers and students. He believed that experimental model high schools would serve as the model to promote teaching quality for all high schools. Although scholars like Xie Limin (2006) supported the establishment of experimental model high schools, many other scholars opposed and even criticized the policy. These scholars stated that experimental model high schools had no substantial difference from the previous key schools. Thus, experimental model high schools merely changed the name from key schools. They also argued that the development of experimental model high
schools would enlarge the education gap (like fund, teachers, test scores) between these model schools and ordinary schools, and between rural and urban areas (Zhong, Jin and Wu, 2000).

**Hong Kong’s Education Policy**

Hong Kong uses a secondary school allocation scheme to decide students’ enrollment to secondary schools. One of the main criterions for the allocation is students’ standardized score in the three examinations taken in primary 5 and 6. Before 1986, students needed to be judged and selected by Junior Secondary Education Assessment for senior secondary education. With the compulsory education expanding to twelve years in 2012 and the implementation of the new education system in 2009, students experience an uninterrupted six-year secondary education with no examination. In the following, I will discuss Hong Kong’s Secondary School Allocation System and Hong Kong’s uninterrupted secondary education.

**Secondary School Allocation System**

**1841-1977**

In 1841, Hong Kong became the British colony. In the beginning, Britain did not set up a formal education system in Hong Kong. At that time, the colonists used schooling selectively to give the education priority to the elite, and the masses were deliberately deprived of educational opportunities to keep the colonial authorities (Postiglione and Ming, 1992). The *Annual Report of the Director of Education for the Year 1924* published by Hong Kong Education Department in 1925 wrote that education in government schools were to be provided for the British children in Hong Kong. However, the huge number of Chinese children made it impossible to provide education to them all. Thus, the colonists encouraged
private schooling among Chinese children. In 1865, Hong Kong government took back the education right with the establishment of Hong Kong Education Department. Since then, Hong Kong began to promote basic education to a larger population. But the education priority still focused on English and Chinese elite (Tang, 1997). The 1935 Burney Report announced the importance of vernacular primary education and suggested the government to provide more primary education opportunities to the lower-class Chinese children.

Before 1949, the government took no measures to control students’ enrollment from primary to secondary schools. In 1949, Hong Kong held the first Joint Primary 6 Examination. Students in primary 6 needed to take the examination. Students who passed the examination would be able to enter government secondary schools. In 1962, the government decided to use a new Secondary School Entrance Examination to replace the Joint Primary 6 Examination. This new entrance examination had a clearer division standard on students than the previous one. The new examination divided students into nine levels based on their overall score. Only the students in the first six levels would get the chance for secondary education.

Entering the 1970s, with the rapid development of Hong Kong’s economy, the government decided to promote free primary education and nine-year compulsory education as well as vocational training and high education, to adapt to the social needs (Tang, 1997). In 1971, the government passed the 1971 Education Act, starting to implement compulsory primary education. This action would help to improve government authority and decrease people’s discontentment toward the previous education policy that focused on elite education (Li and Yang, 2014). In the same year, the government also published the Education Ordinance. The Education Ordinance gave Hong Kong’s Education Department the right to
force parents to send their aged children to primary schools. In 1978, under governor Sir Murray MacLehose, the government published *White Paper* (the development of senior secondary and tertiary education), deciding to formally implement nine-year free compulsory schooling and abolish Secondary School Entrance Examination. Since then, Hong Kong began to use its secondary school allocation system.

**1978-present**

With the reform of nine-years of compulsory education, the new system of allocation emphasized allocation rather than selection (Government Secretariat, 1981). The allocation system worked along with Hong Kong Academic Aptitude Test. Although all the students could enter secondary schools, students would be allocated to five levels of secondary schools based on their scores in Hong Kong Academic Aptitude Test (Hu, 2008). This test consisted of two subjects: verbal reasoning and quantitative reasoning. The Education Department announced that the test was not a completely academic test and was not based on the curriculum. Thus, students did not need to work hard to prepare for the test. However, gradually, schools and teachers arranged test training for students in order to get a better school reputation, which increased students’ burden (Education Commission, 1990). Then, more and more people criticized the aptitude test. In 1996, more than twenty education groups established a joint conference to protest the academic aptitude test. They advocated that the government should abolish the test so that teachers and students could make the best use of their teaching and study time. They also suggested the government to use Chinese, English and mathematics to replace verbal reasoning and quantitative reasoning in the test. Then students would not need to take extra time to prepare the subjects that were not included in the curriculum (Hu, 2008).
In *Suggestions on the Reform of Hong Kong Education System* published in 2000, Hong Kong Education Commission suggested to cancel the aptitude test. The commission announced that the aptitude test distorted the curriculum and influenced students’ all round development. The government accepted the document, and decided to use students’ previous academic record in primary school as the standard for allocation. The government also decided to decrease the division number of secondary schools from five levels to three levels. The stratification of five levels affected students’ motivation in the lower levels, thus, a decreased number of school levels would help to increase students’ performance and education equity (Hu, 2013). The three levels of secondary schools existed till today, and were also know as three bands.

In 2005 December, the Education Commission its report, called the *Review of the Secondary School Teaching Language and Secondary School Allocation System*. The report suggested using students’ performance in three examinations taken in grade 5 and grade 6 in primary schools as the criteria for allocation. From 2007, the government began to standardize students’ scores in the three examinations and then divided students into three groups. However, the evaluation standard may be different among schools, and different evaluation standards made it hard to compare students’ scandalized score in the same level (Li and Yang, 2014). Thus, the government decided to add Pre-Secondary One Hong Kong Attainment Test (PS1HKAT) into the allocation criterion. PS1HKAT is given every two years to all primary school graduates in Hong Kong. The results of the PS1HKAT are used to adjust students’ previous standardized score and then adjust the three groups division of students. For example, Hong Kong 2013 secondary school allocation looked at the results of 2010 PS1HKAT and 2012 PS1HKAT. Scholars agreed that PS1HKAT was a fair
supplementary of the allocation system, which considered the differentiation among schools (Li and Yang, 2014)

Today’s secondary school allocation system considers both students’ standardized score in the three examinations taken in primary 5 and 6 and the previous test result of PS1HKAT. The allocation system consists of two parts, self-allocation and united allocation. Self-allocation is quite similar to Shanghai’s high school enrollment strategy “early selection”. Self-allocation happens in the first semester of grade 6. Secondary schools can use 30% of their enrollment plan in self-allocation. Students can apply for two secondary schools and then get evaluated and interviewed by the schools they have applied. Students who are not accepted by either of the two applied secondary schools have to join the united allocation with other students, and will be allocated to three bands schools. Hong Kong secondary school allocation has always being a hot debating issue. Scholars have whether the allocation system can satisfy the needs of both parents and schools and whether the allocation criterion increases students’ academic burden (Li and Yang, 2014). Some supportive scholars thought that the allocation system considered students’ characteristics and reasonably allocated students to the suitable secondary schools, and fitted the idea of education equity. There are also scholars who thought that self-allocation would enlarge the difference of students’ quality among school (Li and Yang, 2014).

**Uninterrupted Six-year Secondary Education**

**New School System: 3+3+4**

Before 1951, for all the English schools, students took eight-years education and then applied for college. In 1951, the English schools changed the eight-year system to the “6+5+2” (six-year primary education, five-year secondary education and two-year precollege
preparation) system to fit with the British education model. In 1965, the Education Department decided to change the education system for the Chinese secondary schools. The Chinese secondary schools changed the six-year secondary education to five-years of secondary education, in accordance with the education system in the English schools. Since then, Hong Kong students proceeded through a “3+2+2” (three-year junior secondary education, two-year senior secondary education and two-year precollege preparation) structure. After finishing five-years of secondary education, students needed to take Hong Kong Certificate of Education Examination (HKCEE). Based on their HKCEE results, students would either move out (and pursue alternative forms of post-secondary education) or move on to the final two years, precollege preparation, also know as “matriculation”. A final examination, Hong Kong Advanced Level Examination (A-Level) at the end of the two precollege-preparation years, would determine students’ entry to college education.

In Suggestions on the Reform of Hong Kong Education System published in 2000, the Hong Kong Education Commission suggested that three years of senior secondary education could promote a more diverse and complete curriculum for students and help students to build a more solid knowledge base (Fok and Yu, 2014). The work group in charge of reviewing the senior secondary education system was created in December of 2001. The work group published Review Report on Senior Secondary Education System in 2003, suggesting taking a new “3+3+4” (three-year junior secondary education, three-year senior secondary education and four-year college education) system. In 2005, Hong Kong Education Department published the New Education System of Senior Secondary Schools and Higher Education: an Action Plan for the Future, formally deciding to establish a new
education system. The new system would change the previous “3+2+2” (three-year junior secondary education, two-year senior secondary education and two-year precollege preparation) system to the new “3+3+4” system. In the old system, students needed to take two high stakes tests (the HKCEE and the A-Level). In 2012, under the new education system, students began to take only one high stakes test, Hong Kong Diploma of Secondary Education Examination (HKDSE) for college entrance after the six-year secondary education.

The new secondary education system was formally implemented in 2009 September, and the four-year college education system was started in 2012. The reform on the education system received broad public massive support. The director of Hong Kong Education Department, Li Guozhang said that the new system could better integrate with the international mainstream education system, including United States and Mainland China. He also expected the new system to bring long-term benefits for Hong Kong’s next generation (Rong, 2005). The Heads Association of Hong Kong University also announced it support of the new system and promised to provide special training for secondary school teachers (2004).

The Elimination of Junior Secondary Education Assessment

In 1978, Hong Kong decided to formally implement nine-year free compulsory schooling. Since then, all students could continue to junior secondary education, but not all of them could continue to senior secondary education due to the limited capacity in senior secondary schools (Hu, 2008). Thus, in 1981, the government established a Junior Secondary Education Assessment to select qualified students for senior secondary education. The senior secondary schools would first look at students’ performance at the junior secondary school
level. Then, based on school capacity caps decided by the government, each publicly-funded senior secondary school would decide which students it would admit. Students who were not selected could choose to exit or enter proprietary schools. In 1981, among 90,000 junior secondary school students who took the assessment, 60% of them were selected to enter senior secondary schools. The Junior Secondary Education Assessment was developed under the shortage of senior secondary education, and was aimed at decreasing the number of students who transferred to a different secondary school (Hu, 2008). This assessment got massive criticism. For example, Wu Mingqin (1984) pointed that the assessment distorted the uninterrupted secondary school system, and the assessment made examinations be the center of secondary education, which greatly affected students’ all round development.

In 1984, the No.1 Report of the Education Commission advocated increasing the capacity of senior secondary schools funded by the government to 84.6%, giving students a greater access to free senior secondary education. With Hong Kong’s rapid economic development in the 1980s, the government had the capacity to expand senior secondary education, which made the selective role of the Junior Secondary Education Assessment useless (Hu, 2008). Thus, in 1986, the Junior Secondary Education Assessment Working Party of Hong Kong Education Department published Report on the Review of the Junior Secondary School Assessment. The report recommended abolishing the Junior Secondary Education Assessment after 1987. Secondary schools could use the enrollment rate of the previous three years to decide the number of junior students. In 2007, Hong Kong expanded the compulsory education from nine years to twelve years. Since then, senior secondary education also became a necessity for students. Usually, students will directly enter the
senior department from the junior department in the same secondary school.
The PISA attribution question and answers by city and grade

Although it is not possible to prove a definite effect of ability grouping on student attribution, the available information from PISA suggests a link that is consistent with the theories of attribution and the policy analysis of student allocation in Hong Kong and Shanghai. Answers by 9th grade and 10th grade students in PISA question #44 in Shanghai and Hong Kong to help illustrate the differences in students’ attributions in the two cities sharing a similar culture background. The 2012 edition of PISA included students’ voices and their interpretation of their own successes and failures. Question #44 of the student questionnaire examined students’ attributions to failure in mathematics, which gives an opportunity to consider students’ own understanding on their academic performance besides the evaluation from education specialists. PISA 2012 collected students’ answers from 34 OECD member countries and 31 partner countries, including Shanghai and Hong Kong.

In the 2012 survey, students answered questions related to their family characteristics, school learning environment and their own views on their academic performance. Question #44 of the student questionnaire examined students’ attributions to failure in mathematics. Students were asked to explain the reasons for their failure in the hypothetical event they failed a mathematic test. Question #44 gave six potential explanations for students to choose. For each explanation, students could use a four-point agree scale: “very likely”, “likely”, “slightly” and “not at all”. Weiner (1985) classified the reasons for success and failure into three dimensions: locus (internal or external), stability and controllability. The six explanations in question #44 can be divided into internal attributions (ability, effort), and external attributions (teacher, luck). Table 1 gives an overview of question #44.
Table 1. Students’ Attributions of Failure in Mathematics

<table>
<thead>
<tr>
<th>Explanation</th>
<th>Attribution Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>a I’m not very good at solving mathematical problems</td>
<td>Internal (ability/effort)</td>
</tr>
<tr>
<td>b My teacher did not explain the concepts well this week</td>
<td>External (teacher)</td>
</tr>
<tr>
<td>c This week I made bad guesses on the quiz</td>
<td>External (luck)</td>
</tr>
<tr>
<td>d Sometimes the course material is too hard</td>
<td>Internal (ability/effort)</td>
</tr>
<tr>
<td>e The teacher did not get students interested in the material</td>
<td>External (teacher)</td>
</tr>
<tr>
<td>f Sometimes I am just unlucky</td>
<td>External (luck)</td>
</tr>
</tbody>
</table>

Based on the previous policy review, we can see that in Shanghai and Hong Kong, 9th grade is the last year of the middle secondary school, and 10th grade is the first year of the upper secondary school. All students are ability grouped in 10th grade in both cities. However, only Hong Kong students are ability grouped in 9th grade, while Shanghai students are expected to attend a neighborhood school. It is possible that the cities’ differences in ability grouping and students’ different experiences with high stakes testing can help to explain differences in 9th and 10th grade students’ attributions of success and failure in Shanghai and Hong Kong.

One goal of this thesis is to explore differences in attribution within and across Shanghai and Hong Kong. It is possible to compare the mean attributions across the cities, and it is also possible to compare attributions within each city by comparing 9th and 10th grades, which experienced different ability grouping in each city. The data illustration below addresses two questions: 1) what are the differences in students’ attributions of success and failure in each city, 2) how do these attributions differ in each city between 9th and 10th grade?

In the six explanations give as responses to question #44, explanations a. and d. can be considered expressions of an internal attribution of failure. Students who would explain
failure with explanations b., c., e. and f. can be considered to have external attributions. For the four-point agreement scales, “very likely”, “likely”, “slightly” and “not at all”, I kept the first three scales and deleted the last scale. This is because the first three scales “very likely”, “likely” and “slightly” showed students attribution tendency. I counted “very likely” one point, “likely” two points and “slightly likely” three points. Then I added up students’ scores for explanations a. and d. and I subtracted students’ scores for explanation b, c, e and f to generate a new internalization score to reflect the attribution index. Lower internal attribution score means higher internal attribution index. Table 2 gives the information about students’ internalization score in grade 9 and grade 10 in each city.

<table>
<thead>
<tr>
<th></th>
<th>Grade</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shanghai</td>
<td>grade 9</td>
<td>-4.9</td>
<td>1.62</td>
</tr>
<tr>
<td></td>
<td>grade 10</td>
<td>-5.12</td>
<td>1.65</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>grade 9</td>
<td>-5.29</td>
<td>1.72</td>
</tr>
<tr>
<td></td>
<td>grade 10</td>
<td>-5.37</td>
<td>1.77</td>
</tr>
</tbody>
</table>

Tables 3 presents t-tests to show where differences in attribution between the two cities and the two grades are statistically significant. Table 3 can be interpreted to illustrate that ability grouping and experiences with high stakes testing affect students’ attribution differently in Shanghai and Hong Kong. However, there is no clear or consistent trend toward internalization. In table 3, the average internalization score of Hong Kong’s 9th grade students (-5.29) is lower than the attribution score of Shanghai’s 9th grade students (-4.9). The score difference (0.38) is significant between the two cities (P=0.005). The difference reveals that, compared to Shanghai’s 9th grade students, Hong Kong’s 9th grade students tend
to give more internal attribution for their failure in mathematics. Table 3 shows the internal attribution score of 10th grade students in the two cities. Although Hong Kong’s 10th grade students still have lower average internal attribution score (-5.37) than Shanghai’s 10th grade students (-5.13), the score gap (0.24) decreases compared to the 9th grade level (0.38).

Table 4 presents some evidence to support the view that high stakes testing and ability grouping could be associated with the attributions for failure that are given by Shanghai students from grade 9 to grade 10. I looked at differences in response between Shanghai students in 9th and 10th grades, because of the different mechanisms for their assignment to 9th grade and 10th grade schools. Table 4 gives the internalization scores of Shanghai students in 9th and 10th grades. The score difference (0.224) is significant between 9th and 10th grade (P=0.04). The higher internal attribution index of Shanghai’s 10th grade students means that, as compared to students at the 9th grade level, Shanghai students have greater internalization of their failure in the 10th grade as compared to 9th grade. For Hong Kong students, the average internalization score is around -5.3 for both 9th grade and 10th grade students and there is no statistically significant difference. In other words, Hong Kong students explain failure the same way in the 10th grade as do Hong Kong students in the 9th grade level.

From PISA data, we can see the differences in students’ attributions of success and failure between Shanghai and Hong Kong. Compared to Shanghai’s 9th grade students, Hong Kong’s 9th grade students tend to give more internal attributions for their failure in mathematics. For differences in 9th and 10th grade students’ attributions of success and failure in Shanghai and Hong Kong, Hong Kong students’ internal attributions of their failure remain unchanged in the 9th and 10th grade level. However, Shanghai students attribute failure more to internal attributions in grade 10 than in grade 9.
Table 3. *T*-test of Differences in Students’ Internalization Score by City

<table>
<thead>
<tr>
<th>Grade</th>
<th>City</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Shanghai</td>
<td>344</td>
<td>-4.9</td>
<td>1.62</td>
<td>-2.82</td>
<td>0.005*</td>
</tr>
<tr>
<td></td>
<td>Hong Kong</td>
<td>269</td>
<td>-5.29</td>
<td>1.72</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Shanghai</td>
<td>647</td>
<td>-5.13</td>
<td>1.65</td>
<td>-2.61</td>
<td>0.009*</td>
</tr>
<tr>
<td></td>
<td>Hong Kong</td>
<td>691</td>
<td>-5.37</td>
<td>1.77</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4. *T*-test of Differences in Students’ Internalization Score by Grade

<table>
<thead>
<tr>
<th>City</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Shanghai</td>
<td>9</td>
<td>344</td>
<td>-4.9</td>
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<td>2.05</td>
<td>0.04*</td>
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</tr>
<tr>
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<td>Grade 9</td>
<td>269</td>
<td>-5.29</td>
<td>1.72</td>
<td>0.69</td>
<td>0.49</td>
</tr>
<tr>
<td></td>
<td>Grade 10</td>
<td>691</td>
<td>-5.37</td>
<td>1.77</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Discussion and Conclusion

The policy review shows that there are different ability grouping process between grade 9 and grade 10 students within and across Shanghai and Hong Kong. PISA 2012 shows that students’ attributions are different between Shanghai and Hong Kong and between grade 9 and grade 10 students. The statistical analysis is far from conclusive. However, there is some tentative support for the connection between ability group changes and changes in attribution. Compared to Shanghai’s 9th grade students, Hong Kong’s 9th grade students tend to give more internal attributions for their failure in mathematics. For the grade differences, Shanghai’s grade 10 students attribute more internal attributions to their failure in mathematics than do grade 9 students. However, Hong Kong students’ internal attributions of their failure are unchanged between the 9th and 10th grade level. Shanghai and Hong Kong share the similar cultural environment but very different education policies on ability grouping. The PISA interpretation results allow me to consider the role of ability grouping and education system structure in shaping students’ attribution patterns. I consider that when students share a similar cultural background, then the differences in their attributions of success and failure are likely to be caused by differences in ability grouping processes. Specially, students will tend to attribute more internal attributions for their academic performance if they are selected by the ability grouping process and high stakes tests to different levels of schools.

I used Turner’ (1960) contest mobility theory and Blau and Mijs’ (1977, 2016) heterogeneity and homogeneity theory to help to explain this change in students’ attribution patterns. When students are selected by ability grouping processes to different levels of
schools, they are more likely to learn from this selection process that it is their own performance in the ability and achievement test that decides their current position. The ability grouping process will also place students in a homogenous environment where all the students are selected from the ability and achievement high stakes test. This kind of homogenous environment will lead the students to believe the importance of effort and ability. Thus, the selection role of ability grouping and the homogenous environment brought by the ability grouping process will work together to contribute to students’ internal attributions.

Previous researchers either used cultural differences to explain the differences in students’ attributions, or ignored the ideology differences and focused on the differences of school systems. This thesis contributes by combining cultural ideology and school systems to explore the role of school systems in shaping students’ attributions under the same cultural environment. The thesis still has a number of limitations. First, the 2012 PISA is a cross-sectional data, and so causation is impossible to prove. We have no way to know what responses were given in 9th grade by the individual students who responded in the 10th grade, we only can compare the average responses in 2012 for each grade. Second, there are many factors that can influence students’ attributions such as socioeconomic status and gender. My interpretation of PISA data offers a possible explanation for students’ different attribution patterns. In the future longitudinal studies of the same students as they transition between 9th and 10th grade will be useful for dataset testing the possibility suggested by this thesis. Longitudinal surveys can also include additional attributional variables.

The thesis has several implications for Chinese education policies. One is about the existence of high school entrance examination. In the very recent Twelfth National People’s
Congress (NPC) and Chinese People’s Political Consultative Conference (CPPCC) held in 2016 March, Yan Mo, the member of the national committee of CPPCC and also the winner of the 2012 Nobel Prize in literature, made a controversial proposal. Yan Mo suggested that the government should abolish the high school entrance examination and shorten the schooling years for basic education from twelve years to nine years. This proposal began a heated debate in China. Some parents supported the proposal since they expected the elimination of the high school entrance examination to decrease students’ academic burden and parents’ economic pressure. Other parents, by contrast, opposed the proposal because they think the elimination of the high school entrance examination would make the enrollment unfair, and feared that their children would more believe in the power of money or authority in school admission than their own capability. Controversy over whether high school entrance examination should exist is not a new topic as scholars debated on the issue over the years (Gao, 2008; Xiao, 2010). The thesis offers a suggestion to explain the existence of high school entrance examination. The high school entrance examination can be reformed to fit students’ situation better, but should not be totally abolished. Students selected by ability grouping process and the high stakes test would tend to attribute more internal attributions for their academic performance. This internalization would help students to promote their academic performance in a more positive way. And students would more realize the importance of self-effort and ability in their success, which could also help them in the future career life. The second implication is about students’ internalization in different levels of schools. Students in higher level of schools like Hong Kong’s band one school and Shanghai’s experimental model high schools may come to justify their success to their superior ability (Mijs, 2016). On the contrary, students in lower level of schools may be
disappointed and blame themselves for their lack of ability. The overly confidence and lack of confidence can both influence students’ understanding of their experience. Then educators need to pay more attention to justify students’ ideas about their ability in a more suitable way. One interesting explanation in #44 is “material too hard”. The disconnected transition from middle school curriculum to high school curriculum may lead to students doubting their effort and ability. Students’ understandings of the difficulty of secondary school curriculum will not only influence their attributions, but also influence the following academic performance and their confidence level. Many Chinese scholars have considered improving the academic transition from middle school to high school (Chen, 2011; Zheng, 2011; Cai, 2013). The academic transition offers a suggestion for teaching pedagogy in high schools. High school teachers can consider reviewing the middle school curriculum at first to help students to build a more solid learning foundation. Then the teachers can consider introducing the high school curriculum before starting formal teaching, in order to give students an overall look at the courses and help students to get a smooth transition.
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