SCHOOLS AND THE CLASS DIVIDE:
AN EXAMINATION OF CHILDREN'S SELF-CONCEPT AND ASPIRATIONS IN SINGAPORE

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SCHOOLS AND THE CLASS DIVIDE: AN EXAMINATION OF CHILDREN'S SELF-CONCEPT AND ASPIRATIONS IN SINGAPORE

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FOREWORD

Towards a New Vision and Meritocracy in Singapore

Singapore is a meritocratic society. Our system of meritocracy in the past fifty years of nation building since 1965 has brought us quite far, with a tremendous amount of social mobility. Education is the best gift for our children. We are proud to have a strong education system. Singapore students aim high and they achieve very good results. This is recognised around the world. We must build on these strengths as we aim to help our students to discover their own talents, realise their full potential, and develop a passion for learning that lasts throughout life.

However, our brand of meritocracy is also one that still focuses too much, and rather narrowly, on academic qualifications. It is somewhat similar to scaling Mount Everest. Not many mountain climbers can reach the peak, and it is a great achievement to have conquered the mountain. Those who have made it not only require individual mental strength and physical stamina, but also tremendous amounts of logistic support and team spirit. Having reached the top, how do those who have succeeded look upon themselves and subsequently, on those who have failed? The same question of perception is similarly applicable to those who have failed. Extrapolating the scenario to our existing system, where the definition of success and failure in life is based too heavily on individual academic achievements, it is important to explore whether the social mobility that we have achieved so far has also inadvertently created a widening status divide in our society.

To sustain and move beyond our current state of achievements, our political leaders are fully aware that our current concept of meritocracy must evolve into a broader definition of success recognising different strengths in different individuals. We must work towards a more flexible and diverse broad-based education system, providing many paths for students to grow and develop. Instead of aiming only at one Mount Everest, we must build a mountain range with many peaks of excellence. It should also be a system where it does not matter so much what happened at different stages in your schooling years, but what happens after that, when all individuals are evaluated continuously based on their contributions and abilities. This is part of building an inclusive society, where people treat one another as equals, regardless of their education level or job. This is a tall order and it will take a heroic effort on everybody's part. A society in which everybody believes he or she is equal to anyone else and treated as such is better than one which is overly hierarchical and with widening social gaps. Education is the key towards this new vision and we need to start from the very young.

In 2015, our Society embarked on a study to look at how school stratification may shape children's self-concept and their aspirations. The findings suggest that even from a young age, students perceive certain schools to be more prestigious than others. Such

perceptions may be unwittingly reinforced by parents, and can contribute to a widening divide, both in terms of social distance and class hierarchy. At the same time, these findings hint at the deeper underlying issue of an overemphasis on academic achievement. The child's potential for success appears to be too narrowly defined by school type and academic achievement. Education is viewed as a social leveller in our society, but our results suggest it may not be succeeding in this. Schools and parents go to great lengths to help the child academically, in ensuring a good education for our children. However, we must also ask ourselves what we truly value for our children, and what we hope our children would gain from their education.

We hope our research findings are useful to the policy-makers when they proceed to refine the desired outcomes of our education system.

I would like to congratulate Ms Ong Xiang Ling, our Society's research officer, and Dr Cheung Hoi Shan, her Research Advisor and a post-doctoral fellow of the National University of Singapore for this monumental piece of research work. I would also like to thank Associate Professor John Elliott, Chairman of our Research Committee, for his advice and contributions.

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Chairman, Research and Advocacy Standing Committee
Vice Chairman, Singapore Children's Society

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LIST OF RESEARCH PUBLICATIONS

The present monograph is the latest in a series published by Singapore Children's Society. Earlier monograph publications can be freely downloaded from the Singapore Children's Society website at https://www.childrensociety.org.sg/research-completed

No.	Monograph title and description
1	*The Public Perceptions of Child Abuse and Neglect in Singapore* published in December 1996, confronts the average Singaporean's thinking towards child abuse and neglect.
2	*The Professional and Public Perceptions of Child Abuse and Neglect in Singapore: An Overview* published in April 2000 focuses on the attitudes of professionals towards abuse or neglect, and their opinions on the experience and reporting of child abuse and neglect.
3	*The Professional and Public Perceptions of Physical Child Abuse and Neglect in Singapore* published in April 2000 focuses specifically on the attitudes of professionals and the public towards physical child abuse and neglect.
4	*Emotional Maltreatment of Children in Singapore: Professional and Public Perceptions* published in February 2002 focuses on the attitudes of professionals and the public towards child emotional maltreatment.
5	*Child Sexual Abuse in Singapore: Professional and Public Perceptions* published in June 2003 focuses specifically on the attitudes of professionals and the public towards child sexual abuse.
6	*The Parenting Project: Disciplinary Practices, Child Care Arrangements and Parenting Practices in Singapore* published in October 2006 looks into how children are disciplined, who their main caregivers are, and how parents interact with their children in general.
7	*Children's Social and Emotional Well-Being in Singapore* published in July 2008 examined parents' and children's perspectives on children's state of social and emotional well-being.
8	*Bullying in Singapore Schools* published in July 2008 examined the prevalence of bullying in the Primary and Secondary schools of Singapore.
9	*Young Adults' Recall of School Bullying* published in July 2010 examined the possible long-term effects of bullying on victims after they leave school and enter the society.
10	*Changing Public Perceptions of Child Abuse and Neglect in Singapore* published in November 2015 and revised in January 2016, examined changes over the years in the way Singaporeans perceive child abuse and neglect, their views on reporting it and their judgment of its seriousness.

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EXECUTIVE SUMMARY

Background

Academic achievement is highly valued in Singapore. Hence, some schools may be perceived to be more prestigious than others because they have a good academic track record. Recent data suggest that children from affluent backgrounds are more likely to attend such "elite" schools. However, there is a lack of research on how school type may contribute to social class differences in children's perceptions of themselves (self-concept) and their future (aspirations). Moreover, little is known about how children perceive individuals in different school types.

This study looks at the influence of school type on children's self-concept and aspirations, and their perceptions of other individuals in "elite" and "non-elite" schools. We also explored how school type may shape parents' aspirations for their children.

Method

Schools were classified as "elite" and "non-elite" based on their academic streams and level of autonomy. In the first phase of the study, structured interviews were conducted separately with 601 upper primary and secondary school students, and their respective parents. Both parents and students were interviewed on their aspirations. Students were also asked to rate the social status and academic competence of: (1) themselves; (2) individuals in elite schools; and (3) individuals in non-elite schools.

The second phase of the study involved in-depth interviews with parents to explore how school type may shape parents' aspirations for their children. Twenty parents were interviewed on their perceptions of schools in Singapore, their involvement in their children's education and the reasons for their aspirations.

Key Findings

1. At both the primary and secondary school levels, students from elite schools had higher levels of socio-economic status (SES) than those from non-elite schools.

2. Regardless of their school type, all students perceived individuals in elite schools to be of a higher social status and academic competence than those in non-elite schools. This was observed at both the primary and secondary school levels.

3. Students from elite secondary schools perceived themselves to have a higher social status than individuals from non-elite secondary schools.

4. Regardless of their school type, most students aspired to attain at least a university degree. However, students from elite secondary schools were more likely to have high confidence in attaining at least a university degree, compared with those from non-elite secondary schools.

5. Parents of children from elite secondary schools were more likely to have high confidence in their child's ability to attain at least a university degree.

6. Follow-up interviews revealed that parents associated placement in elite secondary schools with better opportunities for attaining a university degree.

Conclusion

In summary, both parents and students perceived differences between elite and non-elite schools. For students, placement in elite schools was associated with higher levels of social status and academic competence. Such perceptions could contribute to a social distance between students in elite schools and the rest of society. Thus, there is a need to provide students in elite schools with more opportunities to mix with others from different backgrounds.

At the secondary school level, students from affluent families were more likely to be enrolled in elite schools. Enrolment in elite schools, in turn, made the student more likely to have high confidence in attaining at least a university degree. Given that this could translate into actual educational attainment, schools may contribute to socio-economic inequalities. Hence, to level the playing field for children, there may be a need to increase the socio-economic diversity in elite schools, as well as to put in place interventions that would boost the confidence of students in non-elite schools.

However, the child's potential for future educational outcomes could lie with parental expectations, rather than with the type of school per se. Placement in elite secondary schools appeared to boost parents' confidence in their child's academic potential, which in turn made the child more likely to have confidence in attaining at least a university degree. This suggests a need to reduce differences between elite and non-elite secondary schools. More importantly, parents and other stakeholders need to recognise a broader definition of success, such that perceptions of the child's potential would not hinge on his or her school type or academic achievement.

INTRODUCTION

In August 2015, the principal of Raffles Institution (RI) – a premier secondary school in Singapore – stated that RI had become a "middle-class" school such that the student body was no longer representative of the socio-economic diversity in Singapore. Speaking at the school's Founder's Day ceremony, he explained that

> Our system of meritocracy is working less well than it used to … families that have been successful financially have been able to create advantages for their children – the PSLE[1] and other gatekeeping examinations are no longer the level playing field that they once were, thanks to an explosion in the numbers of tuition and enrichment centres (Teng, 2015b).

The speech was quickly picked up by the media and sparked off an intense discussion, with many supporting the view that every child, regardless of socio-economic background, should be given an equal opportunity to enrol in prestigious schools (Teng, 2015c). Such a reaction from members of the public comes as no surprise, given that meritocracy and equity are core tenets on which Singapore society is based. Yet, because children from affluent backgrounds tend to have a greater access to tuition and enrichment classes, they appear to have a competitive edge in "gatekeeping examinations" like the PSLE, making it easier for them to qualify for prestigious schools.

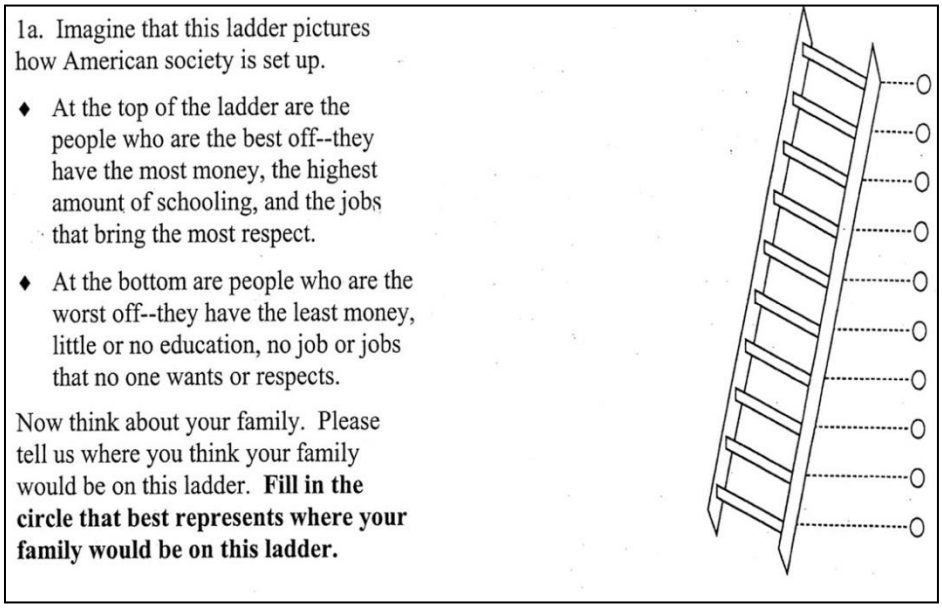
In this study, we examine how school stratification – the sorting of students into different school types based on academic performance – may shape children's perceptions of themselves (self-concept) and of their future (aspirations). If social class is associated with school type, and school type in turn influences children's self-concept and aspirations, then school stratification may contribute to social class differences. Thus, the present study seeks to find out: (1) the association between social class and school type; and (2) the influence of school type on children's self-concept and aspirations. We begin by defining social class, before examining its links with school type. We then look at how school type may shape children's self-concept and their aspirations.

Defining social class

Social class is defined as an individual's relative position in a social hierarchy of power, prestige and access to resources (Diemer & Ali, 2009). It is typically measured via socio-economic status (SES), which comprises objective indicators such as income and educational level. It can also be measured via subjective social status, which is the individual's subjective perception of his or her social ranking (Diemer, Mistry, Wadsworth, Lopez, & Reimers, 2013). Such subjective perceptions can be assessed with a visual tool in which the respondent indicates his or her relative standing on a "ladder" of social hierarchy (Adler, Epel, Catellazzo, & Ickovics, 2000). Figure 1 shows an example of a tool that is used with youths.

[1] Primary School Leaving Examination - a national examination that children in Singapore take at the end of primary school. Performance in this examination determines which secondary school the child could enrol in.

Fig. 1 *Example of a tool to measure subjective social status*



Goodman et al. (2001). The MacArthur Scale of Subjective Social Status – Youth Version. Adolescents' Perceptions of Social Status: Development and Evaluation of a New Indicator. *Pediatrics, 108*(2), 1-8. Retrieved from http://pediatrics.aappublications.org/content/108/2/e31

Subjective social status is therefore the perception of how one compares to others in terms of indicators associated with power and prestige, such as the amount of money that one's family has. Compared to adults, children's ratings of subjective social status are less aligned with actual SES. This is because children's perceptions of social status tend to be influenced by visible cues, such as material possessions (Leahy, 1981). In addition, children may be less likely than adults to view SES as a product of their own effort (Rosenberg & Pearlin, 1978). Instead, children appear to base their social standing on indicators that they view as their own accomplishments, such as academic performance (Goodman et al., 2001; Sweeting & Hunt, 2014). Given the salience of school stratification in Singapore, school type may influence children's subjective social status because of its association with academic performance.

Class and school stratification

School stratification occurs when children are sorted into different school types and academic tracks (also known as "streams") based on their performance in selection tests or national exams. In Singapore, this streaming process begins as early as age 9. At the primary school level, students who are assessed to be intellectually gifted are invited to enrol in the Gifted Education Programme (GEP), which is offered only in selected primary schools. At the secondary school level, students are sorted into different schools and streams based on their PSLE scores. Top-performing students are eligible for the Integrated Programme (IP), which allows students to proceed to junior college without sitting for the GCE 'O' Level examinations. It is believed that the time freed up from having to prepare for the 'O' Levels would "stretch pupils and provide greater breadth in the academic and non-academic curriculum" (Ministry of Education [MOE], 2015a). Like the GEP, the IP is available only in selected secondary schools.

Schools with high-ability streams like the GEP and IP are generally known as “elite” or “top” schools as they have a good academic track record. Whereas elite primary schools are known for producing the top scorers in the PSLE (Toh, 2012), elite secondary schools are traditionally ranked among the top based on their performance in the GCE ‘O’ Level Examinations (Tan, 2008). In 2012, the practice of publicly ranking secondary schools was abolished (Ong, 2012). This was soon followed by the decision to stop announcing the names of top PSLE scorers, along with the schools they came from (Chew, 2012).

In spite of these changes, places in elite primary and secondary schools continue to be highly sought after. For instance, some parents attempt to crowdsource information on primary schools that produce the top PSLE scorers, and select their children’s schools accordingly (Yang, 2015). In addition, past school rankings seem to have had lasting effects in further stratifying secondary schools. As elite secondary schools develop a reputation for academic excellence, they attract more top-performing students who further boost the prestige of these schools (Tan, 2008). For example, the PSLE cut-off point (or minimum aggregate score required for admission) is often higher for elite secondary schools due to a higher demand for places in these schools.

Furthermore, elite schools often have a greater degree of autonomy compared with non-elite schools. Most elite primary schools are “government-aided”,[2] while elite secondary schools have “independent” or “autonomous” status.[3] This difference in status provides elite schools with more autonomy in administrative matters, such as staff recruitment and curriculum design. As such, elite schools are often perceived to have better teachers and a more enriched curriculum (Koh, 2014).

However, the most striking difference that sets these elite schools apart from other schools is perhaps the socio-economic composition of the student body. Data increasingly point to a disproportionate number of students from affluent backgrounds in elite primary and secondary schools. For instance, according to figures released by the government, more than half the students in elite secondary schools had fathers who were university graduates, compared with about 10% of students in other secondary schools. At the primary school level, about 60% of students in elite schools live in private housing, compared with the national average of 20% for all primary schools (Davie & Chew, 2012).

The above trends have been attributed to “parentocracy”, or the view that parents’ resources and expectations drive the child’s academic success, rather than the child’s own effort and ability. First, well-to-do parents may provide their children with more resources in the form of private tuition and enrichment classes, giving them an edge in gatekeeping examinations such as the PSLE. For instance, a survey by The Straits Times found that with increasing levels of income, parents spent correspondingly more on private tuition for their children (Teng, 2015a). Second, in the primary school admission system, priority is given

[2] Government-aided schools are not fully funded by the government and thus, maintain some degree of autonomy in school operations. However, they are expected to conform to certain standards that are comparable to those in government schools, such as school admission standards (MOE, 2000).

[3] In the 1980s, some secondary schools with a reputation for producing top-performing students were granted “independent” status. In a bid to extend a greater degree of autonomy to more schools, a new category of “autonomous” schools was established in the 1990s. This comprised schools that had a good academic track record, but were less well-established and had relatively less autonomy than “independent” schools (Tan, 2008).

based on parents' connections to the school, as well as proximity of the family home to the school. Given that many elite primary schools are located in wealthier neighbourhoods, it appears that children from privileged backgrounds are given more opportunities to enrol in elite primary schools (Ng, 2011; Sumit & Foo, 2015). Moreover, some elite primary schools are also feeder schools,[4] making it easier for children in these primary schools to enter elite secondary schools.

In sum, at both the primary and secondary school levels, elite and non-elite schools are differentiated not only by academic stream, but also by the socio-economic composition of the student body. In recent years, the Ministry of Education has taken steps to reduce the differentiation between elite and non-elite schools. For instance, schools are no longer publicly ranked based on academic performance, and resources are channelled to help all schools level up to become "good schools" (Lim, 2012; Ong, 2012). Although such attempts are laudable, it remains to be seen if children perceive differences between elite and non-elite schools. If this is the case, it would be of interest to examine whether these perceptions influence how children view themselves (self-concept) and their future (aspirations).

Self-concept

Self-concept, or how one perceives the self, involves multiple components. One such component is subjective social status, or the individual's self-perception of his or her social standing. As noted earlier, academic performance may be an important indicator of social status for children (Goodman et al., 2001; Sweeting & Hunt, 2014). Given that elite schools are associated with good academic performance, children may hold stereotypes that link membership in elite schools with high social status. For instance, a survey by The Straits Times showed that secondary school students in Singapore defined the "elite" as those who attended elite schools and excelled academically (Kwek, 2007). Notably, these indicators were also perceived to be more important than wealth, power and family background in the definition of "elite" status.

In short, both membership in elite schools and academic excellence are tied to being "elite". Thus, children may perceive individuals from elite schools to have a higher social status than those from non-elite schools. By virtue of their own membership in elite schools, children may also display higher levels of subjective social status than their peers in non-elite schools. For example, children in elite schools may view themselves as having a high social status. In contrast, children in non-elite schools could view themselves as having a low social status.

Because elite schools are associated with academic excellence, children may also hold stereotypes linking membership in elite schools with high academic competence. In other words, children may use information about an individual's school type to judge his or her level of academic competence. Thus, they may consider individuals from elite schools to have a higher academic competence than those from non-elite schools. Moreover, children may develop self-perceptions of academic competence that are consistent with these stereotypes (Wiederkehr, Darnon, Chazal, Guimond, & Martinot, 2015). For instance, children from elite schools may see themselves as belonging to a group that is associated with high academic competence. As a result, these children may develop a higher self-

[4] For children in feeder schools, or primary schools with affiliation, the PSLE cut-off point for the affiliated secondary school is lower.

perception of their academic competence than their peers from non-elite schools, regardless of their actual academic abilities. Conversely, children from non-elite schools may internalise stereotypes of being intellectually inferior to students from elite schools, resulting in a lower self-perception of their academic competence (Gamoran & Berends, 1987). Thus, in addition to subjective social status, school type may also shape children's academic self-concept, or perceptions of their academic competence. Academic self-concept, in turn, could influence children's aspirations.

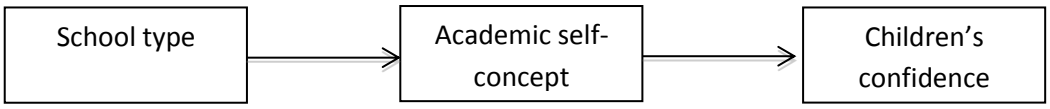
Aspirations

Children's aspirations – the goals or hopes that children have for their future – are often measured in terms of the highest level of education or job prestige that they want to attain (e.g., Beal & Crockett, 2010; Kiang, Witkow, Gonzalez, Stein, & Andrews, 2015). Children's aspirations are shown to predict actual educational attainment. For instance, children with higher educational and occupational aspirations are more likely to attain higher educational qualifications in adulthood (e.g., Beal & Crockett, 2010). Thus, to the extent that higher educational qualifications bring about better economic prospects, it is important for children to have high aspirations.

Previous studies have shown that most students in Singapore have high aspirations of attaining at least a university degree (Ng & Cheong, 2014; Senin & Ng, 2012). However, having high levels of aspirations alone may be insufficient to bring about achievement, especially if these aspirations are perceived to be unattainable, or difficult to achieve (Oyserman, Bybee, & Terry, 2006). For instance, when children are not confident of attaining a university degree, they may not be sufficiently motivated to work towards this goal. On the other hand, increasing children's confidence of attaining a university degree makes them more motivated to invest effort in their homework (Destin & Oyserman, 2009; Oyserman, Bybee & Terry, 2006). Hence, when children feel more confident of attaining their educational aspirations, they are more likely to engage in behaviours that facilitate actual educational attainment.

In short, it is important to look at both the *level* of aspirations that children have (i.e., the highest level of education that children want to achieve) and their *confidence* in attaining these aspirations (i.e., how confident children are of attaining their desired level of educational attainment). In this study, we define "high aspiration" as the child's desire to attain at least a university degree, and "high confidence" as the child's high certainty in attaining this aspiration. We expect that although most children would show high aspirations regardless of their school type, children in elite schools would be more likely to have high confidence. This is because school type could influence children's academic self-concept, which in turn predicts children's confidence in attaining a university degree. For instance, one study found that children in academically selective schools (i.e., schools with more stringent admission criteria based on academic performance) showed higher levels of academic self-concept than those in non-selective schools. Having higher levels of academic self-concept, in turn, made these children more confident of going to university (Ahmavaara & Houston, 2007). Hence, by influencing children's academic self-concept, school type may shape children's confidence in attaining a university degree (refer to Figure 2). Specifically, placement in an elite school may increase children's academic self-concept, which in turn increases the likelihood that children have high confidence in attaining at least a university degree.

Fig. 2 *Influence of school type on children's confidence via academic self-concept*



Parents' aspirations

School type may also shape children's confidence in attaining their aspirations via its influence on parental aspirations. As with children, it is important to look at both the *level* of parental aspirations (i.e., the highest level of education parents want their child to achieve) and parents' *confidence* in their child's ability to attain these aspirations (Murayama, Pekrun, Suzuki, Marsh, & Lichtenfeld, 2015). Studies have suggested that whereas the *level* of parental aspirations reflects the value that parents place on education (Astone & McLanahan, 1991), parents' *confidence* – or their judgments of their child's ability to attain these aspirations – is based on parents' evaluations of the child's academic potential, as well as their own ability to support the desired level of educational attainment for their child (Seginer, 1983; Yamamoto & Holloway, 2010). For instance, parents who express concerns about the affordability of university education tend to feel less confident that their child would complete university in the future (Kirk, Lewis, Nilsen, & Colvin, 2011).

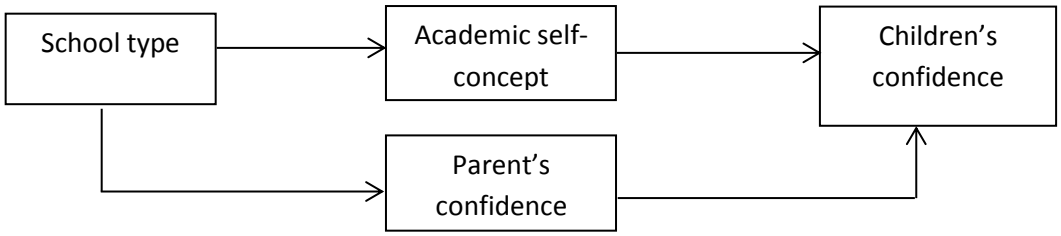
In this study, we define "high parental aspiration" as the parent's desire for the child to attain at least a university degree, and "high parental confidence" as the parent's high certainty in the child's ability to realise this aspiration. As most parents place a high value on education, we expect that regardless of their child's school type, most parents would have high aspirations. On the other hand, we expect that when their child is in an elite school, parents would be more likely to have high confidence in their child's ability to attain a university degree. This is because parents may associate elite schools with more opportunities to develop their children's academic potential. As noted earlier, Singapore parents display a preference for elite schools because of their good academic track record (Yang, 2015). Parents may link the school's academic track record to its ability to facilitate their child's academic achievement (Spera, Wentzel, & Matto, 2009). As such, parents may exhibit more confidence in their child's academic potential when their child is in an elite school.

In addition, anecdotal evidence suggests that school type may influence parents' perceptions of their ability to finance their child's education. For instance, Singaporean parents may associate placement in elite schools with a higher chance of winning government scholarships and securing admission to publicly funded universities (Davie, 2012), both of which would imply a reduction of financial barriers for their child's university education. Hence, when the child is in an elite school, parents may perceive university education to be more accessible for their child.

Taken together, the child's placement in an elite school may increase parents' confidence in their child's ability to attain at least a university degree. This is because parents may associate elite schools with more opportunities to enhance their child's academic potential, as well as reduced financial barriers for the child's university education. Parents' high confidence may in turn boost the child's confidence in attaining his or her

aspirations (Benner & Mistry, 2007; Kirk et al., 2011). Hence, by influencing both academic self-concept and parents' confidence, school type may indirectly influence children's confidence in attaining their aspirations (refer to Figure 3).

Fig. 3 *Possible mediating pathways for the effect of school type on children's confidence*



The social divide

Past research has attested to the importance of children's self-concept and aspirations, showing that these perceptions motivate behaviours that facilitate the achievement of one's goals. Hence, they predict actual educational outcomes (e.g., Beal & Crockett, 2010; Oyserman, Bybee, & Terry, 2006). It is suggested that these perceptions also contribute to social class differences in academic achievement and educational attainment (Heberle & Carter, 2015; Wiederkehr et al., 2015). In other words, low-SES children may feel less confident of their own competencies and thus, feel less motivated to work towards their goals, resulting in lower academic achievement and educational attainment in adulthood (Beal & Crockett, 2010; Oyserman, Bybee, & Terry, 2006).

In short, children's self-concept and aspirations may translate into actual educational outcomes. If school type influences children's self-concept and aspirations, schools may contribute to social class differences. This is because children from privileged backgrounds appear more likely to be in elite schools, and placement in such schools may in turn boost children's self-concept and their confidence in attaining their aspirations. Although previous studies have examined the influence of school stratification on adolescents' self-concept and aspirations (e.g., Ahmavaara & Houston, 2007; Buchmann & Park, 2009), less is known about their effects on primary school-aged children. Schools in Singapore appear to be segregated along social class lines as early as the primary school level. Moreover, research has shown that from upper elementary school (the equivalent of upper primary school in Singapore), children are able to differentiate groups based on social status and prestige, and classify themselves into these groups (Bigler, Averhart, & Liben, 2003; Mistry, Brown, White, Chow, & Gillen-O'Neel, 2015). Thus, school stratification may influence one's self-concept and aspirations from as early as the upper primary school years (i.e., from age 9).

The present study

This study looks at the influence of school stratification on the self-concept and aspirations of upper primary and secondary school students. In summary, we aim to examine the following:

1. The association between socio-economic status (SES) and the type of school students attend (school type)

2. Students' perceptions of the differences between individuals in elite and non-elite schools (i.e., perceived school differentiation)

3. The influence of SES and school type on students' self-concept and aspirations

In line with these aims, we hypothesise that:

1. **Students from elite schools would have higher levels of SES than those from non-elite schools**

2. **Students from elite and non-elite schools would show similar levels of perceived school differentiation**

   All students (regardless of school type) would rate hypothetical individuals in elite schools as having higher social status and academic competence than hypothetical individuals in non-elite schools. The magnitude of this perceived discrepancy is expected to be similar across school types.

3. **Students from elite schools would show higher levels of subjective social status and academic self-concept than those from non-elite schools**

   Students from elite schools would rate themselves as having higher social status and academic competence, compared with how students from non-elite schools rate themselves. This would also mean that, compared with those from non-elite schools, students from elite schools would perceive themselves to be more similar to hypothetical individuals from elite schools. On the other hand, students from non-elite school students would perceive themselves to be more similar to hypothetical individuals in non-elite schools.

4. **Compared with those from non-elite schools, students from elite schools would be more likely to exhibit high confidence of attaining at least a university degree**

   Although most students across school types would have high educational aspirations (i.e., wanting to attain at least a university degree), students from elite schools would be more likely to have high confidence in attaining at least a university degree.

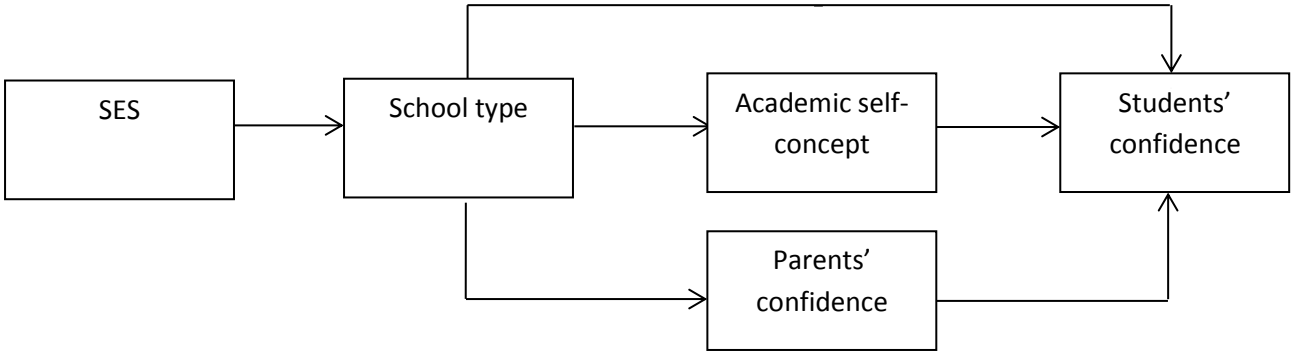
5. **School type would mediate the effects of SES on students' confidence**

   With increasing SES, students would be more likely to attend elite schools. This would in turn increase the likelihood that students would have high confidence in attaining at least a university degree (refer to Figure 4).

6. **Both academic self-concept and parental confidence would mediate the effects of school type on students' confidence**

   For students in elite schools, levels of academic self-concept would be higher, and parents would be more likely to display high confidence that their child would attain at least a university degree. In turn, higher levels of both academic self-concept and parental confidence would increase the likelihood that students have high confidence in attaining at least a university degree (refer to Figure 4).

Fig. 4 *Proposed model of the pathways through which different variables affect students' confidence*



METHOD

Focus group discussions

This study was planned as a questionnaire based survey. However, to guide the design of our questionnaires, we first conducted focus group discussions to explore upper primary and secondary school students' perceptions of social status, and of elite and non-elite schools. Four focus group discussions were conducted with a convenience sample of 26 students. These students were between 9 and 16 years of age and were receiving services from the Singapore Children's Society.[5] The students were asked questions about social class indicators and the different types of schools in Singapore (see Appendix A for the interview guide).

Results of the focus group discussions showed that the students: (1) based their perceptions of social status mainly on family wealth, housing and exam scores; and (2) labelled elite and non-elite schools in Singapore as "very good" schools and "normal" schools respectively. These findings guided the development of questionnaire items on subjective social status and perceived school differentiation, ensuring that they were suitable for the local context.

Pilot study

Draft versions of the questionnaires were administered to a convenience sample of 11 students between 9 and 15 years of age. Because these students had difficulty envisioning how individuals in different school types would be like (perceived school differentiation), the order of the items was revised such that students answered questions about themselves (subjective social status and academic self-concept) before responding to items on perceived school differentiation. Items which measured perceived school differentiation were similar to those which measured subjective social status and academic self-concept, but worded in the third person (see Parts F and G in Appendix C). By revising the order of items, students were able to use themselves as bases for determining the social status and academic competence of other individuals. Revising the order of items also avoided the possibility that students would be primed to attend to information about school type when answering questions about their self-concept.

As some primary school students had difficulty understanding the anchors on the original rating scale (which ranged from *strongly disagree* to *strongly agree*), the anchors were re-worded such that they ranged from *not true* to *very true*. Lastly, for an item on educational aspirations, it was discovered that most primary school students in the sample did not understand the term "postgraduate". Thus, a standard prompt, "further studies after completing your first degree from university" was used whenever the respondent expressed uncertainty about the meaning of this term.

[5] The Singapore Children's Society runs a range of programmes and drop-in centres for children from low-income and/or disadvantaged families.

Participants

To ensure a meaningful comparison of school types, we imposed quota restrictions such that there was an equal number of respondents from each of three school types. These school types differed in academic stream and level of autonomy (see section on "School Type" on page 17 for more details). Upon reaching the quota for a school type, interviewers would cease data collection for that group. In addition, to prevent an overrepresentation from a particular school in each school type, no more than 15 students were surveyed from a single school. Interviewers conducted on-site verification of the student's school based on the school name indicated on the student card or school documents (see Table F1 in Appendix F for the number of schools that are represented in the sample). Table 1 shows a breakdown of the sample according to the students' educational level and school type.

Table 1 *Breakdown of sample*

Educational level	**School Type**			
	Type 1	**Type 2**	**Type 3**	*Total*
Primary 4 to 6	100	100	100	300
Secondary 1 to 4	101	100	100	301
Total	201	200	200	**601**

Sampling method

Cluster sampling was used to recruit students from all three school types. In cluster sampling, geographical areas with the highest proportion of residents in the target age group (9 to 16 years old) were identified based on the 2015 Singapore population census data (Department of Statistics, 2015). Within these areas, housing estates located nearest to primary and secondary schools were randomly selected as sampling locations, where door-to-door surveys were administered.

Type 1 and Type 2 schools in Singapore make up a much smaller proportion of schools compared to Type 3 schools. Thus, there was difficulty meeting the targeted number of participants from these two school types via the cluster sampling method. To make up for the shortfall of participants from Type 1 and Type 2 schools, referral sampling was also used. In referral sampling, participants were recruited via advertisements on social media and referrals from other respondents who had completed the surveys (see Tables F2 and F3 in Appendix F for the proportion of participants recruited via each sampling method).

Because students from Types 1 and 2 primary and secondary schools were recruited via a mix of referral and cluster sampling, chi-square analyses were conducted to examine if, within each school type, students differed in their demographic characteristics as a result of the sampling method used. The analyses revealed that for both primary and secondary

schools, students recruited via referral sampling were more likely to live in private housing,[6] compared to those recruited via cluster sampling (refer to Tables F2 and F3 in Appendix F for detailed statistics). Since door-to-door visits (i.e., cluster sampling) could not be carried out for households residing in condominiums (which make up the bulk of private housing in Singapore), the fact that cluster sampling resulted in fewer participants from the private housing type was accepted as a natural occurrence.

The use of referral sampling for Type 1 and Type 2 respondents could bias the selection of respondents, such that Type 1 and Type 2 respondents were more likely to live in private housing. However, it can be argued that in the first place, there was an inherent underrepresentation of students from Type 1 and Type 2 schools among public housing residents, and this resulted in the need for a different sampling method other than cluster sampling. Moreover, other than housing type differences, we did not find further demographic differences between students who were recruited via cluster versus referral sampling.

Demographic characteristics

The overall sample comprised 601 students (50.4% girls) and their respective parents (77.0% mothers). The age range of parents was 28 to 65 years old (mean age = 44.0 years old). Students were between 9 and 17 years old (mean age = 12.8 years old). Only students in Primary 4 to Secondary 4 levels in mainstream schools in Singapore were eligible for this study. Other demographic characteristics can be found in Table F4 in Appendix F.

Table 2 shows a comparison between the profile of the participants in the present study and the Singapore population according to 2015 census statistics (Department of Statistics, 2015). As shown in Table 2, the demographic characteristics of parents and students in the sample closely resembled those observed in the national population, notwithstanding some slight deviations in household income. Specifically, families from the lowest and highest income brackets were underrepresented in our sample. This could be because the census data for household income also included retiree households, whereas the present sample comprised mainly families with school-going children.

[6] Private housing comprises both condominiums and landed housing. The majority of Singapore residents (80.1%) live in public housing, or Housing Development Board (HDB) flats (Department of Statistics, 2015).

Table 2 *Demographic characteristics of respondents compared with the Singapore population census statistics*

Demographic variable	% of Participants (N=601)	% of National Population
Gender of student		
Female	50.4	50.9
Male	49.6	49.1
Ethnicity of student		
Chinese	72.0	74.3
Malay	12.1	13.3
Indian	12.1	9.1
Others	3.7	3.2
Housing type[7]		
1-room/ 2-room flat	2.8	5.3
3-room flat	11.3	18.3
4-room flat	30.6	32.2
5-room/Executive flat	35.9	24.4
Condominium/Private apartment	14.3	13.5
Landed property	5.0	5.8
Parent's educational attainment[8]		
Below 'O' Level	11.0	10.3
'O' Level	18.8	14.5
Post-Secondary (Non Tertiary)	8.3	9.0
Diploma	20.5	21.3
University degree and above	41.4	44.9
Monthly household income		
Below 2000	6.2	17.4
2000-2999	8.8	5.8
3000-3999	9.7	5.5
4000-4999	11.1	5.9
5000-5999	9.3	5.7
6000-6999	8.2	5.8
7000-7999	6.8	5.3
8000-8999	8.2	5.3
9000-9999	4.7	4.8
10000-11999	9.2	8.1
12000-14999	8.2	9.3
15000&over	9.8	21.1

[7] Figures for national population do not add up to 100% as other dwelling types (e.g. shophouses) are not shown.

[8] Census data for educational attainment were based on those aged 35 to 44 years. This group was selected as the basis for comparison as the majority of parents in our sample (60.7%) fell within this age range.

Although Type 1 and Type 2 schools make up a smaller proportion of schools in Singapore, there was an equal number of respondents from each of the three school types in our sample. Hence, it is interesting that in spite of the overrepresentation from Type 1 and Type 2 schools, the demographic characteristics of the sample were largely similar to those of the national population.

Closer examination of the sample revealed that compared to the national population, ethnic Chinese students were overrepresented in Type 1 primary schools (see Table 3). In contrast, ethnic Chinese students were underrepresented in Type 3 primary schools. Moreover, although Type 1 schools had an overrepresentation of those with higher SES (i.e., living in private housing, parent completed university, and monthly household income of more than $10,000), Type 3 schools had an underrepresentation. On the other hand, the demographic characteristics of those in Type 2 schools were more similar to the national census statistics.

The same pattern of findings was observed for secondary school students (see Table 4). Hence, it appears that across different school types, the differences in demographic characteristics balanced out such that they closely mirrored those of the national population.

Table 3 *Demographic characteristics of primary school respondents by school type compared with the Singapore population census statistics*

Demographic Variable	% of Type 1 (N=100)	% of Type 2 (N=100)	% of Type 3 (N=100)	% of National Population
Ethnicity				
Chinese	91.0	86.0	50.0	74.3
Malay	5.0	4.0	25.0	13.3
Indian	4.0	8.0	19.0	9.1
Others	0	2.0	6.0	3.2
Live in private housing	39.0	25.0	3.0	19.3
Parent respondent completed university	74.0	47.0	33.0	44.9
Monthly household income > $10,000	48.0	29.0	12.0	38.5

Table 4 *Demographic characteristics of secondary school respondents by school type compared with the Singapore population census statistics*

Demographic Variable	% of Type 1 (N=101)	% of Type 2 (N=100)	% of Type 3 (N=100)	% of National Population
Ethnicity				
Chinese	83.2	75.0	47.0	74.3
Malay	5.0	9.0	25.0	13.3
Indian	7.9	10.0	24.0	9.1
Others	4.0	6.0	4.0	3.2
Live in private housing	30.7	16.0	2.0	19.3
Parent respondent completed university	53.5	24.0	17.0	44.9
Monthly household income > $10,000	40.7	25.0	7.0	38.5

Measures

Socio-economic status (SES)

Data on monthly household income, highest educational attainment of both parents and housing type were collected. For household income, parents were asked to indicate their income range from 1 (*below $2000*) to 12 (*$15000 and over*). Highest educational attainment was measured from 1 (*did not complete primary education*) to 9 (*obtained a postgraduate degree*). Housing type was measured using a scale from 1 (*1-room flat*) to 8 (*landed property*).

School type

At both the primary and secondary school levels, schools were classified based on academic stream and level of autonomy. Schools were first classified as "elite" or "non-elite" based on the provision of high-ability streams (i.e., the GEP and IP). For primary schools, this classification was also made based on whether the schools were affiliated to secondary schools that offered the IP stream.

Next, non-elite schools were further classified based on their level of autonomy.[9] As noted earlier, autonomous secondary schools are given more flexibility in administrative matters, compared with government schools (Tan, 2008). Likewise, government-aided primary schools have a greater degree of autonomy compared with government schools, although they have to adhere to certain standards (MOE, 2000). Hence, we considered autonomous secondary schools to be different from government secondary schools, and government-aided primary schools to be different from government primary schools. Figures 5 and 6 respectively show how primary and secondary schools were classified.

[9] Secondary schools that offer the IP happen to include only independent and autonomous schools. All independent secondary schools offer the IP, but not all autonomous schools have the IP. At the primary school level, not all government-aided schools offer the GEP.

Fig. 5 *Flowchart for the classification of primary schools*

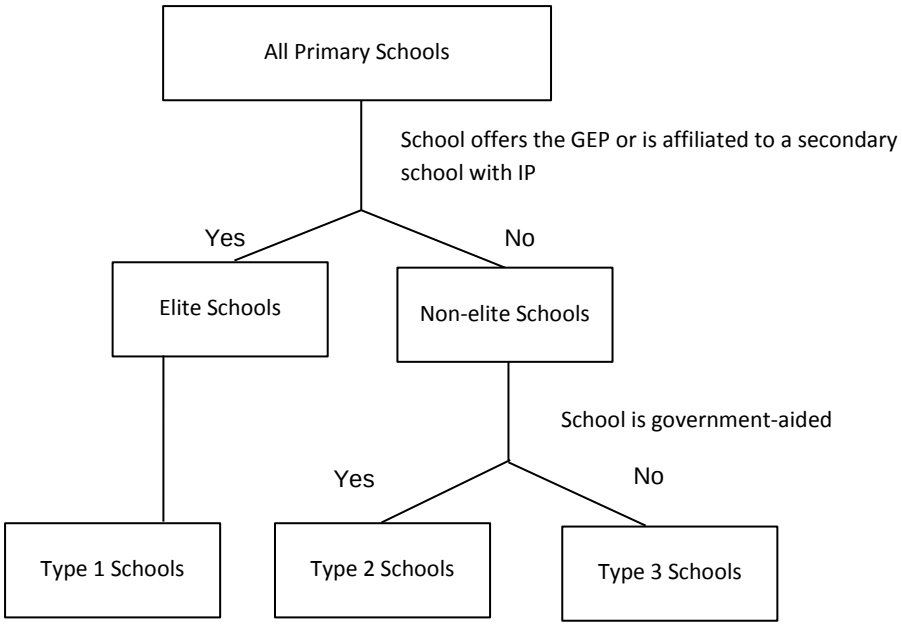
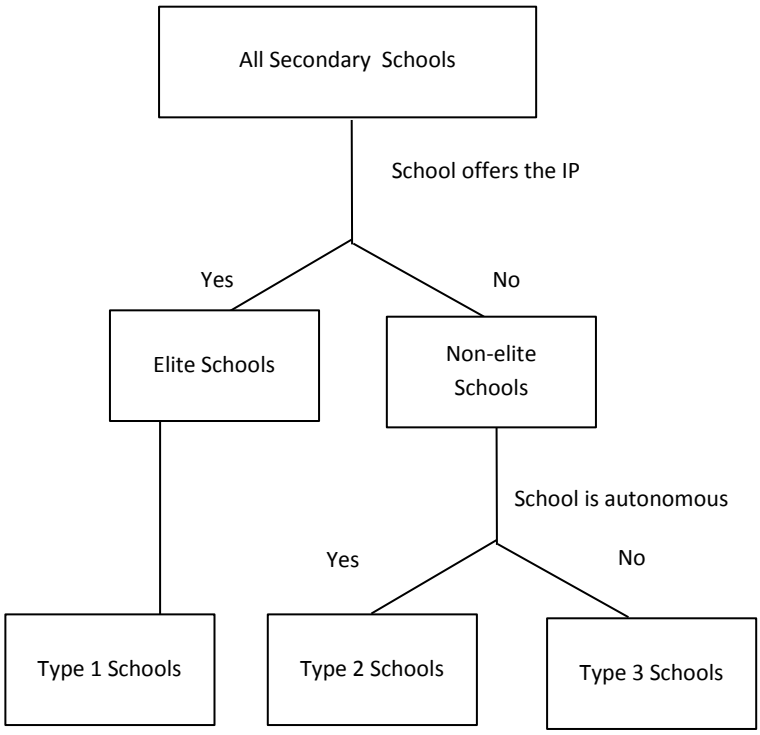


Fig. 6 *Flowchart for the classification of secondary schools*



In our final classification, “elite” schools were re-labelled as “Type 1” schools. Among the non-elite schools, autonomous secondary schools and government-aided primary schools were classified as “Type 2” schools while government schools were classified as “Type 3” schools. The final classification of schools is shown in Table 5 below (refer to Tables B1 and B2 in Appendix B for the schools that fall under each category).

Table 5 *Classification of school type*

	Elite schools	**Non-elite schools**	
	Type 1	**Type 2**	**Type 3**
Primary school	Schools that offer the GEP, or that are affiliated to IP schools	Government-aided schools that are not in Type 1	All government schools
Secondary school	Schools that offer the IP	Autonomous schools that are not in Type 1	All government schools

Student perceptions

Student perception variables included the following: (1) Self-concept, (2) Perceived school differentiation, and (3) Aspirations (refer to Appendix C for the Child’s Questionnaire).

1. Self-concept

Subjective social status

The MacArthur Scale (Adler et al., 2000) was adapted to measure subjective social status (see Figure C1 in Appendix C). Students were shown a picture of the ladder representing all children in their age group, and were told that the top rung of the ladder represented children with the highest ranking. They were then asked to visualise where they would stand on the ladder, ranking themselves from 1 to 10 on each of three indicators: family wealth, housing type, and exam scores.

Academic self-concept

Academic self-concept was measured using the revised Academic Self Concept Questionnaire (ASCQ; Liu, Wang, & Parkins, 2005; Tan & Yates, 2007). The ASCQ has been validated in the Singapore context, and consists of two sub-scales that measure confidence (e.g., “I can follow the lessons easily”) and effort (e.g., “I will do my best to pass all subjects”). As noted by Liu et al. (2005), these two components are likely to be distinct for Singapore students, given that schools in Singapore tend to value hard work as much as academic performance. There were a total of 16 positively worded (e.g., “I can follow the lessons easily”) and negatively worded statements (e.g., “I often daydream in class”). Students rated how true each statement was of themselves on a 4-point scale (from 1 being *not true* to 4 being *very true*). The ratings on all 16 items were added up to give an overall score for academic self-concept.

Three items in the ASCQ required students to compare themselves to their classmates. As we were interested in assessing the influence of school type on academic self-concept, the inclusion of these items was problematic. Rather than compare themselves with individuals from other school types, students might be primed to compare themselves with their classmates for other items as well. Hence, to assess the influence of school type on children's academic self-concept more reliably, these three items were placed at the end of the questionnaire.

2. Perceived school differentiation

Students were asked to rate the social status and academic competence of (1) a hypothetical individual from a "normal" (i.e., non-elite) school, and (2) a hypothetical individual from a "very good" (i.e., elite) school. These category labels were selected based on findings from the focus group discussions. Students rated these hypothetical individuals in the same manner that they rated their own social status and academic competence. When rating the social status of these hypothetical individuals, students were given items that were similar to those measuring subjective social status, but worded in the third person. Likewise, when rating the academic competence of these hypothetical individuals, students were given items that were similar to 13 of the items measuring academic self-concept. [10]

3. Aspirations

Three types of aspirations – educational, school and career aspirations – were assessed. For each type of aspiration, students were asked to rate their *level* of aspiration, followed by their *confidence* in attaining that level of aspiration.

Educational aspirations

For *level* of aspiration, students were asked to rate the highest level of education that they would like to complete (from 1 being *secondary school* to 6 being *postgraduate*). Students then rated their *confidence* in attaining this level of education on a 4-point scale (from 1 being *not sure* to 4 being *very sure*).

School aspirations

Items on school aspirations differed for primary and secondary school students. For *level* of aspiration, primary school students were asked which secondary school they would like to go to. The secondary schools identified by students were classified the same way as how we had coded for school type (see Table B2 in Appendix B for the secondary schools that fall into each school type). Students who did not identify a secondary school selected from the options "not sure" or "doesn't matter".

On the other hand, secondary school students were asked which post-secondary institution they would like to attend. Post-secondary institutions comprised junior colleges, polytechnics and Institutes of Technical Education (ITE). Junior colleges that were linked to Type 1 secondary schools via the Integrated Programme were classified as "Type 1", while all other junior colleges were classified as "Type 2". Polytechnics and ITEs were classified as

[10] For the measure of students' perceived academic competence for these hypothetical individuals, the last three items that involved social comparison to classmates were excluded. This was because students might have difficulty envisioning how the classmates of hypothetical individuals would fare.

"Type 3" (see Table E1 in Appendix E for the list of post-secondary institutions in each category). Students who did not identify a post-secondary institution selected from the options "not sure" or "doesn't matter".

After identifying the school that they aspired to attend, students rated their *confidence* in attending this school on a 4-point scale (from 1 being *not sure* to 4 being *very sure*). However, this part was skipped if the student did not identify a school that he or she aspired to attend.

Career aspirations

For *level* of aspiration, students were asked what type of jobs they would like to have when they grew up. The jobs identified by students were coded separately by two raters as "specialised professions", "non-specialised professions" and "others" (see Table E2 in Appendix E for the coding scheme). The inter-rater agreement was high (97.3%). Students who did not identify a job selected from the options "not sure" or "doesn't matter".

After identifying the job that they aspired to have, students were asked about their *confidence* in having this job, by rating their certainty on a 4-point scale (from 1 being *not sure* to 4 being *very sure*). As with school aspirations, this part was skipped if the student did not identify a job that he or she aspired to have.

Parental perceptions

Parental perception variables included: (1) Parental aspirations; and (2) Parent's rating of the child's academic performance (refer to Appendix D for the Parent Questionnaire). The parent questionnaire was translated to Chinese and Malay. Back-translation was carried out to ensure equivalence of the Chinese and Malay versions to the original English version. The Chinese and Malay versions were administered to 15.6% of the parent respondents.

1. Parental aspirations

Parents were asked about their educational, school and career aspirations for their children. The questions used to measure parental aspirations were similar to the items measuring the educational, school and career aspirations for students. For parents' educational aspirations for their child, *level* was measured by asking parents to rate the highest level of education that they would like their child to complete, and *confidence* was measured by asking parents to rate the certainty that their child would attain this educational level *based on the child's academic ability.* Parents' school and career aspirations were coded in the same way as how students' school and career aspirations were coded. For parents' career aspirations, the jobs that parents identified for their children were coded separately by two raters. The inter-rater agreement was high (96.2%).

2. Parent's rating of child's academic performance

As the child's academic performance is a key variable that could influence both students' and parents' confidence, it is important to statistically control for its effects. Due to practical constraints, we were unable to obtain objective measures of academic performance that were comparable across students from different school types. Hence, parents' ratings of children's academic performance were used as a proxy of academic performance.

Parents were asked how their children usually performed in tests or exams in school, which was measured on a 6-point scale ranging from 1 (*mostly 'A's*) to 6 (*less than mostly 'C's*). Such ratings may not be an accurate indication of the student's true academic performance. However, for outcomes such as parental confidence, parents' subjective interpretation of their child's academic performance may play a more important role than the child's actual academic performance (Alexander, Entwisle, & Bedinger, 1994; Yamamoto & Holloway, 2010).

A summary of all the variables and their measures is shown in Table 6.

Table 6 *Summary of variables*

SES	SCHOOL TYPE	STUDENT PERCEPTIONS			PARENTAL PERCEPTIONS	
Three items: 1. Monthly household income per capita 2. Educational attainment of both parents 3. Housing type	Elite schools ("Type 1" schools) and non-elite schools ("Type 2" and "Type 3" schools)	**Self-concept**	**Perceived school differentiation**	**Aspirations**	**Parental aspirations for their child**	**Parent's rating of child's academic performance**
		• Subjective social status *(adaptation of the MacArthur scale)* • Academic Self-Concept *(revised Academic Self-Concept Questionnaire)*	• Perceived social status *(items similar to those for subjective social status)* • Perceived academic competence *(items similar to those for academic self-concept)* for "very good" (elite) and "normal" (non-elite) school students	• Educational aspirations • School aspirations • Career aspirations Two items: 1. Level of aspiration 2. Confidence in attaining aspiration	• Parents' educational aspirations • Parents' school aspirations • Parents' career aspirations *(Items similar to those for students' aspirations)*	One-item: "What does your child usually score in tests and exams in school?"

Procedure

Ethical approval to conduct the study was obtained from the Singapore Children's Society Ethics Review Committee. Trained interviewers from a local research company conducted the surveys. Students and their parents were interviewed separately in their home, with the parent interviewed first. Only one parent-child dyad from each household participated in the survey. When both parents were available at the point of the survey administration, the interviewer interviewed the parent who reported being more familiar with the child.

Before the start of the survey, the interviewer explained the purpose of the study. Consent from both the parent and the child were obtained prior to their participation. Each participant took no more than 10 minutes to complete the survey. Upon completion of the survey, each parent-child dyad was presented with $10 worth of grocery vouchers as a token of appreciation.

FINDINGS

Preliminary analyses

Factor analyses

Because the measures of SES and subjective social status each consisted of more than one item, principal component analysis (PCA) with varimax rotation was carried out to see if the individual items could be meaningfully categorised into a single measure. Table 7 gives a summary of how the items were combined as a result of this analysis (refer to Table F5 in Appendix F for details).

Table 7 *Combination of items in factor analysis*

Variable	**SES**	**Subjective social status**[11]
Items	1. Mean of both parents' educational attainment 2. Housing type 3. Monthly per capita household income[12]	1. Family wealth 2. Housing 3. Exam Scores
Measure	Factor score	Composite score[13]

Missing values

For students' and parents' school and career aspirations, the items measuring *level* of aspirations were open-ended items. Respondents who had answered "not sure" or "doesn't matter" to these items were allowed to skip the subsequent items that measured *confidence* in attaining the school or career aspiration. Because of the high rate of such responses (ranging from 27.4 % to 66.8%, see Tables F6 to F9 in Appendix F), there were many missing values for the items measuring confidence in attaining school and career aspirations. Hence, statistical analyses were not carried out for these items. With the exception of students' and parents' school and career aspirations, there were few missing values on all other items (less than 5%) and these were excluded listwise in the statistical analyses.

[11] The same three items were also combined to measure perceived social status of individuals from "very good" and "normal" schools.

[12] Parents had indicated the range of their household income. Per capita income was calculated by dividing the upper end of this income range by the number of people in the household.

[13] Rather than factor scores, we used a composite score for subjective social status as all three items were measured on the same scale. The composite score also preserves the original scale of measurement (ranking from 1 to 10) and thus allows for easier interpretation.

Reliability analyses

Reliability analyses were carried out on the Academic Self-Concept Questionnaire (ASCQ). The reliability coefficient for the scale was high (Cronbach's α = .82). Thus, all items in the scale appeared to be consistently measuring academic self-concept.

Comparison of school types

As the classification for school type[14] was different for primary and secondary schools, data for primary and secondary school students were analysed separately. Due to the multiple comparisons that were carried out, the cut-off *p* values were set at a more stringent level of .01 for all statistical analyses. Detailed statistics are reported in Tables F11 to F18 in Appendix F.

Students in different school types were compared on the following: (1) Demographics; (2) SES; (3) Perceived school differentiation; (4) Self-concept; and (5) Aspirations (of both students and their parents). Chi-square analyses were carried out on demographics and students' and parents' aspirations; analyses of variance (ANOVA) were conducted for SES, perceived school differentiation and self-concept.

1. Demographics

The demographic characteristics of respondents within each school type are shown in Tables 6 and 7, for primary and secondary school students respectively. Chi-square analyses were conducted on all demographic variables, except academic stream. This is because academic stream was one of the criteria used to classify schools into the different school types. Hence, it was expected that students from different school types would differ as a function of academic stream.

Students in Type 1 and Type 2 primary schools were more likely to be ethnic Chinese, compared to those in Type 3 primary schools (Table 8). Additionally, compared to those in Type 2 and Type 3 schools, students in Type 1 schools were more likely to:

- Live in private housing
- Have at least one parent who had completed university[15]
- Have a monthly household income of more than $10,000. The figure of $10,000 was used as the cutoff value as recent findings indicate that the middle-class majority in Singapore have a combined monthly household income of between $4000 and $9,999 (Tan, 2014).

[14] See Table 5 in the "Method" section for how schools were classified into different school types.

[15] Tables 8 and 9 report the percentage of students who have at least one parent who completed university, while Tables 3 and 4 in the "Method" section report the educational attainment of the *parent respondent.* As the parent who completed university may not be the parent respondent, figures in Tables 3 and 4, and Tables 8 and 9 differ.

Table 8 *Demographics of primary school students by school type*

Demographic Variable	% of Type 1 (N=100)	% of Type 2 (N=100)	% of Type 3 (N=100)
Gender			
Male	44.0	41.0	58.0
Female	56.0	59.0	42.0
Ethnicity*			
Chinese	91.0	86.0	50.0
Malay	5.0	4.0	25.0
Indian	4.0	8.0	19.0
Others	0	2.0	6.0
Educational level			
P4	31.0	35.0	34.0
P5	27.0	38.0	29.0
P6	42.0	27.0	37.0
Academic stream			
GEP	23.0	0	0
Non-GEP	77.0	100	100
Parent respondent			
Mother	85.0	73.0	75.0
Father	15.0	27.0	25.0
Live in private housing*	39.0	25.0	3.0
At least one parent completed university*	83.0	62.0	42.0
Monthly household income > $10,000*	48.0	29.0	12.0

*$p < .01$

The above trends were also observed for secondary school students (Table 9). Students in Type 1 and Type 2 secondary schools were more likely to be ethnic Chinese. Additionally, compared to those in Type 2 and Type 3 schools, students in Type 1 schools were more likely to:

- Live in private housing
- Have at least one parent who had completed university
- Have a monthly household income of more than $10,000

Table 9 *Demographics of secondary school students by school type*

Demographic Variable	% of Type 1 (N=101)	% of Type 2 (N=100)	% of Type 3 (N=100)
Gender			
Male	46.5	55.0	53.0
Female	53.5	45.0	47.0
Ethnicity*			
Chinese	83.2	75.0	47.0
Malay	5.0	9.0	25.0
Indian	7.9	10.0	24.0
Others	4.0	6.0	4.0
Educational level			
Sec 1	19.8	18.0	29.0
Sec 2	32.7	22.0	26.0
Sec 3	22.8	29.0	20.0
Sec 4	24.8	31.0	25.0
Academic stream			
IP	77.2	0	0
Express	22.8	81.0	53.0
Normal (Academic)	0	11.0	29.0
Normal (Technical)	0	8.0	18.0
Parent respondent			
Mother	85.1	72.0	72.0
Father	14.9	28.0	28.0
Live in private housing*	30.7	16.0	2.0
At least one parent completed university*	66.3	39.0	28.0
Monthly household income > $10,000*	41.7	25.0	7.0

*$p < .01$

2. Socio-economic status (SES)

At both the primary and secondary school levels, students in Type 1 schools had significantly higher SES scores than those in Type 2 and Type 3 schools. Additionally, students in Type 2 schools had significantly higher SES scores than those in Type 3 schools.

Table 10 shows the factor scores of SES for primary and secondary school students. For factor scores, the mean for any sample is zero. A positive value indicates that the score is above the mean, while a negative value indicates that the score falls below the mean. Whereas students in Type 1 schools were more likely to have SES scores that were above the sample mean, students in Type 2 schools tended to have SES scores that were close to the mean, and those in Type 3 schools tended to have scores that fell below the mean.

Table 10 *Mean and standard deviation of socio-economic status for primary and secondary school students*

	Range	Mean SES (*SD*)			Significant differences
		Type 1	Type 2	Type 3	
Primary school	-2.64 to 2.49	.57 (.84)	.09 (.85)	-.66 (.91)	Type 1 > Type 2 Type 1 > Type 3
Secondary school	-2.37 to 2.50	.59 (.86)	.01 (.96)	-.61 (.79)	Type 2 > Type 3

3. Perceived school differentiation

Social status

At both the primary and secondary school levels, students from all school types perceived individuals from “very good” schools to be of significantly higher social status than those from “normal” schools. The magnitude of this perceived discrepancy was similar for all school types (see Figures 7 and 8).

Fig. 7 *Mean social status of individuals from "normal" and "very good" schools as perceived by primary school students*

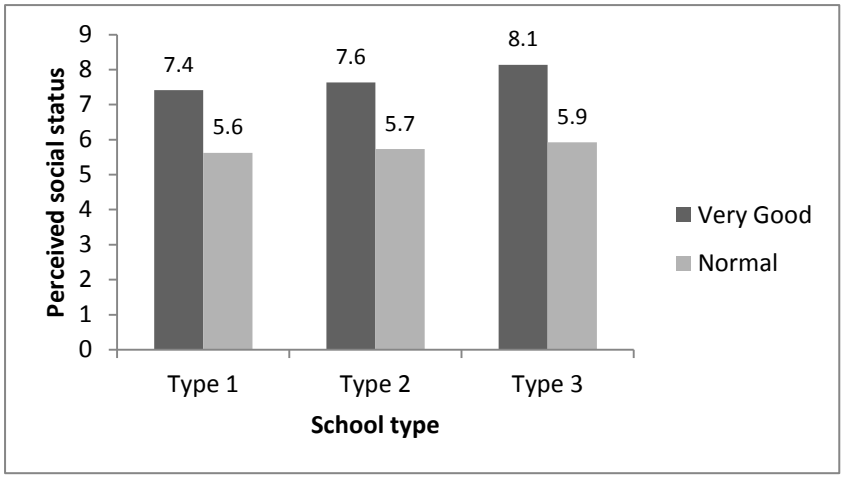
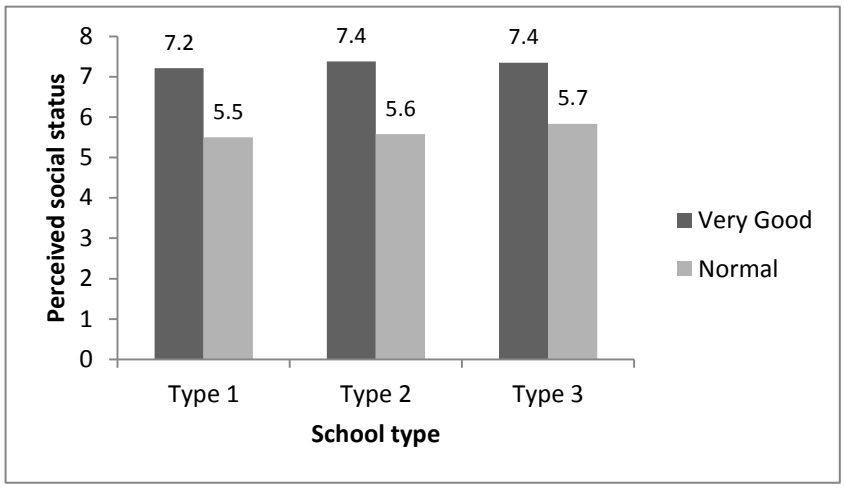


Fig. 8 *Mean social status of individuals from "normal" and "very good" schools as perceived by secondary school students*



Academic competence

At both the primary and secondary school levels, students from all school types perceived individuals from "very good" schools to have higher academic competence than those from "normal" schools. The magnitude of this perceived discrepancy was similar for all school types (see Figures 9 and 10).

Fig. 9 *Mean academic competence of individuals from "normal" and "very good" schools as perceived by primary school students*

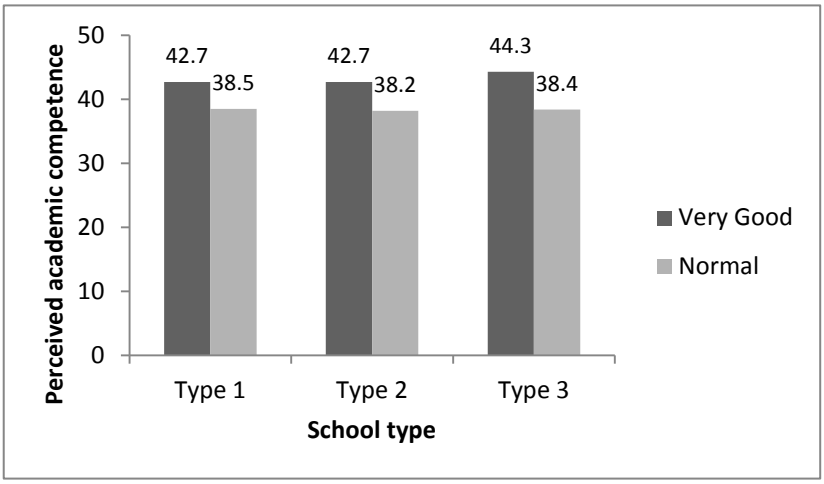
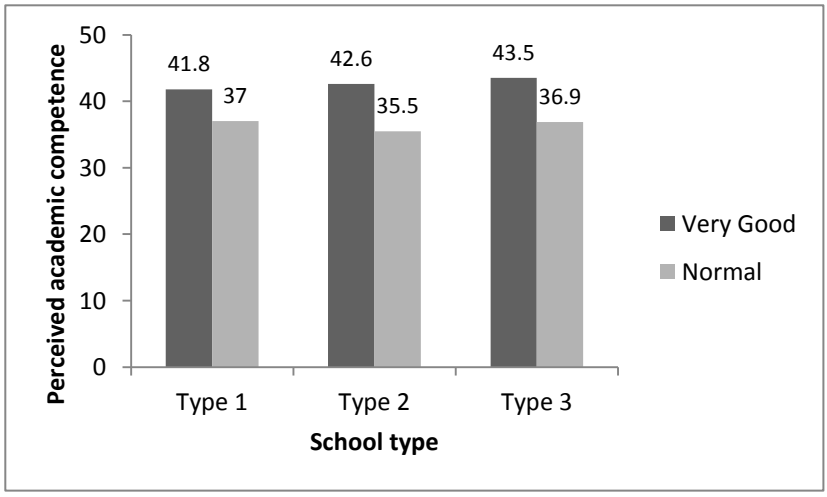


Fig. 10 *Mean academic competence of individuals in "normal" and "very good" schools as perceived by secondary school students*



4. Self-concept

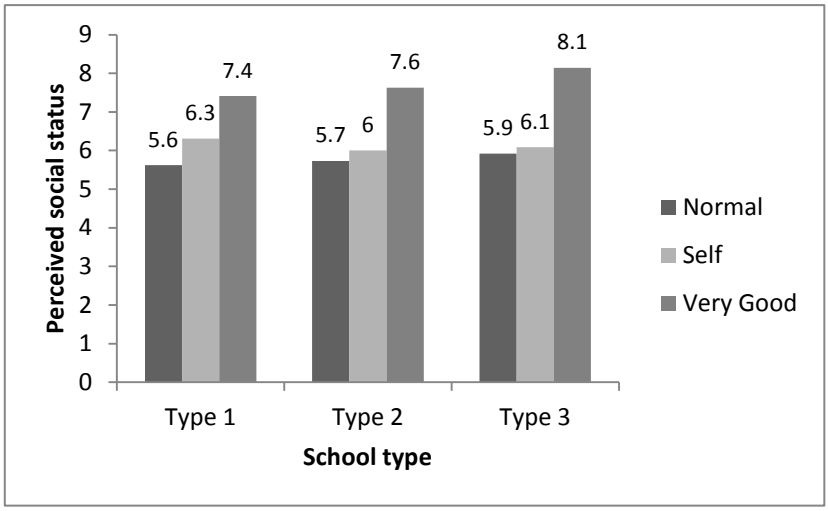
Subjective social status

At the *primary* school level, students from different school types did not differ in subjective social status. When comparing themselves to individuals from "very good" schools, students across all school types perceived themselves to have a lower social status. However, compared with those from Type 2 and Type 3 schools, students from Type 1 schools perceived a smaller discrepancy in social status between themselves and individuals from "very good" schools (see Figure 11).

When comparing themselves to individuals from "normal" schools, only students from Type 1 schools perceived themselves to have a higher social status. Students from Type 2

and Type 3 schools did not perceive a difference in social status between themselves and individuals from “normal” schools.

Fig. 11 *Primary school students’ perceptions of social status of themselves and of individuals from “normal” and “very good” schools*

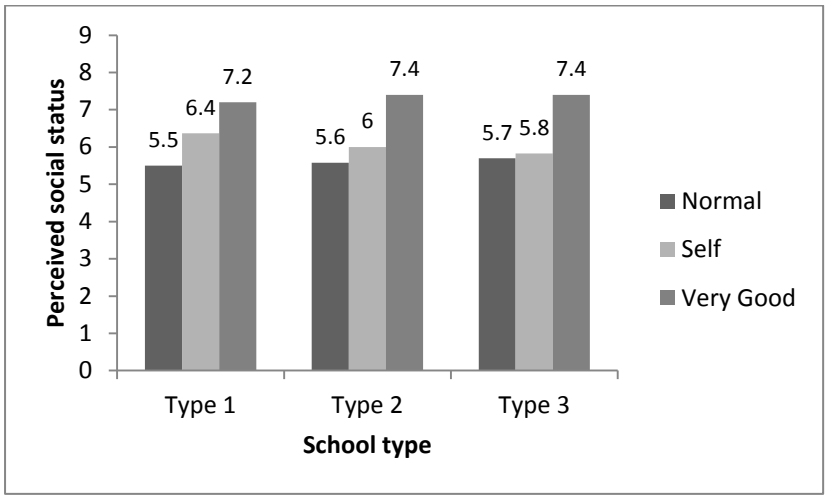


At the *secondary* school level, there were significant differences in subjective social status between students in different school types. Students from Type 1 schools displayed higher levels of subjective social status than students from Type 2 and Type 3 schools. That is, students from Type 1 secondary schools gave themselves higher ratings of social status, compared to how those from Type 2 and Type 3 schools rated themselves.

When comparing themselves to individuals from “very good” schools, students across all school types perceived themselves to have a lower social status. However, compared with those from Type 2 and 3 schools, students from Type 1 schools perceived a smaller discrepancy in social status between themselves and individuals from a “very good” school (see Figure 12).

When comparing themselves to individuals from a “normal” school, only students from Type 1 schools perceived themselves to have a higher social status. Students from Type 2 and Type 3 schools did not perceive a difference in social status between themselves and individuals from a “normal” school.

Fig. 12 *Secondary school students' perceptions of social status for themselves and for individuals from "normal" and "very good" schools*

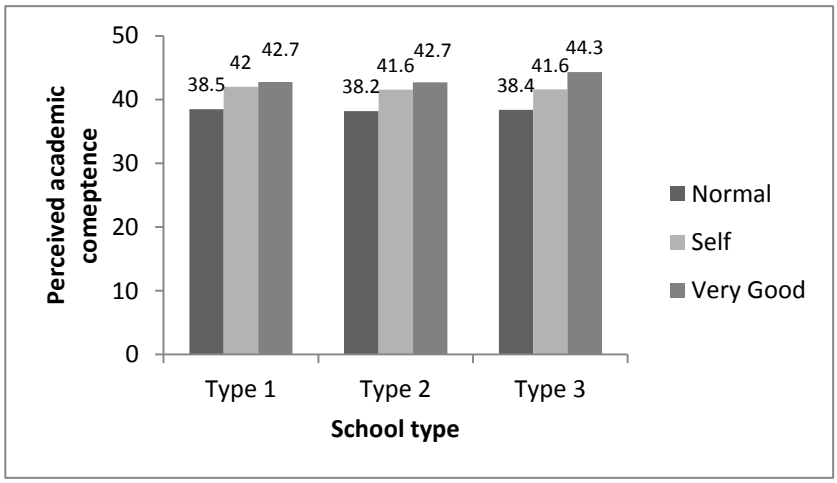


Academic self-concept

At the *primary* school level, there were *no* significant differences in academic self-concept between students across school types. When comparing themselves to individuals from a "normal" school, students across all school types perceived themselves to have higher academic competence (see Figure 13).

When comparing themselves to individuals from a "very good" school, only students from Type 3 schools perceived themselves to have lower academic competence. Students from Type 1 and Type 2 schools did not perceive a difference in academic competence between themselves and individuals from a "very good" school.

Fig. 13 *Primary school students' perceptions of academic competence for themselves and for individuals from "normal" and "very good" schools*

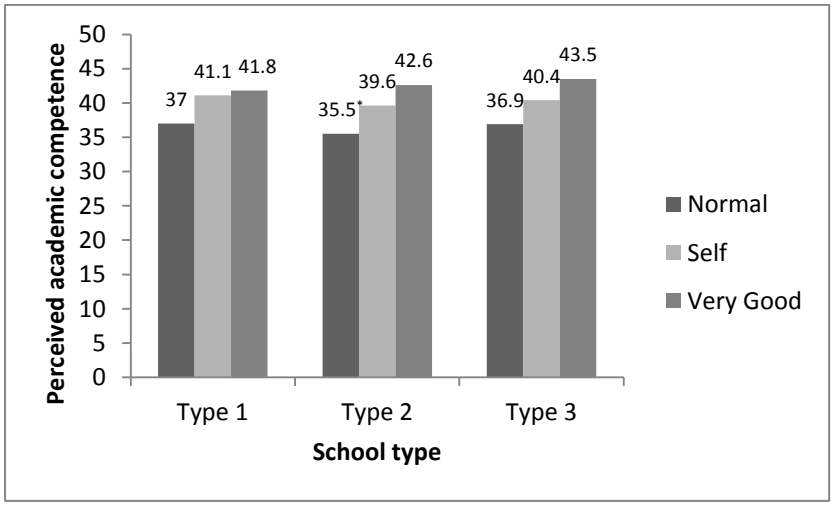


At the *secondary* school level, there was *no* significant difference in academic self-concept between students across school types. When comparing themselves to individuals

from a “normal” school, students across all school types perceived themselves to have higher academic competence (see Figure 14).

When comparing themselves to individuals from a “very good” school, students from Type 2 and Type 3 schools perceived themselves to have lower academic competence. However, students from Type 1 schools did not perceive a difference in academic competence between themselves and individuals from a “very good” school.

Fig. 14 *Secondary school students’ perceptions of academic competence for themselves and for individuals from “normal” and “very good” schools*



5. Aspirations

Chi-square analyses were conducted to examine if students' and parents' aspirations differed by school type. For educational aspirations, we examined both the *level* of aspirations and *confidence* in attaining these aspirations. For school and career aspirations, we examined only the level of aspirations, because the number of responses for confidence in attaining aspirations was not large enough for reliable statistical analyses to be conducted. Overall frequencies for students and their parents' aspirations can be found in Tables F6 to F9 in Appendix F.

Educational aspirations

At the *primary* school level, there was no significant difference in students' or parents' level of educational aspirations across school types. Most students aspired to attain at least a university degree. Similarly, most parents aspired to have their child attain at least a university degree (see Table 11).

Table 11 *Primary school students' and their parents' level of educational aspirations*

School type	Respondent	Aspired educational level (%)			
		Below Polytechnic[16]	Polytechnic	University	Postgraduate
Type 1	**Student**	2.0	4.0	69.0	25.0
	Parent	0	4.0	69.0	27.0
Type 2	**Student**	6.0	14.0	69.0	11.0
	Parent	0	6.0	76.0	18.0
Type 3	**Student**	7.0	12.0	68.0	13.0
	Parent	3.0	13.0	63.0	21.0

As with primary school students, most secondary school students across school types aspired to attain at least a university degree (see Table 12). However, students in Type 1 schools were:

- more likely to aspire to a level of postgraduate education (27.7%), compared with those in Type 3 secondary schools (11%)
- less likely to aspire to a level of polytechnic education (0%), compared with those in Type 3 secondary schools (18%)

Similarly, parents with children in Type 1 *secondary* schools were:

- more likely to want their child to complete a maximum of postgraduate education (30.7%), compared to those with children in Type 3 secondary schools (14.0%)
- less likely to want their child to complete a maximum of polytechnic education (0%), compared to those with children in Type 3 secondary schools (17%)

[16] Educational levels below polytechnic include: secondary school, junior college and Institute of Technical Education (ITE).

Table 12 *Secondary school students' and their parents' level of educational aspirations*

School type	Respondent	Aspired educational level (%)			
		Below Polytechnic	Polytechnic	University	Postgraduate
Type 1	Student	0	0	72.3	27.7
	Parent	0	0	69.3	30.7
Type 2	Student	0	6.0	78.0	16.0
	Parent	1.0	3.0	75.0	21.0
Type 3	Student	3.0	18.0	68.0	11.0
	Parent	1.0	17.0	68.0	14.0

Students' and parents' *confidence* in attaining their educational aspirations were also examined. Students were classified as having "high confidence" (a rating of 3 or 4 on a 4-point scale) or "low confidence" (rating of 1 or 2 on a 4-point scale) in attaining their aspirations. Parents were classified the same way, based on their confidence in their child's ability to attain their aspirations.

At the *primary* school level, there was no significant difference in students' or parents' confidence across school types. Students tended to show high confidence in attaining least a university degree. Similarly, most parents had high confidence in their child's ability to attain at least a university degree (see Table 13).

Table 13 *Primary school students' and their parents' confidence in attaining their educational aspirations*

School type	Respondent	Aspiration = Polytechnic and below (%)		Aspiration = University and above (%)	
		Low confidence	High confidence	Low confidence	High confidence
Type 1	Student	3.0	3.0	33.3	60.6
	Parent	3.0	1.0	19.0	77.0
Type 2	Student	11.0	9.0	31.0	49.0
	Parent	2.0	4.0	28.0	66.0
Type 3	Student	10.0	9.0	29.0	52.0
	Parent	9.0	7.0	26.0	58.0

At the *secondary* school level, students from different school types differed in their confidence in attaining their educational aspirations (see Table 14). Students from Type 1 schools were more likely to have high confidence in attaining at least a university degree (80.2%) compared with those from Type 2 (54%) and Type 3 schools (42%). Parents with children in Type 1 secondary schools were more likely to have high confidence in their child's ability to attain at least a university degree (88.1%), compared to those with children in Type 3 secondary schools (52%).

Table 14 *Secondary school students' and their parents' confidence in attaining their educational aspirations*

School type	Respondent	Aspiration = Polytechnic and below (%)		Aspiration = University and above (%)	
		Low confidence	High confidence	Low confidence	High confidence
Type 1	Student	0	0	19.8	80.2
	Parent	0	0	11.9	88.1
Type 2	Student	2.0	4.0	40.0	54.0
	Parent	1.0	3.0	26.0	70.0
Type 3	Student	9.0	12.0	37.0	42.0
	Parent	8.0	10.0	30.0	52.0

School aspirations

Secondary schools identified by students and parents were classified in the same way as how we had determined school type.[17] At the *primary* school level, students from different school types differed in their level of school aspirations (see Table 15). Students from Type 1 *primary* schools were:

- more likely to aspire to attend Type 1 secondary schools (62%), compared with those from Type 2 (31%) and Type 3 primary schools (20%)
- less likely to aspire to attend Type 3 secondary schools (13%), compared with those from Type 3 primary schools (31%)

Similarly, parents with children in Type 1 *primary* school were:

- more likely to aspire to have their child attend Type 1 secondary schools (65%), compared to those with children in Type 2 (25%) and Type 3 primary schools (22%)
- less likely to aspire to have their child attend Type 3 secondary schools (9%), compared to those with children in Type 3 primary schools (31%)
- less likely to report that the secondary school did not matter (6%), compared to those with children in Type 3 primary schools (18%)

Table 15 *Primary school students' and their parents' level of school aspirations*

School type	Respondent	Aspired secondary school (%)				
		Type 1	Type 2	Type 3	Not sure	Doesn't matter
Type 1	Student	62.0	7.0	13.0	13.0	5.0
	Parent	65.0	8.0	9.0	12.0	6.0
Type 2	Student	31.0	19.0	19.0	27.0	4.0
	Parent	25.0	24.0	18.0	24.0	9.0
Type 3	Student	20.0	16.0	31.0	31.0	2.0
	Parent	22.0	11.0	31.0	18.0	18.0

[17] See Table B2 in Appendix B for the secondary schools that fall into each type.

Post-secondary institutions[18] identified by students and parents were classified into different types. Junior colleges that were linked to Type 1 secondary schools were classified as "Type 1" post-secondary institutions,[19] while all other junior colleges were classified as "Type 2". Polytechnics and ITEs were classified as "Type 3".

At the *secondary* school level, students from different school types differed in their level of school aspirations (see Table 16). Students in Type 1 *secondary* schools were:

- more likely to aspire to attend Type 1 post-secondary institutions (72.3%), compared with those in Type 2 (18%) and Type 3 secondary schools (1.0%)
- less likely to aspire to attend Type 2 post-secondary institutions (6.9%), compared with those in Type 2 secondary schools (21%)
- less likely to aspire to attend Type 3 post-secondary institutions (3%) compared with those in Type 3 secondary schools (40%)

Similarly, parents with children in Type 1 *secondary* schools were:

- more likely to aspire to have their child attend Type 1 post-secondary institutions (64.4%), compared to those with children in Type 2 (14%) and Type 3 secondary schools (3%)
- less likely to aspire to have their child attend Type 3 post-secondary institutions (2%), compared to those with children in Type 3 secondary schools (23%)
- less likely to report that the post-secondary institution did not matter (16.8%), compared to those with children in Type 2 (45%) Type 3 secondary schools (49%)

Table 16 *Secondary school students' and their parents' level of school aspirations*

School type	Respondent	Aspired post-secondary institution (%)				
		Type 1	Type 2	Type 3	Not sure	Doesn't matter
Type 1	Student	72.3	6.9	3.0	9.9	7.9
	Parent	64.4	5.9	2.0	10.9	16.8
Type 2	Student	18.0	21.0	24.0	29.0	8.0
	Parent	14.0	12.0	9.0	20.0	45.0
Type 3	Student	1.0	14.0	40.0	32.0	13.0
	Parent	3.0	14.0	23.0	11.0	49.0

Career aspirations

For career aspirations, jobs that required at least a university degree or specialised training were classified as "specialised professions" whereas jobs that required at least a diploma certificate were classified as "non-specialised" professions. All other jobs were classified as "others" (see Table E2 in Appendix E for jobs that fall within each category).

At both the primary and secondary school levels, there was no significant difference in level of career aspirations between students in different school types. Similarly, parents' level of career aspirations did not differ for their children in different school types (see Tables 17 and 18). Across school types, students tended to either identify specialised professions,

[18] See Table E1 in Appendix E for the post-secondary institutions that fall into each type.
[19] Type 1 secondary schools are linked to different junior colleges via the Integrated Programme.

or report being unsure of what job they wanted to hold in the future. On the other hand, parents tended to either identify specialised professions for their children, or indicate that it did not matter what job their children held in the future (see Table F10 in Appendix F for the jobs that are most frequently cited in students' and their parents' career aspirations).

Table 17 *Primary school students' and their parents' level of career aspirations*

School type	Respondent	Aspired career (%)				
		Specialised professions	Non-specialised professions	Others	Not sure	Doesn't matter
Type 1	Student	41.0	8.0	15.0	34.0	2.0
	Parent	24.0	2.0	7.0	26.0	41.0
Type 2	Student	28.0	9.0	25.0	33.0	5.0
	Parent	20.0	7.0	6.0	24.0	43.0
Type 3	Student	35.0	9.0	34.0	22.0	0
	Parent	19.0	13.0	10.0	23.0	35.0

Table 18 *Secondary school students' and their parents' level of career aspirations*

School type	Respondent	Aspired career (%)				
		Specialised professions	Non-specialised professions	Others	Not sure	Doesn't matter
Type 1	Student	36.6	4.0	7.9	48.5	3.0
	Parent	29.7	4.0	4.0	15.8	46.5
Type 2	Student	26.0	8.0	13.0	50.0	3.0
	Parent	19.0	3.0	8.0	12.0	58.0
Type 3	Student	37.0	10.0	19.0	31.0	3.0
	Parent	20.0	4.0	8.0	12.0	56.0

Table 19 summarises the findings from the comparisons that were made across school types.

Table 19 *Summary of results from the comparison of different school types*

Variable	Significant differences between school types	
	Primary	**Secondary**
Demographics	*Ethnicity (proportion of Chinese)* • Type 1 > Type 3 • Type 2 > Type 3 *Parent's educational attainment, Housing type & Household income* • Type 1 > Type 2 • Type 1 > Type 3	
SES	Type 1 > Type 2 > Type 3	
Perceived school differentiation (social status)	No difference	
Perceived school differentiation (academic competence)	No difference	
Subjective social status	No difference	• Type 1 > Type 2 • Type 1 > Type 3
Academic self-concept	No difference	
Level of educational aspirations	No difference	*Postgraduate degree* • Type 1 > Type 3
Confidence in attaining educational aspirations	No difference	*High confidence in attaining at least a university degree* • Type 1 > Type 2 • Type 1 > Type 3
Level of school aspirations	*Type 1 secondary school* • Type 1 > Type 2 • Type 1 > Type 3	*Type 1 post-secondary institution* • Type 1 > Type 2 • Type 1 > Type 3
Level of career aspirations	No difference	
Parents' level of educational aspirations	No difference	*Postgraduate degree* • Type 1 > Type 3

Parents' confidence in their child's ability to attain their educational aspirations	No difference	*High confidence in child's ability to attain at least a university degree* • Type 1 > Type 3
Parents' level of school aspirations	*Type 1 secondary school* • Type 1 > Type 2 • Type 1 > Type 3	*Type 1 post-secondary institution* • Type 1 > Type 2 • Type 1 > Type 3
Parents' level of career aspirations	No difference	

Differences within school types

Considerable heterogeneity exists within the same school type in terms of school affiliation and academic stream, which could also influence self-concept and aspirations. Hence, comparisons were made between affiliated and non-affiliated primary schools, and between academic streams within the same school type. Detailed statistics are reported in Table F19 in Appendix F.

School affiliation

Some Type 1 primary schools are affiliated to Type 1 secondary schools. This school affiliation could contribute to the student's desire to attend Type 1 secondary schools. However, chi–square analyses revealed that there was no difference in the level of school aspirations between students in schools with affiliation or without affiliation (see Table 20). Compared to students in schools with affiliation to Type 1 secondary schools, students in schools without affiliation were equally likely to aspire to attend Type 1 secondary schools.

Table 20 *Type 1 primary school students' level of school aspirations*

Type 1 primary schools	Aspired secondary school (%)				
	Type 1	Type 2	Type 3	Not sure	Doesn't matter
Schools with affiliation (n=66)	64.7	5.9	17.6	8.8	2.9
Schools without affiliation (n=34)	60.6	7.6	10.6	15.2	6.1

Academic stream

Type 1 secondary schools offer only the Integrated Programme (IP) and Express streams, while Type 2 and Type 3 schools offer only the Express and Normal streams. Thus, comparisons between the IP and Express streams were made only for Type 1 schools, while comparisons between the Express and Normal[20] streams were made for Type 2 and Type 3 schools.

Within Type 1 secondary schools, the results revealed that there was a significant difference in the level of school aspirations between students from the IP and Express streams (see Table 21). Students in the IP stream were:

- more likely to aspire to attend Type 1 post-secondary institutions (79.5%), compared with students in the Express stream (47.8%)
- less likely to aspire to attend Type 2 post-secondary institutions (2.6%), compared with students in the Express stream (21.7%)

[20] Due to the small number of students in the Normal (Technical) streams (n=8 in Type 2 and n= 18 in Type 3), both Normal (Academic) and Normal (Technical) streams were combined for Type 2 and Type 3 schools.

Table 21 *Type 1 secondary school students' level of school aspirations*

Academic stream	Aspired post-secondary institution (%)				
	Type 1	**Type 2**	**Type 3**	**Not sure**	**Doesn't matter**
IP stream (n=78)	79.5	2.6	2.6	7.7	7.7
Express stream (n=23)	47.8	21.7	4.3	17.4	8.7

Within Type 2 secondary schools, there was a significant difference in the level of school aspirations between the Express and Normal streams (see Table 22). Students in the Express stream were:

- more likely to aspire to attend Type 2 post-secondary institutions (25.9%), compared with those in the Normal Academic and Technical streams (0%)
- less likely to aspire to attend Type 3 post-secondary institutions (16.0%), compared with those in the Normal Academic and Technical streams (57.9%)

Table 22 *Type 2 secondary school students' level of school aspirations*

Academic stream	Aspired post-secondary institution (%)				
	Type 1	**Type 2**	**Type 3**	**Not sure**	**Doesn't matter**
Express stream (n=81)	21.0	25.9	16.0	29.6	7.4
Normal stream (n=19)	5.3	0	57.9	26.3	10.5

As with the findings for Type 2 secondary schools, there was a significant difference in the level of school aspirations between the Express and Normal streams in Type 3 secondary schools (see Table 23). Students in the Express stream were:

- more likely to aspire to attend Type 2 post-secondary institutions (22.6%), compared with those in the Normal Academic and Technical streams (4.2%)
- less likely to aspire to attend Type 3 post-secondary institutions (26.4%), compared with those in the Normal Academic and Technical streams (55.3%)

Table 23 *Type 3 secondary school students' level of school aspirations*

Academic stream	Aspired post-secondary institution (%)				
	Type 1	**Type 2**	**Type 3**	**Not sure**	**Doesn't matter**
Express stream (n=53)	1.9	22.6	26.4	37.7	11.3
Normal stream (n=47)	0	4.2	55.3	25.5	14.9

Apart from differences in the level of school aspirations for secondary school students, no difference was observed between academic streams within school type on all other variables. Within Type 1 primary schools, there was also no difference between

students in the Gifted Education Programme (GEP) and those not in the GEP on all variables.

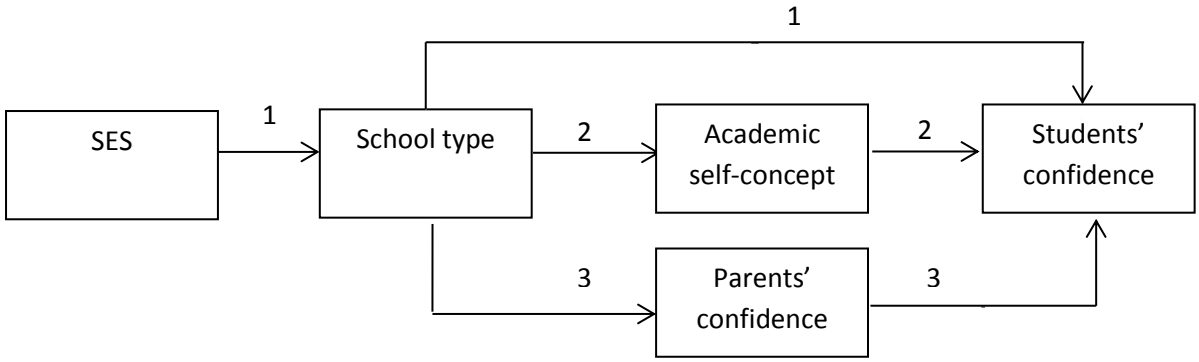
Mediation pathways

The comparison of educational aspirations across school types revealed that at the secondary school level, there was a significant difference in students' confidence between Type 1 schools and the other school types (Type 2 and Type 3). For this reason, schools were reclassified as elite schools (Type 1 schools) and non-elite schools (Type 2 and Type 3 schools) in the mediation analyses.

Additionally, because most students in our sample aspired to attain at least a university degree (85% for primary school and 91% for secondary school), we reclassified students' confidence as high confidence (i.e., high certainty in attaining aspirations of at least a university degree) and low confidence. Similarly, we dichotomised parents' confidence as high confidence (i.e., high certainty in their child's ability to attain aspirations of at least a university degree) versus low confidence.

It was hypothesised that school type would mediate the link between SES and students' confidence in attaining their aspirations (see Path 1 in Figure 15). In addition, both academic self-concept and parental confidence were expected to mediate the link between school type and students' confidence (see Paths 2 and 3 respectively in Figure 15).

Fig. 15 *Hypothesised pathways through which different variables affect students' confidence*



Binomial logistic regression analysis was conducted with students' confidence as the outcome variable (see Tables F20 and F21 in Appendix F for the detailed results of the regression analysis). We assessed the influence of school type on students' confidence by statistically controlling for the effects of gender, ethnicity, SES and parent's rating of their child's academic performance. These variables were entered in the first block, and school type was entered in the second block. Both academic self-concept and parents' confidence were entered in the third block (see Table 24). All mediation analyses were conducted based on Baron and Kenny's (1986) four steps.

Table 24 *Regression of independent variables on students' confidence*

Independent variables			Outcome
Block 1	**Block 2**	**Block 3**	
• Gender • Ethnicity • Parent's rating of the child's academic performance • SES	• School type	• Academic self-concept • Parents' confidence	Student's confidence

School type as a mediator

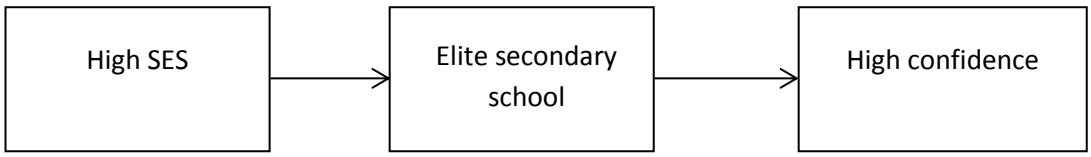
It was hypothesised that school type would mediate the link between SES and students' confidence in attaining their educational aspirations (see Path 1 in Figure 15). At the *primary* school level, the findings showed that school type did *not* predict students' confidence after controlling for SES and other covariates (i.e., all variables in Block 1 of the regression model). Thus, school type did not mediate the link between SES and confidence in attaining educational aspirations for primary school students.

At the *secondary* school level, the findings showed that:

- SES predicted school type after controlling for gender, ethnicity and parent's rating of the child's academic performance
- SES predicted students' confidence after controlling for the same three covariates
- School type predicted students' confidence after controlling for the same three covariates as well as SES (i.e., all variables in Block 1 of the regression model). Students in elite schools were **2.57 times more likely** than those in non-elite schools to have high confidence in attaining at least a university degree

In addition, results of the Sobel test showed that school type partially mediated the relationship between SES and confidence in attaining educational aspirations for secondary school students (see Figure F1 in Appendix F for detailed results). That is, school type partly accounted for the link between SES and students' confidence. With increased SES, students were more likely to be in a Type 1 (or elite) secondary school. This in turn predicted an increased likelihood of having high confidence in attaining at least a university degree (see Figure 16).

Fig. 16 *School type as a mediator of the link between SES and secondary school students' confidence*



Academic self-concept as a mediator

It was hypothesised that academic self-concept would mediate the link between school type and students' confidence (see Path 2 in Figure 15). At both the primary and secondary school levels, school type did *not* predict academic self-concept after controlling for gender, ethnicity, SES and parent's rating of the child's academic performance. Thus, academic self-concept did not mediate the link between school type and confidence for both primary school and secondary students.

Parental aspirations as a mediator

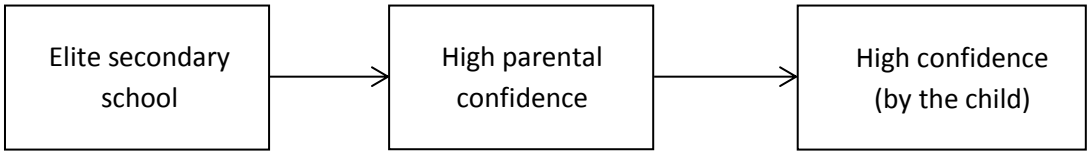
It was hypothesised that parents' confidence in their child's ability to attain their aspirations would mediate the link between school type and students' confidence (see Path 3 in Figure 15). At the *primary* school level, school type did *not* predict parents' confidence after controlling for gender, ethnicity, SES and parent's rating of the child's academic performance. Thus, parents' confidence did not mediate the link between school type and primary school students' confidence.

At the *secondary* school level, the findings showed that:

- School type predicted parents' confidence after controlling for gender, ethnicity, SES and parent's rating of the child's academic performance
- School type predicted students' confidence after controlling for the same four covariates (i.e., all variables in Block 1 of the regression model)
- Parents' confidence predicted students' confidence after controlling for the same four covariates as well as school type (i.e., all variable in Blocks 1 and 2 of the regression model). Compared with those whose parents had low confidence, students whose parents had high confidence were **2.63 times more likely** to have high confidence in attaining at least a university degree

In addition, results of the Sobel test showed that parents' confidence partially mediated the relationship between SES and secondary school students' confidence (see Figure F2 in Appendix F for detailed results). That is, parents' confidence partly accounted for the link between school type and students' confidence. For students in elite secondary schools, parents were more likely to have high confidence in their child's ability of attaining at least a university degree. This in turn increased the likelihood that students had high confidence in attaining at least a university degree (see Figure 17).

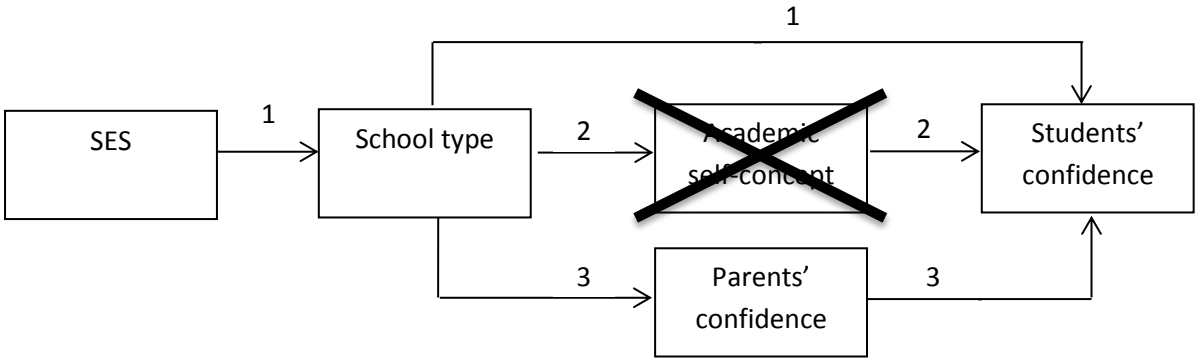
Fig. 17 *Parents' confidence as a mediator of the link between school type and secondary school students' confidence*



In sum, the findings suggest that for secondary school students, school type mediates the relationship between SES and students' confidence (see Path 1 in Figure 18), whereas parents' confidence mediates the relationship between school type and students'

confidence (see Path 3 in Figure 18). Hence, placement in an elite secondary school appears to increase the likelihood that students have high confidence through its effects on parents' confidence. However, placement in an elite secondary school did *not* contribute to an increase students' academic self-concept (see Path 2 in Figure 18).

Fig. 18 *Model of the pathways through which different variables affect secondary school students' confidence*



DISCUSSION

Key findings

Hypothesis 1: Students from elite schools would have higher levels of SES than those from non-elite schools

At both the primary and secondary school levels, students in elite schools (i.e., Type 1 schools) had higher levels of SES than those in non-elite schools (i.e., Type 2 and Type 3 schools). Hypothesis 1 is supported. Interestingly, we also observed that within non-elite schools, students in Type 2 schools had higher levels of SES than those in Type 3 schools.

Hypothesis 2: Students from elite and non-elite schools would show similar levels of perceived school differentiation

At both the primary and secondary school levels, students across all school types rated individuals in elite ("very good") schools as having higher social status and academic competence than individuals in non-elite ("normal") schools. In addition, the magnitude of this perceived discrepancy was similar across school types. Hypothesis 2 is supported.

Hypothesis 3: Students from elite schools would show higher levels of subjective social status and academic self-concept than those in non-elite schools

Hypothesis 3 is only partly supported, because the results differed for primary and secondary students. At the primary school level, there were no significant differences in students' subjective social status or academic self-concept between school types. At the secondary school level, students from elite (i.e., Type 1) schools displayed higher levels of subjective social status than those in non-elite (i.e., Type 2 and Type 3) schools. However, there was no difference in their academic self-concept.

In addition, compared to those from Type 2 and Type 3 secondary schools, students from Type 1 secondary schools were more likely to identify with individuals in elite schools. That is, they were more likely to see themselves as being of similar social status as individuals in elite schools. On the other hand, compared with those from Type 1 schools, students from Type 2 and Type 3 schools tended to see themselves as being of similar social status as individuals in non-elite schools.

Hypothesis 4: Compared to those from non-elite schools, students from elite schools would be more likely to exhibit high confidence in attaining at least a university degree

Hypothesis 4 is only partly supported, because the findings differed for primary and secondary school students. Across school types, most students aspired to attain at least a university degree, and at the primary school level, students from elite and non-elite schools did not differ in their confidence in attaining this aspiration. At the secondary school level, however, students from elite schools were more likely to have high confidence in attaining at least a university degree, compared with those from non-elite schools.

Hypothesis 5: School type would mediate the effects of SES on students' confidence

Hypothesis 5 is only partly supported, because the results differed for primary and secondary school students. School type partially mediated the effects of SES on students' confidence, but only at the secondary school level. With increasing SES, students were more likely to be enrolled in elite secondary schools. This in turn increased their likelihood of having high confidence in attaining at least a university degree.

Hypothesis 6: Both academic self-concept and parental confidence would mediate the effects of school type on students' confidence

Hypothesis 6 is only partly supported because parental confidence, but not academic self-concept, partially mediated the effects of school type on students' confidence. Again, this was only at the secondary school level. Parents with children in elite secondary schools were more likely to have high confidence in their child's ability, which in turn increased the likelihood that the students had high confidence in attaining at least a university degree.

Additional findings

Educational aspirations

At the primary school level, students from different school types did not differ in their level of educational aspiration. However, at the secondary school level, students from Type 1 schools were more likely to aspire to a postgraduate degree, compared with students in Type 3 schools. In spite of this difference, it is noteworthy that most primary and secondary school students (85% and 91% respectively) aspired to attain at least a university degree. The same pattern of findings was observed for parents' aspirations for their children.

School aspirations

Compared with those in Type 3 primary schools, students in Type 1 primary schools were more likely to aspire to attend Type 1 secondary schools, whereas those from Type 3 primary schools were more likely to aspire to attend Type 3 secondary schools. Secondary school students showed a similar pattern – those from Type 1 secondary schools were more likely to aspire to attend Type 1 post-secondary institutions, while those from Type 3 secondary schools were more likely to aspire to attend Type 3 post-secondary institutions. Again, the same pattern of findings was observed for parents' aspirations for their children.

Because some Type 1 primary schools are affiliated to Type 1 secondary schools, it is possible that school affiliation might contribute to the preference for Type 1 secondary schools. However, a comparison between Type 1 primary schools with affiliation and those without suggests that school affiliation did not make a difference to students' school aspirations. Type 1 primary school students tended to prefer Type 1 secondary schools, regardless of whether or not their primary school was affiliated to a Type 1 secondary school.

For secondary school students, further analyses showed that the difference in level of school aspirations may be linked to academic stream. Within Type 1 secondary schools, students in the Integrated Programme (IP) were more likely than those in the Express stream to aspire to attend Type 1 post-secondary institutions. This may not be surprising, given that IP students have the opportunity to proceed to top junior colleges – or Type 1

post-secondary institutions – without taking the 'O' level examinations. As the IP is offered only in Type 1 secondary schools, students in these schools may indicate that they aspire to attend Type 1 post-secondary institutions because they are more likely to be in the IP.

Career aspirations

For both primary and secondary school students, there was no school type difference in career aspirations. Across school types, students tended to either aspire toward specialised professions, or report that they were unsure of what job they wanted to hold in the future. On the other hand, parents tended to either aspire toward specialised professions for their children, or report that it did not matter what job their children held in the future.

Implications

1. Segregation of schools along social class lines

Students in Type 1 schools had the highest SES, followed by those in Type 2, and then Type 3 schools. At the primary school level, this finding may not be surprising given that primary school admission is partly based on proximity of the child's home to the school. In neighbourhoods where popular primary schools (i.e., Type 1 and Type 2 primary schools) are located, private housing is found in relatively higher proportions, and property prices are higher compared to those in other neighbourhoods (Sumit & Foo, 2015). Hence, wealthier parents may stand a better chance of enrolling their children in Type 1 and Type 2 primary schools because they are more likely to purchase properties near these schools.

When it comes to secondary schools, however, admission is largely based on merit – performance in the PSLE. Why, then, would the SES of secondary school students also differ as a function of school type? One possibility is that children from affluent families have a greater access to resources that could potentially give them a competitive edge in the PSLE. For instance, well-to-do families tend to spend more on private tuition (Teng, 2015a). This could translate into better performance in the PSLE and thus, help children gain admission to Type 1 secondary schools.

Besides having greater access to resources like private tuition, children from affluent families are also more likely to be enrolled in Type 1 primary schools. Some Type 1 primary schools are affiliated to Type 1 secondary schools, and this allows students to qualify for a Type 1 secondary school with a lower PSLE score. Additionally, our findings showed that compared with those from other school types, students from Type 1 primary schools were more likely to want to attend Type 1 secondary schools, regardless of whether or not their schools were affiliated to Type 1 secondary schools. This higher aspiration may translate into greater motivation for students to work hard in order to achieve their goal.

Taken together, children from higher-SES backgrounds are more likely to attend Type 1 primary schools, and placement in such schools may in turn increase their likelihood of attending Type 1 secondary schools. This could mean that the overrepresentation of high-SES students in elite schools is perpetuated from the primary to the secondary school level. Consequently, SES differences could become more entrenched.

The present findings suggest that it would be beneficial, from a meritocratic perspective, to increase socio-economic diversity in elite schools. First, the current primary

school admission system could be modified such that children from different socio-economic backgrounds have more equal opportunities of entering elite primary schools. Second, a possible way to increase socio-economic diversity in elite secondary schools would be to look into school affiliation, or the practice of giving some students preferential admission to secondary schools based on the primary school that they came from. Third, more can be done to encourage children from less affluent backgrounds to apply to elite secondary schools. For instance, some elite secondary schools reach out to needy, academically-inclined children in primary schools, offering scholarships to encourage these children to enrol in the school (Teng, 2015c). Increasing public awareness of such scholarships would help alleviate the concerns of lower-income families, who may feel deterred by the school fees of some elite secondary schools.

2. Social distance between students from elite schools and the rest of society

At both the primary and secondary school levels, all students perceived individuals from elite ("very good") schools to have higher social status and academic competence than those from non-elite ("normal") schools, regardless of the type of schools they themselves attended. These findings suggest that individuals in elite schools are associated with high social status and academic competence, and such stereotypes are common even at the primary school level. That is, like secondary school students, primary school students also took school type into account when forming a judgment about an individual's social status and academic competence.

These stereotypes did not translate into actual differences in academic self-concept between students from elite and non-elite schools. However, at the secondary school level, students from elite secondary schools displayed higher levels of subjective social status than their peers from non-elite secondary schools. Furthermore, students from elite secondary schools also perceived themselves to have higher social status than individuals from non-elite schools. Taken together, students from elite secondary schools may be more likely to see themselves as belonging to a group that is associated with high social status.

Past news reports have raised the concern of elitism in top schools (e.g., Kwek, 2007; Teng, 2015b), suggesting that students in such schools may see themselves as a class apart from others and as such, fail to empathise with the rest of society. Indeed, past research has shown that in general, individuals who rank themselves higher on the social ladder display less empathy towards others (Kraus, Cote, & Keltner, 2010). Given that students in elite secondary schools may see themselves as having higher social status than their peers, they may experience difficulties connecting with people whom they perceive to be of lower social status. Moreover, this difficulty in social interaction may be compounded by a lack of opportunities to mix with others from a different school type or social background – students in elite schools may form exclusive circles among themselves, which could eventually contribute to a social distance between themselves and the rest of society (Kwek, 2007).

Taken together, these findings suggest the need to reduce perceived differences in social status between elite and non-elite secondary school students. First, it may be important to address stereotypes that associate elite school students with a higher social status. For instance, attempts have been made to reduce perceived school differentiation (e.g., by labelling all schools as "good" schools). Second, it would be beneficial to foster an

expectation for students in elite secondary schools to mix with others who are of different backgrounds. This can be done by providing more opportunities for students from different school types to work together, and interact in cooperative ways that do not focus on interschool competition. Doing so would help elite secondary school students to discover ways in which they are similar to people of different backgrounds, and thus, facilitate their ability to interact with other people in society (Garcia, Hallahan, & Rosenthal, 2007).

Why might students in elite and non-elite schools exhibit differences in subjective social status, but not in academic self-concept? One possibility could be the use of different reference groups for social comparison. In our measure of subjective social status, students were asked to compare themselves to all other individuals in Singapore. However, in our measure of academic self-concept (the ASCQ), students were not explicitly asked to compare themselves to any particular reference group[21]. Thus, it is possible that students compared themselves with their peers in the same school when responding to items related to academic self-concept. This could make differences in academic self-concept between elite and secondary school students less apparent.

Moreover, the ASCQ contains questions not only related to students' confidence in their academic performance, but also the amount of effort they have put in towards their schoolwork. Given the emphasis on academic achievement in Singapore, students regardless of school type may have thought of themselves as having worked hard. This may also have contributed to the lack of differences in students' academic self-concept across school types.

3. Contribution to socio-economic inequalities

Compared with those in non-elite secondary schools, students in elite secondary schools were not only more likely to aspire to a higher level of education (i.e., a postgraduate degree), but were also more likely to exhibit high confidence in attaining at least a university degree. Although the majority of students across school types aspired to attain at least a university degree, having such goals alone does not translate into high educational attainment, particularly when these goals are perceived to be out-of-reach (Oyserman, Bybee, & Terry, 2006).

Research has shown that low levels of certainty in attaining one's educational goals may result in shorter-term outcomes such as academic underperformance (Oyserman, Bybee, & Terry, 2006), test anxiety (Boxer, Goldstein, DeLorenzo, Savoy, & Mercado, 2011), and depressive symptoms (Kiang et al., 2015) which in turn affect future academic and occupational trajectories. In contrast, students who are optimistic about attaining high educational goals are more likely to engage in behaviours that are aligned with these goals, such as studying (Oyserman, Bybee, & Terry, 2006). Hence, by influencing behavioural choices and motivational levels, students' confidence in achieving one's educational goals can predict future educational attainment (Beal & Crockett, 2010). Although all these studies were carried out in other countries, there is little reason to suppose the implications would not also hold in Singapore.

[21] This was with the exception of three items that involved comparison with classmates, which, as explained earlier, had been deliberately placed at the end of the measure to avoid priming students to use their classmates as a reference group.

To the extent that a university degree brings about better economic prospects, school type differences in students' confidence could mean unequal opportunities for social mobility. Moreover, school type partially mediated the link between SES and students' confidence. The higher their SES, the more likely it was for students to be enrolled in elite secondary schools, which in turn increased the likelihood that students had high confidence of attaining at least a university degree. Given that students' confidence could translate into actual educational attainment, school stratification may contribute to socio-economic inequalities.

Yet, the findings also suggest that school type per se may not be the only determinant of secondary school students' confidence. We found that parental confidence also contributed to the link between school type and students' confidence. That is, elite secondary school students were more likely to have high confidence in attaining least a university degree partly because their parents also tended to have high confidence in their ability. Conversely, parents were more likely to have low confidence when their child was in a non-elite secondary school.

Taken together, it may be important to "level up" the confidence of students in non-elite secondary schools. It has been shown that both parents' and teachers' expectations can have effects on students' confidence (Benner & Mistry, 2007). This suggests that when parents have low expectations of their child, high teacher expectations could help boost the confidence levels of students. Thus, it may be crucial for teachers in non-elite secondary schools to gain more confidence in their students' potential. This could help offset the effects of low parental confidence on students. In addition, these teachers could also do more to help students recognise if they have untapped potential, and provide them with more encouragement to attain their goals (Eccles, 2004).

In addition, past research has shown that by teaching students how to link their goals with concrete strategies, school-based interventions can help to increase "possible selves", or perceived certainty in attaining one's goals (Oyserman, Bybee, & Terry, 2006). One such intervention is the "Scaffold Programme", which was recently piloted in four secondary schools in Singapore for students at risk of dropping out of school (Tai, 2014). This programme teaches students the need to develop clear goals, envision possible obstacles to their goals and articulate specific strategies to overcome them. Such an intervention could be tailored to meet the needs of more students in non-elite secondary schools. For instance, schools could do more to identify students who lack the confidence to pursue their academic goals, and match these students with mentors who can advise them on how they can reach their goals. This would help increase the confidence and motivation of students in non-elite secondary schools.

In sum, school type may influence students' confidence in attaining at least a university education because of its effect on parental confidence. However, school type did not appear to influence academic self-concept. In other words, students in elite schools appear more likely to have high confidence *not* because they perceive themselves to have higher academic competence, but because their parents have high confidence in their potential. This was observed even when parents' ratings of the child's academic performance were taken into account, suggesting that the difference in parental confidence

for elite and non-elite school students was not simply due to parents' perceptions of their children's academic performance. Instead, certain aspects of school type may shape parental confidence. For instance, parents may associate elite secondary schools with better opportunities, such as increased chances of securing admission to publicly funded universities (Davie, 2012). This could in turn result in higher parental confidence that the child would attain a university degree.

Table 25 shows a summary of the key findings and implications.

Table 25 *Summary of key findings and implications*

	KEY FINDING	IMPLICATION	WHAT CAN BE DONE
1.	At both the primary and secondary school levels, students in elite school had higher levels of SES than those in non-elite schools.	Schools may be segregated along social class lines	<u>Increase socio-economic diversity in elite primary and secondary schools</u> • Modify the primary school admission system to increase socio-economic diversity in schools • Relook at the practice of granting preferential admission to elite secondary schools based on school affiliation • Encourage children from less privileged backgrounds to apply to elite secondary schools
2.	Students in elite secondary schools showed higher levels of subjective social status than those in non-elite secondary schools	A social distance may exist between students from elite secondary schools and the rest of society	<u>Mitigate differences in perceived social status between elite and non-elite secondary school students</u> • Address stereotypes that associate elite school students with high social status • Foster an expectation and provide opportunities for elite school students to mix with other individuals who are of different backgrounds

KEY FINDING		IMPLICATION	WHAT CAN BE DONE
3.	Students in elite secondary schools are more likely than those in non-elite secondary schools to have high confidence in attaining at least a university degree	Schools may contribute to socio-economic inequalities	<u>"Level up" the confidence of non-elite school students</u> • Implement school-based interventions in non-elite secondary schools • Use teaching practices to boost the confidence levels of students in non-elite schools

Limitations and directions for further investigation

Parents of elite secondary school students were more likely to feel confident that their child could attain at least a university degree. However, it is unclear why this trend was observed for secondary school students, and not primary school students. We speculate that parents may associate placement in elite secondary schools with better opportunities to develop the child's academic potential. Yet, it is also possible that the child's PSLE score had influenced parental confidence. Although we had controlled for parents' ratings of academic performance, such ratings may not reflect parental perceptions of the child's prior academic achievements, such as PSLE performance. Hence, it is possible that because students in elite secondary schools had performed well in the PSLE, parents gained more confidence in their child's potential to attain a university degree.

In addition, we are unable to establish whether high parental confidence increased the likelihood that students would attend elite secondary schools, or whether the child's placement in an elite secondary school led to high parental confidence. Further research is needed to find out if parents indeed perceive differences in opportunities between elite and non-elite secondary schools, and how such perceptions may influence parents' confidence in their child's ability to attain at least a university degree. In view of this, we conducted a follow-up qualitative study.

FOLLOW-UP STUDY

Background

Findings from the quantitative study showed that regardless of their child's school type, most parents wanted their child to attain at least a university degree. However, parents' confidence that their child could attain this level of education varied with the child's school type. When their child was enrolled in an elite secondary school, parents were more likely to feel confident that their child could attain at least a university degree.

In this study, we examine parental aspirations from a qualitative perspective to gain a better understanding of parents' thoughts and feelings about school stratification, and the influence of school type on parents' confidence. Such qualitative data would complement the quantitative findings by providing a rich description of the factors that shape parents' confidence in their child's potential.

This qualitative study explores the following research questions:

1. How do parents feel about secondary school stratification?
2. How might school type influence parents' confidence?
3. How might the influence of school type on parents' confidence change from the primary to secondary school level?

Participants

Participants were 20 parents (all mothers) who had participated in the quantitative study. These parents had indicated interest in participating in a possible follow-up study and provided the interviewers with their contact information. Because the follow-up study took place one year after the quantitative study was conducted, the child of interest (i.e., the child who had participated together with the parent in the quantitative study) would have progressed to the next educational level. To keep the child's school type and educational level (primary or secondary) consistent with the quantitative study, we excluded parents whose children had transited from Primary 6 to Secondary 1 at the time the qualitative study was conducted.

The remaining parents were contacted via email and text messaging. Twenty parents agreed to participate in the qualitative study. The majority of these parents had attained at least a university degree (60%). The coding used to classify the school type of the child of interest was consistent with the coding used in the quantitative study (elite or non-elite) and there was an equal representation of parents with children in elite and non-elite schools. The breakdown of this sample is shown in Table 26 below (See Appendix G for the table of respondents).

Table 26 *Breakdown of sample*

Educational level of the participant's child	School type of the participant's child		Total
	Elite	Non-elite	
Primary 5 to 6	5	5	10
Secondary 2 to 4	5	5	10
Total	10	10	**20**

Procedure

Semi-structured interviews were carried out with each participant individually, and the interviews lasted for 30 minutes on average. The researcher asked participants questions about their perceptions of secondary school stratification, their involvement in their children's education, and their aspirations for their children (see Appendix H for the interview guide).

Before the start of the interview, the purpose of the study was explained. All participants were assured that their identities would be kept confidential. Consent was obtained from the participant to be interviewed, and to have the interview audio recorded. All interviews were conducted in English except for two, which were conducted in Mandarin. The interviews took place at the participants' homes, or at a public place, such as a café, on the request of the participant. At the end of the interview, each participant received a $10 grocery voucher as a token of appreciation.

Qualitative data

All 20 interviews were audio recorded and transcribed. The thematic analysis procedure described by Braun & Clark (2006) was used to identify consistent patterns or themes in the interview transcripts. Initial codes were first generated to capture the data in the transcripts. Next, codes were combined into broader themes. The transcripts were coded independently by two raters, and all discrepancies were discussed to agreement. Three themes emerged from the analysis: (1) Divide between elite and non-elite schools; (2) Changes from primary to secondary school; and (3) Pursuit of a university degree.

Divide between elite and non-elite schools

This theme consists of three sections: (1) Definition of elite schools; (2) Preference for elite schools; and (3) Benefits of elite schools.

1. Definition of elite schools

Parents perceived a clear difference between elite and non-elite secondary schools. However, they did not always use the terms "elite school" and "non-elite school", but used different labels interchangeably. For instance, Parent #8 labelled elite secondary schools as "branded" schools, and non-elite secondary schools as "government" schools.

> I think with Singapore schools, you only look at two [types]. It's either the branded school, or the government school.
>
> *- Parent #8 (child in a non-elite secondary school)*

On the other hand, Parent #6 used the labels "better school" and "neighbourhood school".

> The ones that are the better schools… also mean a higher standard. The feel is just very different, [between] a neighbourhood school and a…so-called better school.
>
> *- Parent #6 (child in an elite primary school)*

To ensure that the meanings attached to these labels were consistent with our definition of elite and non-elite secondary schools, we asked parents what constituted elite schools. While Parent #6 mentioned a "higher standard", other parents cited good academic track record, good reputation, and a high PSLE cut-off point as indicators of elite schools (see Table 27).

Table 27 *Indicators of elite schools (and number of participants who made reference to each category)*[22]

Indicators of elite schools	School type of the participant's child				
	Primary		Secondary		
	Elite (n=5)	Non-elite (n=5)	Elite (n=5)	Non-elite (n=5)	Overall (n=20)
Good academic track record	2	1	4	3	10
Good reputation	0	2	3	2	7
High PSLE cut-off point	1	2	1	1	5

[22] The coding allowed for multiple responses from each participant. Hence, the number of total responses in the table might not add up to 20.

Good academic track record

The majority of parents used academic track record as an indicator of elite secondary schools. Parent #10 believed that her child's school – an elite secondary school – was a "very good school" because it had a long history of producing good academic results.

> [My child's school] has been around for more than a hundred years…even during my time, it was a very good school…it has a good track record… [the students'] results are always very good.
>
> *- Parent #10 (child in an elite secondary school)*

Good reputation

Some parents also used school reputation as an indicator of elite secondary schools. For instance, Parent #1 determined which schools were "good schools" based on what she had heard from others.

> Good schools have labels…these schools are good because they are already good, told by everybody in Singapore.
>
> *- Parent #1 (child in a non-elite primary school)*

High PSLE cut-off point

Parents also mentioned that elite secondary schools were the ones with a higher PSLE cut-off point (the minimum PSLE aggregate score to qualify for admission to the secondary school). Although school rankings have been abolished, some websites compile rankings of secondary schools based on their PSLE cut-off points. Parent #5 refers to one of these websites to determine which schools are the "good schools".

> To me, the good school refers to the academics and the ranking…I am a member in the "kiasuparents" website, so from there, I know the list of secondary schools and their ranking.
>
> *- Parent #5 (child in a non-elite primary school)*

2. Preference for elite schools

When how they would select a secondary school for their child, 8 out of 10 parents with primary school children displayed a preference for elite secondary schools. For instance, Parent #1 shared that she wanted her child to go to "the good schools",

> You know, all along you hear people saying, "Oh, must hit for the good schools". Indirectly, as a parent, I got sucked into it…so if you ask me, "Do you want your child to go to all these top schools?" It will be denial if I say, "no".
>
> *- Parent #1 (child in a non-elite primary school)*

Likewise, Parent #9 expressed a desire for her child to enter a "top" school,

> It will be a very proud moment for me if [my child] gets into the top schools. You know, every parent will say that…as a parent, if my child has to go to a neighbourhood school, I have to make the best out of it. I must be very positive, because it is going to be very hard to swallow.
>
> *- Parent #9 (child in an elite primary school)*

Parent #20 shared that she had enrolled her child in an elite primary school because of its affiliation to an elite secondary school. The affiliation meant that her child could enter an elite secondary school with a lower PSLE cut-off point.

> If you were to score below 240 [for PSLE], you have no choice but to go to all the neighbourhood schools. I put my child in [her current primary school] because she would have the opportunity to get into [an elite secondary school] at a lower qualifying score – 220, which makes a lot of difference. So it's mainly because of the affiliation.
>
> *- Parent #20 (child in an elite primary school)*

3. Benefits of elite schools

Parents with primary school children explained that they preferred elite secondary schools for their children because of the benefits that could be derived from such schools. The benefits cited by parents included academic support, a more conducive school environment for studying, a wider range of programmes and facilities, and better future prospects (see Table 28).

Table 28 *Benefits of elite schools (and number of participants who made reference to each category)*

Benefits of elite schools	**School type of the participant's child**				
	Primary		**Secondary**		
	Elite (n=5)	**Non-elite** (n=5)	**Elite** (n=5)	**Non-elite** (n=5)	**Overall** (n=20)
Academic support	**3**	**2**	**5**	**3**	**13**
Results	*1*	*1*	*4*	*1*	7
Teachers	*2*	*0*	*1*	*1*	4
Learning	*0*	*1*	*1*	*1*	3
Good school environment	**4**	**3**	**3**	**2**	**12**
Peer motivation	*2*	*2*	*1*	*1*	6
Peer behaviours	*2*	*0*	*2*	*2*	6
Socio-economic composition	*2*	*1*	*1*	*1*	5
More school programmes/facilities	**3**	**1**	**2**	**0**	**6**
Better future prospects	**3**	**1**	**1**	**1**	**6**

Academic support

Parents made the most references to academic support when citing the benefits of elite secondary schools. Such responses included: (a) results – references to academic performance; (b) teachers – references to the quality of teaching; and (c) learning – references to the academic curriculum, or the development of academic skillsets.

(a) Results

Most parents (seven out of 20) felt that elite schools would help their child achieve good academic results because of the schools' established track record. For instance, Parent #5 preferred that her child go to an elite secondary school as she believed that "good schools" would help develop her child's academic potential,

> Because they are already good schools, they already know how to achieve good results. So they can guide [my child] there, to achieve the steps…if she can go to a good school, I believe the base [will be] there. So to build her up, it will be easier.
>
> *- Parent #5 (child in a non-elite primary school)*

At the same time, most parents whose children were in elite secondary schools (four out of five) expressed confidence that their child's school was preparing its students well for national exams. For instance,

> I believe [my child's school] is training [its] students to do well in the national exam…the way the school teaches them, in terms of academics is actually very, very good…so the school helps prepare them.
>
> *- Parent #14 (child in an elite secondary school)*

(b) Teachers

Academic track record was also tied to the quality of teaching in the school. Some felt that elite schools had better teachers (four out of 20), though this was less frequently mentioned than academic results.

> I believe [that]…[for] those schools with good track record, the teacher will be able to guide them…those better schools, their teachers are better.
>
> *- Parent #18 (child in a non-elite secondary school)*

(c) Learning

A few parents (three out of 20) felt that studying in elite schools would result in other gains in the academic domain, such as the development of certain skillsets. For instance, Parent #3 commented,

> [In an elite school], the system here teaches you how to learn. How to have discipline…to organise your knowledge, to study in a certain way. Whether it is the right way to learn.

Although these skills were not directly linked to better academic performance, they were regarded as useful in the long run. Parent #3 also expressed satisfaction that her child's school – an elite secondary school – was helping to develop these skills in her child.

> The skills that [my child] is learning now, in school…those are skills that you will keep with you, no matter what you do…to be trained, you need to go through the whole process. And that's what I'm happy with, you know, because I see [my child] now, going through that stage.
>
> *- Parent #3 (child in an elite secondary school)*

Good school environment

The next most frequently cited category was the school environment, or the positive peer influence in elite schools. This included references to (a) peer motivation (e.g., developing similarly high aspirations as one's peers), (b) peer behaviours (e.g., engagement in achievement-related behaviours such as studying) and (c) the socio-economic composition of the student body.

(a) Peer motivation

Six out of 20 parents believed that in an elite school, the child would be with highly motivated peers and as a result, develop similarly high aspirations. Parent #2 commented,

> In [elite schools], if you mix with good company…with your friends all aiming towards […] you have that kind of motivation, that kind of aim-high kind of people. So you also feel motivated. I guess maybe you will like, I want to join my friends, that kind of thing.
>
> *- Parent #2 (child in a non-elite primary school)*

In a similar vein, Parent #15 noted that because her child was with the "right clique" in school – an elite secondary school – her child was also motivated to achieve better results.

> The school kind of motivates her to do well, because of the right clique that she is with…when she sees the senior who is doing well, she is kind of motivated and will tell herself "I want to achieve this level as well". So she will set her own target.
>
> *- Parent #15 (child in an elite secondary school)*

(b) Peer behaviours

Besides the motivation from high-achieving peers, six out of 20 parents also felt that in elite schools, children would not be exposed to deviant behaviours such as bullying. For instance, Parent #20 said,

> When I go to [an elite school], I can see that it's a very safe environment - you won't see funny things, or bullies and all that... other schools, they may have, um, gangs and all that. And the whole place is very rowdy. You will only learn how to scold four-letter words.
>
> *- Parent #20 (child in an elite primary school)*

(c) Socio-economic composition

Whereas Parent #20 believed that elite schools provide a "safe environment", Parent #10 felt that her child's school – an elite secondary school - provided a "happy environment" because most of the students in the school were from well-to-do families.

> I think if you go to a good school, the environment is like…fewer domestic problems, fewer broken families… the students in [my child's school], they are all very well-loved by their families…many of them have never stepped into an HDB flat before…so it's like, all very privileged people. It is a very happy environment.
>
> *- Parent #10 (child in an elite secondary school)*

Such an environment may be regarded as conducive for behaviours that are aligned with academic achievement. Parent # 14 explained that her child's school – also an elite secondary school – provided a "good environment" for her child because the students there were "well-disciplined". This kind of peer influence encouraged her child to study.

> [My child]'s in a school with a good environment...so at least I know her friends are... quite well-disciplined in school...when my child sees [her] friends study, she would also want to study.
>
> *- Parent #14 (child in an elite secondary school)*

More school programmes/facilities

Six out of 20 parents felt that elite schools offered a greater range of facilities and exposed students to more non-academic programmes, which may not be available in other schools. Parent #19 stated,

> The bigger reputable schools, they do have a lot of facilities…and experiences for the kids, which they may not be able to get elsewhere. It could be things like the overseas attachments.
>
> *- Parent #19 (child in an elite primary school)*

For Parent #10, this exposure to non-academic programmes was observed in her child's school – an elite secondary school,

> What I like is that there are a lot of very interesting programmes for the [students] that they cannot do [elsewhere]…even like overseas trips and all that, they have a lot of that.

Parent #10 also noted that such opportunities had cultivated certain skills for her child, such as public speaking,

> [My child] has learnt a lot. Now she is very confident. In fact, she dares to speak up in public…because the school gives them a lot of opportunities to speak up and things like that.
>
> *- Parent #10 (child in an elite secondary school)*

Better future prospects

Six out of 20 parents also felt that elite secondary schools offered better future prospects. This could be in terms of career development or social networking. For instance, Parent #16 believed that studying in elite (or "top") secondary schools would gear students towards professions in law and medicine,

> Let's say you want to study law or medicine in the future…of course if you study in a top school, you have higher chances of doing so.
>
> *- Parent #16 (child in a non-elite secondary school)*

Parent #7 remarked that because children from elite schools were more likely to become "somebody, say a doctor or a lawyer", the child would have better opportunities for networking in the future,

> In elite schools, because of this chance to network, the rich will become richer, because they have all these resources to turn to. So it will be good if [my child] can get into [an elite school]…because probably some of the kids will turn out to be somebody, say a doctor or a lawyer, and then next time if you need any help with legal cases…you can turn to the lawyer friend. You will still have lawyers coming out of neighbourhood schools, but the chances are much [lower].
>
> *- Parent #7 (child in an elite primary school)*

Changes from primary to secondary school

This theme comprises two sections: (1) Importance of secondary school; and (2) Parents' roles in education.

1. Importance of secondary school

Most parents felt that the choice of school mattered more at the secondary than at the primary school level. This was because of the increased importance of peer influence during secondary school, as well as the influence of secondary school on the child's academic pathways (see Table 29).

Table 29 *Importance of secondary school (and number of participants who made reference to each category)*

Importance of secondary school	School type of the participant's child				
	Primary		Secondary		
	Elite (n=5)	Non-elite (n=5)	Elite (n=5)	Non-elite (n=5)	Overall (n=20)
Peer influence	3	3	2	2	10
Future pathways	2	0	2	3	7

Peer influence

Peer influence was commonly cited as a reason for why secondary school was more important than primary school. Parents reasoned that during the secondary school years, the child would be going through adolescence and so would be more susceptible to peer influence,

> Actually secondary school is more important [than primary school] because at this teenager stage, they are influenced more easily…at this age, around 13 or 14, they will tend to change, in terms of behaviour and all that. [It depends on] whether they mix with the right people.
>
> *- Parent #18 (child in a non-elite secondary school)*

Parents also pointed out that in secondary school, parents would have less influence over their children even as peers become more influential. Thus, the school environment becomes more crucial. For example,

> [In] primary school, parents have a lot of say; [in] secondary school, not so. The peers become more important…you worry about…the friends that they mix with.
>
> *- Parent #11 (child in a non-elite primary school)*

Another parent explained,

> Secondary school is actually more important [than primary school]…because once [my child] steps into Sec One, she has her own mind. She wants to make her own decisions. So of course, a good environment in school – meaning the friends that she mix[es] with – would be very, very important.
>
> *- Parent #14 (child in an elite secondary school)*

Future pathways

For some parents, school type mattered more at the secondary school level than at the primary school level because the secondary school would determine the child's pathways for tertiary education. This is because the child takes a high-stakes examination at the end of secondary school – the 'O' levels. Parent #6 pointed out,

> When you are in secondary school, you have to take a very major exam – the 'O' levels. That will ultimately determine which path they choose, what route they take, you know. It's either they do a JC (junior college), or Poly (polytechnic), or they might even end up going to ITE (Institute of Technical Education)…it is en route to their future.
>
> *- Parent #6 (child in an elite primary school)*

Parent #16 elaborated on this further by explaining that those who graduate from JC typically stand a better chance of entering public universities. Hence, the secondary school would determine if the child can eventually gain admission into public universities, which are preferable to private or overseas universities.

> Secondary school is more important because [the] 'O' levels… affect whether they go to Poly or JC. If you go to Poly…[your] chances of going to local university are lower. Then you will have to go to private or overseas university, which will be expensive. So if your goal is to go to university, you have to go to JC.

Parent #16 added that one generally needs to perform better in the 'O' levels to secure a place in JC. As such, she exhorts her child – who is in a non-elite secondary school – to study hard.

> I tell [my child], "If you want to get into JC, you must work. You must put in effort to get results".
>
> *- Parent #16 (child in a non-elite secondary school)*

2. Parents' roles in education

Although all parents said that they were involved in some way in their children's education, the type of involvement differed between parents with primary school children and those with secondary school children. Whereas parents with primary school children were

more likely to provide direct academic support (e.g., supervision of the child's homework), those with secondary school children tended to provide indirect academic support (e.g., monitoring if the child needed tuition). The reasons cited for this provision of indirect rather than direct support included the child's need for autonomy, and the difficulty of the child's homework (see Table 30).

Table 30 *Parental roles in education (and number of participants who made reference to each category)*

Parents' roles in education	**School type of the participant's child**					
	Primary			**Secondary**		
	Elite (n=5)	**Non-elite** (n=5)	**Overall** (n=10)	**Elite** (n=5)	**Non-elite** (n=5)	**Overall** (n=10)
Direct support	**5**	**5**	**10**	**1**	**2**	**3**
Indirect support	**3**	**4**	**7**	**5**	**5**	**10**
Child's need for autonomy	*1*	*0*	*1*	*3*	*5*	*8*
Difficulty of homework	*0*	*0*	*0*	*2*	*0*	*2*

Direct support

Behaviours that involved direct academic support (i.e., coaching the child or helping the child with homework) featured prominently for parents with primary school children. For example, Parent #7 cited the need to coach her child as well as supervise his homework,

> When [my child] is home, I typically have to be coaching him all the time. I just sit with him…and make sure he does his homework.
>
> *- Parent #7 (child in an elite primary school)*

Parent #11 explained that she had to help her child with homework because her child was still young,

> Basically, [when] I go back [home], I do check her work. I ask her whether she has finished their work. If she has questions, I will help her… I still have to supervise her work. I cannot leave her on her own; she is too young.
>
> *- Parent #11 (child in a non-elite primary school)*

In contrast, few parents with secondary school children reported such behaviours. One of these was Parent #8, who remarked that coaching the child herself was necessary in order to compensate for the quality of her child's school – a non-elite secondary school.

> I try to coach him whenever I can...I feel even if he is in a government school, because I am a stay-at-home mum, I can still coach him. Whatever [that] he cannot get from school, I can supplement it at home.

However, Parent #8 added that there was a limit to how much she could help her child with academics, given that he was already a teenager,

> If he doesn't want to study, I can push him a little, but I can't twist him. He is already a teenager; they know how to rebel if they want to.
>
> *- Parent #8 (child in a non-elite secondary school)*

Indirect support

Like Parent #8, most parents with secondary school children faced limitations in their attempts to coach the child or help the child with homework. Such limitations were attributed to the child's need for autonomy and the increased difficulty of homework.

(a) Child's need for autonomy

Most parents with secondary school children demonstrated an awareness of their children's need for autonomy. They commented that they could not exercise as much control over their children now, as compared to when their children were in primary school. For example,

> I am not exactly that involved in [my child's] studies anymore…unlike in primary school, when I ask her to do assessment papers, she will do [them]...there is no way I can nag at her anymore, because they have their own mind, compared to when they were in primary school.
>
> *- Parent #14 (child in an elite secondary school)*

(b) Difficulty of homework

Parents with secondary school children also shared how they could no longer help their child with homework because of the increased level of difficulty of homework in secondary school. Parent #14 remarked,

> When [my child] was much younger, of course I will go through her homework and all that…but after P6, I cannot keep up already…the level [of her homework] is too high already. It is very difficult.
>
> *- Parent #10 (child in an elite secondary school)*

As a result of these constraints, parents of secondary school children tended to provide indirect academic support to their children, such as monitoring their child's need for private tuition, or providing their child with resources such as guidebooks. For example, Parent #13 commented,

> Every time when [my child] comes back [from school], I will ask [her]…how are you coping with your studies, do you want any help... I told her that at any point in time, if

you find difficulty coping [with studies], just let us know and we will find a tutor for you.

- Parent #13 (child in a non-elite secondary school)

Parent #16 felt that because she was unable to help her child with her studies, she could only arrange for tuition should her child experience difficulties with school work,

[My child] has to rely on herself. If she can't then I will send her for tuition. So I can't help her, I can only send her for tuition.

- Parent #16 (child in a non-elite secondary school)

Similarly, Parent #15 remarked that she "can't help much" when her child has difficulties with homework. However, she would try to address them by referring her child to the school teacher, or providing resources like guidebooks.

Because I can't help much [with my child's homework], I will suggest that she go and talk to her teacher…or assist her to get some guidebooks, or whatever assessment books that she needs.

- Parent #15 (child in an elite secondary school)

Pursuit of a university degree

This theme is divided into two sections: (1) Value of a university degree; and (2) Confidence in the child's future

1. Value of a university degree

All parents (except two) said that they wanted their children to attain at least a university degree. The reasons they cited for this were: (1) Good job prospects (references to securing employment or a standard of living); (2) Staying competitive in the job market (references to the commonality of degree holders); and (3) Personal achievement (references to the child's need to achieve his or her full potential).

Table 31 *Value of a university degree (and number of participants who made reference to each category)*

Value of a university degree	**School type of the participant's child**				
	Primary		**Secondary**		
	Elite (n=5)	**Non-elite** (n=5)	**Elite** (n=5)	**Non-elite** (n=5)	**Overall** (n=20)
Good job prospects	2	4	4	3	13
Staying competitive in the job market	2	3	0	1	6
Personal achievement	2	2	0	0	4

Good job prospects

The majority of parents shared that a university degree would lead to better job prospects, whether it was in terms of seeking employment or securing an adequate wage. For example,

> In Singapore, if you don't have a degree, it's actually quite difficult to look for a job. Even if you can [find] a job, the pay [will be] low, compared to a graduate. It's a lot of difference, you know, between a graduate and a non-graduate salary.
>
> *- Parent #14 (child in an elite secondary school)*

As a result, some parents felt that a university degree would ensure that one had a comfortable standard of living, or – in Parent #13's words - "a decent life". Parent #13 also commented that a university degree was important because of its role as a social leveller,

> If you want to survive in this country, and to have a future, you must have a degree. You must have a paper qualification…[it] is the only way out for the less fortunate people. There is no other way out. If you really want to have a decent life and everything, I think education is the only way to success.
>
> *- Parent #13 (child in a non-elite secondary school)*

Staying competitive in the job market

The next most frequent reference made was the need to have a degree in order to compete in the job market. For instance,

> In Singapore now, everywhere is also university graduate [sic]. So my minimum is…she must have at least a degree. Or else it [would be] very hard to compete with other people outside.
>
> *- Parent #5 (child in a non-elite primary school)*

As a result of this competition, some parents felt that a university degree would be the minimum requirement to "survive" in Singapore, which Parent #6 defines as "getting a decent job" or "a decent pay".

> I think that [a university degree] will be the very basic, or minimal educational level…in order to survive in Singapore - getting a decent job, decent pay. When [my child's] time comes, that university certificate [will] probably [be] just another certificate, because everybody else will have it.
>
> *- Parent #6 (child in an elite primary school)*

Personal achievement

Fewer parents cited personal achievement as a motivation for their child to attain a university degree. But for those who did, it was important that their children achieved their full academic potential.

> I just want [my child] to achieve the best that she can, within her own capability…for my [child], I know she can make it, so I would expect at least a university degree from her. Then she won't be doing herself a disfavour. So the standard that I have, is the best that [she] can be.
>
> *- Parent #20 (child in an elite primary school)*

2. Confidence in the child's future

Although nearly all parents hoped that their child could attain at least a university degree, parents' confidence in their child's ability to achieve this outcome was more varied. Parents with primary school children, as well as those with children in non-elite secondary schools, tended to feel uncertain about their child's potential to attain a university degree. In contrast, those with children in elite secondary schools were more likely to feel confident about their child's potential.

On the other hand, when asked about their ability to finance the child's university education, parents tended to exhibit confidence – as long as the child studied in a local university.

Table 32 *Confidence in the child's future (and number of participants who made reference to each category)*

Confidence in the child's future	**School type of the participant's child**					
	Primary			**Secondary**		
	Elite (n=5)	**Non-elite** (n=5)	**Overall** (n=10)	**Elite** (n=5)	**Non-elite** (n=5)	**Overall** (n=10)
Uncertainty in the child's potential	**2**	**3**	**5**	**0**	**4**	**4**
Young age	*2*	*3*	*5*	*0*	*0*	*0*
Unpredictability of the child's academic performance	*0*	*1*	*1*	*0*	*4*	*4*
Confidence in the child's potential	**2**	**2**	**4**	**5**	**1**	**6**
Confidence in financing the child's studies at a local university	**3**	**3**	**6**	**3**	**2**	**5**

Uncertainty in the child's potential

For parents who were uncertain about their child's chances of attaining at least a university degree, the reasons cited for this uncertainty differed according to the child's

educational level. Whereas parents with primary school children cited the child's young age as a reason for their uncertainty, those with secondary school children mentioned the unpredictability of the child's academic performance as their reason.

(a) Young age

Across school types, parents with primary school children shared that it was still too early to tell if the child would be able attain a university degree. For instance, Parent #6 commented that she could not "see it so far" because her child had not taken her PSLE yet,

> I don't see that far yet. She's not even taken her PSLE. I really do not see it so far, because I have got no idea where she wants to go, what she wants to study.
>
> *- Parent #6 (child in an elite primary school)*

Parent # 1 commented that because of her child's young age, as well as the difficulty of gaining admission into local universities, she was hesitant to set an expectation for her child.

> [My child is] competing with a lot of kids in Singapore…to study [in a local university], you have to fight with [high-performing] students…why expect so much at this age now? [My child] is still very young… I think with no expectations, there will be no disappointment.
>
> *- Parent #1 (child in a non-elite primary school)*

(b) Unpredictability of the child's academic performance

Parents with secondary school children – specifically, those with children in non-elite schools – tended to feel uncertain about their child's ability to attain a university degree because they felt that the child's academic performance was unpredictable. For example, Parent #13 explained that because children can have "ups and downs", she was hesitant to come to a judgment about her child's future.

> I know that children have ups and downs in their life. Today I am ok, tomorrow I can be something else. So what my child's future is going to be is solely in her own hands. So we cannot tell now…it depends on the child herself.
>
> *- Parent #13 (child in a non-elite secondary school)*

This view is shared by Parent #18, who cited the inconsistency of her child's academic performance as a reason for her uncertainty. She also remarked that because academic performance would determine the child's chances of entering university, she could only encourage her child to put in more effort.

> It's… too early for me to judge [if my child can attain a university degree]…because usually [for the] mid-year [exams], he will do very badly. [When] he realise[s] that his

> results are lousy…he will start to pick up….so I did mention to him…you really need to buck up... ultimately, it's the result that counts.
>
> *- Parent #18 (child in a non-elite secondary school)*

Confidence in the child's potential

In contrast to parents with children in non-elite secondary schools, parents with children in elite secondary schools were more optimistic about their child's potential of attaining a university degree. This was even when they felt that the child needed to put in more effort, as was the case for Parent #17,

> [My child] is capable of [attaining a university degree]. He can [do it]…the only thing is, he is lazy to put [in] effort...but he has [the] potential.
>
> *- Parent #17 (child in an elite secondary school)*

Parent #10 commented that performance in the 'A' levels (the national examination that students take at the end of junior college) was the main criterion for admission into local universities. She was confident her child would be able to perform well enough to enter junior college and thus, have the opportunity to sit for the 'A' levels and possibly do well enough to gain admission to a university.

> I think now the main criterion is…how many A's or B's you get at [the] 'A' levels. [My child] should be able to make it to 'A' levels, and then university…I think she is intelligent enough.

Parent #10 also added that her child's school – an elite secondary school – boosted her confidence in her child, as the school prepared students well academically,

> I think that [the] most important is [your] school's academic qualifications …and that's why [my child's school] prepares them very well… if you graduate from [my child's school], you have a very high chance of making it to university.
>
> *- Parent #10 (child in an elite secondary school)*

Confidence in financing the child's studies at a local university

Most parents were confident of their ability to finance their child's studies at a local university, sharing that tuition fees at local (or public) universities were more affordable. For instance,

> If [my child studies in a] local [university], [it] shouldn't be a problem. If [he studies] overseas, then we will have some difficulty. Hopefully, he can study [in a] local [university].
>
> *- Parent #18 (child in a non-elite secondary school)*

Parents may perceive tuition fees at local universities to be more affordable because of the different financing options that are available for local universities, such as the use of CPF savings[23]. Parent #6 commented,

> At this point in time, we do not have enough cash savings for [my child's university education]. But with that option [to withdraw from your] CPF, it shouldn't be an issue. If she studies in Singapore, that is.
>
> *- Parent #6 (child in an elite primary school)*

As a result of the availability of these options, some parents indicated a preference for their children to study in a local university. Like Parent #18, Parent #6 expressed the desire for her child to attend a local university.

> Of course if [my child] can go to [a] local university, it's the best... besides savings, you can also use CPF…or take up a study loan.
>
> *- Parent #14 (child in an elite secondary school)*

Table 33 shows a summary of the key points from each theme.

[23] The Central Provident Fund (CPF) is a compulsory savings scheme for working Singaporeans. Parents can use their CPF savings to pay for their children's tuition fees at a local university.

Table 33 *Summary of key points from each theme*

THEMES		
Divide between elite and non-elite schools	**Changes from primary to secondary school**	**Pursuit of a university degree**
<u>Definition of elite schools</u> • Good academic track record • Good reputation • High PSLE cut-off point <u>Benefits of elite schools</u> • Support for academics – Results – Teachers – Learning • Good school environment – Peer motivation – Peer behaviours – Socio-economic composition • More school programmes/facilities • Better future prospects	<u>Importance of secondary school</u> • Peer influence • Educational pathways <u>Parental roles in education</u> • Direct support • Indirect support – Child's need for autonomy – Difficulty of homework	<u>Value of a university degree</u> • Good job prospects • Staying competitive in the job market • Personal achievement <u>Confidence in the child's future</u> • Uncertainty in the child's potential – Young age – Unpredictability of the child's academic performance • Confidence in the child's potential • Confidence in financing the child's studies at a local university

Emphasis on academic achievement (in primary school)

This section explores the broader theme of the emphasis on academic achievement, which comprises the following: (1) Need for tuition; (2) Pressure on the child; and (3) Lack of focus on character building. These topics emerged from the qualitative interviews with parents of primary school children. Although they were not the primary aims of this study, we felt that they were inextricably linked to the topic of school stratification and hence, should be discussed.

1. Need for tuition

During the interviews, eight out of 10 parents with primary school children revealed that their child was currently having private tuition. Seven out of 10 parents with secondary school children reported the same.

For parents with primary school children, the presence of competition was often cited as the reason for enrolling their child in tuition. For instance, Parent #20 shared that she enrolled her Primary 6 child in tuition for three subjects. She explained that in Primary 6, "that year is more crucial", because her child had to compete with others in the PSLE to secure a place in a top secondary school.

> We are really hoping that [our child] will go to [a top secondary school]. Because I think the school matters…[but] we realised that, generally, because all the other students had tuition, their PSLE scores were much higher. So you can see the average [cut-off point for the school] has been raised, just because people have tuition.

Parent #20 added that the tuition was necessary to "keep up with this race", even though it posed a considerable financial strain on the family,

> Having seen that everyone else has tuition, we had no choice but to spend the money on tuition for [my child]…it takes up a lot of money, really. I calculated that the tuition fees cost more than our family's food. So to keep up with this race is very expensive.
>
> *- Parent #20 (child in an elite primary school)*

Similarly, Parent #5 commented that tuition was necessary for her child because of the PSLE. This was in part due to the presence of competition. She also mentioned that the tuition helped her child cope during the transition from Primary 4 to Primary 5, when the school begins preparing the students for the PSLE,

> It is a rushed step for them from P4 to P5…because when they are in P5, they already start some P6 work. That's why I give her tuition for all subjects, in case she cannot cope…I understand now today, [tuition for] the kids is quite stress[ful]. But I cannot totally ignore [their studies]. Because the competition…[it is] quite competitive.
>
> *- Parent #5 (child in a non- elite primary school)*

2. Pressure on the child

As Parent #5 pointed out, children today are facing considerable stress. Even as the majority of parents with primary school children felt that tuition was necessary, some, like Parent #20, acknowledged that by enrolling the child in tuition, they were subjecting the child to an even heavier workload,

> We, as parents, we don't want to give them the pressure at this young age. It's quite sad, because I can see my P6, she's drowned with homework, and tuition homework, and all the past year papers they are giving out now…quite poor thing actually.

Parent #20 also felt that her child was facing a lot of stress because of the sudden increase in workload from Primary 5 to Primary 6,

> [My child] has so much homework at P6, because…at P6, [the school] starts to add pressure. So suddenly, the ramp-up comes very soon…. and then she couldn't take it…she tells me…her brain is tremoring and all that. So it's actually a symptom of stress. They feel the pressure towards the end [of primary school], and they are not ready for it.
>
> *- Parent #20 (child in an elite primary school)*

Likewise, Parent #1 commented that children today had to grapple with academic stress even at a young age.

> My heart goes out to my child…and to little kids outside who have to go through this system. It is very draining...the stress that they get from schoolwork is enough to make a child depressed at a young age.
>
> *- Parent #1 (child in a non-elite primary school)*

3. Lack of focus on character building

Some parents lamented that the pressure to do well academically had resulted in a lack of focus on non-academic pursuits. For example, Parent #9 remarked that too much attention in school has been given to the PSLE, at the expense of character building,

> Come P5 and P6, we actually do nothing but drill PSLE. They don't have time for character building. You better do well in PSLE, that's all they know. [But] primary school is important to build their character…for their holistic development.
>
> *- Parent #9 (child in an elite primary school)*

In a similar vein, Parent #7 felt that the non-academic curriculum was important in exposing the children to different things; however, there is currently a lack of emphasis on providing children with such exposure,

> I think...the kids [should be] allowed to explore their interests…it's not just developing a one-track mind like [being] exam-smart….so the emphasis on extracurriculum is very important…to expose the kids to different things…I always feel that Singapore's

education system is too academic-driven, which is very sad. We short-change the kids for a lot of things.

- Parent #7 (child in an elite primary school)

Other parents made reference to the importance of character building, noting that academic achievement alone was insufficient to prepare the child for future employment. For instance, Parent #9 felt that it was important to develop leadership skills in children,

It's not all about academics, but how [children] themselves work together with others…so it's important [to] mould [children]…to help them stretch their leadership…to prepare them to be better able to face the working world in the future.

- Parent #9 (child in an elite primary school)

Likewise, Parent #7 remarked that while academic achievement "may get you through the first step", other non-academic skills, such as "the can-do spirit" were more valuable for one's future,

Honestly, whatever you learn in school, it may be outdated by the time you step out into the work force. It may get you through the first step. But it may not necessarily [result in] a successful career... in the future economy, it is creativity, the can-do spirit that is important.

- Parent #7 (child in an elite primary school)

GENERAL DISCUSSION

The quantitative study showed that across school types, most parents wanted their child to attain a university degree. However, school type influenced parents' confidence only for secondary school students. Parents' confidence, in turn, helped shape secondary school students' confidence in attaining at least a university degree.

In the follow-up study, we explored the factors that may shape parents' aspirations for their children, and why school type may influence parental confidence only at the secondary school level. The study revealed two main findings: (1) Parents perceived that a university degree was the ticket to a better future; and (2) They perceived that elite secondary schools provided a clear path to university.

Key findings

1. Perception that a university degree was the ticket to a better future

The quantitative study revealed that across school types, parents were markedly similar in wanting their child to attain at least a university degree. In the overall sample, 91.3 % of parents with primary school children and 92.7% of those with secondary school children wanted their child to attain at least a university degree. In comparison, among those who had identified jobs that they wanted their child to have, only 21% of parents with primary school children and 22.9% of those with secondary school children wanted their child to hold jobs that required a university degree.

The follow-up study also gave us a better understanding of why these parents valued a university degree – most were driven by practical concerns. For instance, parents believed that a university degree was the only way to secure a decent standard of living. Although some parents appeared to value a university degree for intrinsic reasons (e.g., wanting their child to achieve the best of his or her potential), most were motivated by the belief that a university degree was the ticket to a better future (e.g., to help one compete in the job market and secure a comfortable standard of living).

However, when it came to parents' confidence in their child's ability to attain a university degree, parents' responses were more varied. School type did not make a difference to parental confidence for primary school children. In the follow-up study, we found that this could be because for primary school children, parents felt that it was too early to judge the child's potential for future academic achievement. Implicit in this reasoning may be that parents do not know which secondary school their child would eventually be enrolled in. On the other hand, parents' confidence in their secondary school children varied with the child's school type – those with children in elite secondary schools appeared confident of their child's ability to attain a university degree, while those with children in non-elite secondary schools expressed more uncertainty.

Findings from the follow-up study showed that when their child was in a non-elite secondary school, parents tended to view the child's future as being wholly dependent on the child's own efforts (exemplified by remarks such as "what my child's future is going to be is solely in her own hands"). In contrast, placement in an elite secondary school appeared to boost parents' confidence in their child's ability to attain a university degree, because they

felt that the school would help improve the child's chances of gaining admission to a local university.

Taken together, the reasons that shape the level of parental aspirations may be different from those that influence parents' confidence in their child's ability to realise that aspiration. It has been suggested that the level of parental aspirations may reflect societal norms about education as well as the parents' personal goals (Astone & McLanahan, 1991; Yamamoto & Holloway, 2010). Indeed, we found that in the follow-up study, parents were motivated by the belief that a higher education is necessary for gaining employment in the competitive job market, which would in turn help their children secure a good future.

In contrast, previous research has shown that parents' confidence reflects their evaluation of their child's academic potential, as well as the availability of resources to support their desired level of achievement for their child (Seginer, 1983; Yamamoto & Holloway, 2010). This is also the case in the follow-up study, where we see that school type may shape parents' confidence by influencing their perceptions of their child's academic potential, as well as the affordability of university education for their child. Specifically, school type may influence parents' judgments of whether their child can do well enough to enter a local university, which is associated with lower tuition expenses and hence, greater affordability.

2. Perception that elite secondary schools provided a clear path to university

Parents clearly believed that there were differences between elite and non-elite secondary schools. They associated elite secondary schools with various benefits, some of which were "validated" by parents with children in elite secondary schools. In particular, these parents shared that their child's school helped prepare students well academically. They also felt that the peer environment in their child's school cultivated behaviours that would facilitate academic performance.

In short, parents appear to associate placement in elite secondary schools with better opportunities for academic success. At the same time, parents may view the type of secondary school to be more important than the type of primary school. This may be linked to the perception that one's peers in school become more influential during the secondary school years. Furthermore, parents may face more limitations in providing academic support to their secondary school children as the syllabus becomes more challenging; as such, the school may be perceived to play a more critical role in the child's academic performance. This may be especially so given that at the end of secondary school, students take the 'O' level examinations – a high-stakes examination that can have a significant impact on the child's chances of entering university.

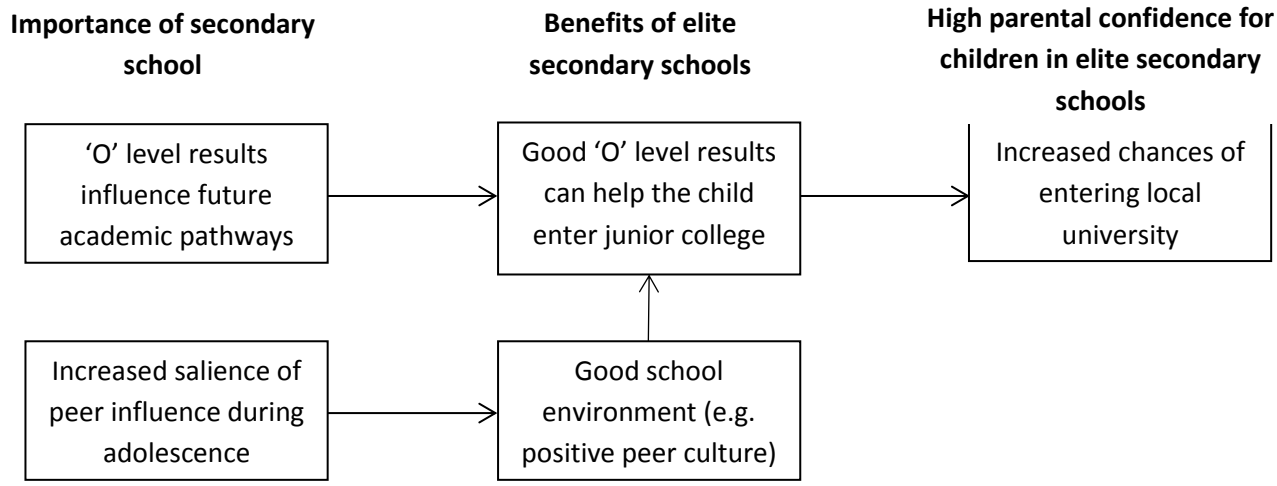
Importantly, parents may regard the 'O' level examinations as high-stakes because it would determine if the child can gain admission to a junior college.[24] As pointed out by one parent, securing a place in junior college was critical because with alternative routes such as a polytechnic education, the "chances of going to [a] local university are lower. Then you will have to go to [a] private or overseas university, which will be expensive*".* Indeed, the

[24] Some elite secondary school students are in the Integrated Programme, which allows students to proceed directly to junior college without taking the 'O' levels.

qualitative findings revealed that parents were more likely to be confident of financing the child's university education if it was at a local university.

In sum, parents may perceive that elite secondary schools (1) provide a more conducive environment for studying at a time when peer influence is more critical; and (2) help the child achieve good results in high-stakes examinations, which in turn improve the child's chances of securing a place in a local university. These perceptions, coupled with the perceived affordability of local universities, may contribute to the belief that elite secondary schools provide a clear path to university. Thus, parents with children in elite secondary schools may be more likely to display high confidence in their children's ability to attain a university degree (see Figure 19).

Fig. 19 *Perception that elite secondary schools provide a clear path to university*



Implications

The qualitative findings suggest that parents associate elite secondary schools with better opportunities for future academic success. Such a belief may contribute to two issues. First, parents may judge their child's academic potential based on the secondary school that the child is enrolled in. For instance, parents may set higher expectations when their child is in an elite secondary school, because they perceive that the school would facilitate the child's academic performance and thus, help the child gain admission to university. The corollary is that parents may have lower expectations when their child is in a non-elite school. As one parent explains,

> *Psychologically, you think that [elite] schools are better... they may not be better, but because you tell yourself they are better, you see that they are better. Then if you go to a neighbourhood school, the teacher can be putting in so much effort, but because you think it's a neighbourhood school, how far can you go? And then everybody will also say, "How far can you go?" So that's where the…imbalance comes in. It's the mindset, because it is so ingrained in our society.*

In short, mindsets about the characteristics of elite and non-elite secondary schools can shape parents' confidence in their children. In turn, parents may indirectly affect

students' beliefs for themselves via specific parenting behaviours (Benner & Mistry, 2007; Hill et al., 2004). For instance, parents who are more confident of their child's potential may encourage their child to engage in more academic activities. Thus, parents' mindsets about secondary schools could ultimately influence their children's confidence of attaining a university degree. This is evident in the quantitative study, which showed that students from elite secondary schools were more likely to have high confidence in attaining at least a university degree partly because their parents had high confidence in their ability to realise this aspiration.

Given the perception that elite secondary schools provide a clear path to university, as well as the premium that is placed on a university degree, it may not be surprising that places in elite secondary schools are highly sought after. However, the perception that elite secondary schools provide a clear path to university also contributes to the belief that the child's future hinges on his or her performance in the PSLE, resulting in an unhealthy obsession with academic grades. Such an overemphasis on academic achievement comes at a cost – the financial strain imposed by enrolling the child in private tuition, added stress for the child, and insufficient opportunities for the child's character development.

Yet, these findings also beg the question: Does the type of secondary school really matter for the child's future? The follow-up study suggests that parents appear to think so, because they perceive several differences between elite and non-elite secondary schools. Although not all of these differences are directly linked to academic performance, they may nonetheless contribute to the belief that elite schools provide children with better opportunities for future success. Hence, there may be a need to: (1) reduce differences between elite and non-elite secondary schools; and (2) address the mindset that elite secondary schools provide a better path to success.

1. Reduce differences between elite and non-elite secondary schools

In this study, parents associated elite secondary schools with several benefits. Although these are benefits that are *perceived* by parents (we cannot ascertain if such benefits truly exist without empirical support), there may be some truth in parents' perceptions. For instance, the quantitative study showed that there were actual differences in SES between elite and non-elite school students. Students in elite schools tend to have higher levels of SES, and for some parents, this socio-economic composition may be linked to a more conducive environment for studying, as well as better opportunities for building social networks.

Hence, steps need to be taken to reduce differences between elite and non-elite secondary schools. In recent years, the government has also taken steps to reduce such differentiation, for instance, by ensuring that qualified teachers are spread across schools (MOE, 2015b). However, more can be done to "level up" non-elite secondary schools in areas where they are perceived to fall short compared to elite secondary schools. For example, the present findings suggest that compared with non-elite schools, elite schools are perceived to offer a wider range of non-academic programmes for their students. These programmes may equip students with skills that may be beneficial in the long run, such as the confidence to "speak up in public" as highlighted by a parent. Hence, more of such programmes can be introduced in non-elite schools to ensure that students in different

school types have similar opportunities for developing a range of skills. Moreover, to address the perception that elite schools are linked to a better school environment as well as prospects for networking, it may be crucial to increase the socio-economic diversity of the student body in elite schools (see section on "Segregation of schools along social class lines" on page 50 for more details).

In addition to "levelling up" non-elite secondary schools, there may also be a need to reduce the disparity in chances for university admission between junior college and polytechnic graduates. In this study, parents perceived that junior college graduates have better chances of entering public universities compared to polytechnic graduates. Thus, school type may influence parents' confidence in their child's ability to attain a university degree, because parents tend to associate enrolment in elite secondary schools with an increased likelihood of entering junior college. Notably, the quantitative study also showed that elite and non-elite schools could channel students into different educational trajectories. For instance, students in non-elite secondary schools were more likely to want to attend polytechnic, rather than junior college. In contrast, students in elite secondary schools may be more likely to want to attend junior college, possibly because they are already more likely to proceed to junior college via the Integrated Programme (IP) route.

Hence, to reduce the difference in opportunities that are available to students in elite and non-elite schools, it may be beneficial to provide polytechnic graduates with more opportunities to entering public universities. For instance, the government has recently taken steps to increase the number of places in public universities for polytechnic graduates (MOE, 2015c). Doing so would send a signal to parents that access to public universities may not necessarily hinge on the type of post-secondary institution or secondary school that the child is in.

2. Address the mindset that elite secondary schools provide a better path to success

Besides reducing differences between elite and non-elite secondary schools, more can be done to convince parents that the secondary school is not the be-all and end-all of the child's future. For example, parents need to recognise that placement in an elite school would not necessarily lead to better academic results, and that their child's academic performance may also hinge on how well he or she fits into a particular school environment. As one parent pointed out, whether or not the school was an elite school was less important than ensuring that the school would be the right fit based on her child's learning ability:

> If [my child] doesn't make the mark [for an elite school] but gets in by DSA[25], then I don't think she will enjoy the school. Whereas if she were to go to a school with a cut-off that is similar to her grade, I think her peers would be around the same standard. The learning expectation, the way that they learn would be similar…I think she will be more comfortable.

[25] Direct school admission (DSA) allows some secondary schools to take in a certain percentage of its students through discretionary admission, rather than the PSLE score. This could be based on non-academic achievements such as sports or the arts.

In short, parents need to recognise the importance of selecting a secondary school based on its match to the child's aptitude and interests, rather than on the school's elite status. The government has recently taken steps to shift the focus of secondary school selection to "finding the right school, not the top school" (Teng, Yang, & Davie, 2016). With this, parents are encouraged to pick the school that would provide their children with opportunities to pursue their interests in non-academic areas. For instance, secondary schools are given funds to develop their own distinctive niche programmes, such as in sports or the arts. This is a positive step to encourage parents to select their child's secondary school based on the school's niche programmes, rather than on the school's academic track record.

In addition, more can be done to help parents recognise that factors other than school type may play a more important role in the child's academic achievement. For instance, parents need to be made aware that their own expectations for their child may also be crucial in shaping their child's aspirations, and in turn, their child's motivational levels. This is shown in the quantitative study, as school type was indirectly linked to the child's aspirations via parents' confidence in their child. Moreover, past research has shown that character traits – such as self-discipline and perseverance – may play a more important role than school type or intelligence in predicting later academic achievement and educational attainment (Duckworth, Peterson, Matthews, & Kelly, 2007; Duckworth & Seligman, 2005). If parents can recognise this, it could reduce the tendency to judge a child's potential based on the secondary school that he or she is enrolled in. It may also help to address the excessive focus on doing well in the PSLE, in order to secure a place in an elite secondary school.

Last but not least, there is a need to broaden our current definition of success. The present findings suggest that parents associate elite secondary schools with academic achievement, and thus, better opportunities for success. Most parents appear convinced that academic achievement is the only way to success, as they believe that good academic performance would lead to a university degree, which would in turn ensure economic security for their child. Hence, parents may covet places in elite secondary schools for their children because success is, at present, narrowly defined by academic achievement.

It is therefore timely that the government has recently announced plans to shift away from an emphasis on academics and towards holistic learning (e.g., Teng, Yang, & Davie, 2016). For example, schools have begun to increase their focus on outdoor education so that students are given more opportunities to develop character strengths such as resilience. Secondary schools are also setting aside more curriculum time for non-academic programmes to allow students to explore their interests.

Over the years, we have also seen the creation of more educational pathways to cater to individuals with different strengths and passions. For instance, the government has recently launched the Applied Study in Polytechnics and ITE Review (ASPIRE), which looks at enhancing educational and career progression prospects for polytechnic and ITE graduates (Davie, 2014). Such a move assures one that there are multiple pathways to success, rather than just a single pathway meant for those who are academically-inclined. The establishment of specialised schools – such as the Singapore Sports School and the School of Science and Technology (SST) – is also a clear indication that the government is

developing more routes for students who want to pursue their interests in different areas. As one parent remarked,

> [My child's] interest lies in technology. I believe in him pursuing his interest, his passion. Because if you go to work, you don't choose a career that makes the most money. You choose a career that you are interested in. We actually see a few schools like SST…which may be a place that actually nurtures his interest.

The above steps are laudable attempts by the government to recognise individual strengths in non-academic areas. However, to convince parents to adopt a broader definition of success, more needs to be done to show that in addition to academic excellence, non-academic strengths are also valued by key stakeholders such as schools and employers. At present, schools and employers recognise and reward individuals largely based on their academic achievements, or their level of education (Teng, Yang & Davie, 2016). These stakeholders can do more to recognise strengths in other domains. For instance, local universities can now admit more students on a discretionary basis, allowing for a more holistic admissions process that recognises an individual's competencies in different areas (Davie, 2016). Such a change could signal to parents that strengths in non-academic areas are also valued by society. However, care must also be taken to ensure that such a system does not end up favouring children from privileged backgrounds, or those whose families are able to afford enrichment classes that can boost their standing across different domains.

Besides encouraging pursuits in non-academic areas like sports or the arts, we can also do more to recognise less tangible character strengths, such as compassion for those who are less fortunate, or resilience to rise above one's disadvantaged circumstances to excel in one's pursuits. In spite of the current tendency to equate success with academic achievement, it is heartening to note that some parents do recognise the importance of character strengths. Importantly, these parents do not downplay the importance of academic achievement or intellect, but recognise that it is necessary to build character alongside academic development. For instance, a parent commented that it was the combination of intellect and character that made one "successful",

> I hope [my child] knows that we are looking out for her, not just in terms of grades alone…if character has been implemented in them, they are the ones who will be successful in society. If the character has been implemented, together with a good IQ, these are the people who can speak up for the weak.

Evidently, this parent's aspiration for her child extends beyond academic achievement, as she defines "successful" as being able to "speak up for the weak". Another parent expressed the hope that her child would be able to give back to society,

> Honestly, I don't set [my child] a target. I only believe that he should explore his interests, and do whatever he is happy with…I just wish he can contribute to society. To be of use to some people.

Table 34 shows a summary of the key findings and implications of the follow-up study.

Table 34 *Summary of key findings and implications of the follow-up study*

KEY FINDINGS	IMPLICATIONS	WHAT CAN BE DONE
Parents perceived that: 1. A university degree was the ticket to a better future 2. Elite secondary schools provided a clear path to university	1. Parents may judge their child's potential based on the type of secondary school that their child is enrolled in 2. There may be an excessive focus on the need to do well in the PSLE	**1. Implement policy changes to reduce differences between elite and non-elite schools** • "Level up" non-elite secondary schools in areas where they are perceived to fall short compared to elite secondary schools • Reduce the disparity in chances for university admission between junior college and polytechnic graduates **2. Address the mindset that elite secondary schools provide a better path to success** • Help parents recognise that other factors may be more important than school type in determining academic achievement • Broaden the definition of success by recognising non-academic strengths

Limitations and directions for future research

Self-selection bias

Given that the participants in the follow-up study had been self-selected (i.e., selected based on their interest and willingness to participate in the interviews), the findings may only represent the views of a certain group of parents. Notably, the majority of parents in this study were highly-educated and had attained at least a university degree. This group of parents may also be more likely to exhibit stronger views about the differences between elite and non-elite secondary schools. Even so, we ensured that there was an equal representation of parents with children from both school types, and it is notable that most of the findings (e.g., divide between elite and non-elite schools, pursuit of a university degree) converged across both groups of parents.

Influence of parental aspirations on the child

Although we have established a relationship between parents' and students' aspirations, it is unclear how parents may transmit to their children the aspirations they have for them. Previous research has suggested that parents may influence their children's aspirations via their interactions with their children (e.g., discussions with their child about their plans for the future; Hill et al., 2004). However, because of the qualitative nature of the follow-up study, we were unable to examine how the degree and type of parent-child interaction may differ for students in different school types. Future research can explore how parents' aspirations may shape their interactions with their children, such that we can better address the impact of parental aspirations on their children.

Conclusion

Singapore is widely recognised for having a world class education system. Our students are consistently ranked among the top in international maths and science competitions (Trends in International Mathematics and Science Study; Provasnik et al., 2012). Additionally, by making every school a "good" school, Singapore's education policy helps ensure that all children will have access to a good quality education, regardless of their family circumstances (MOE, 2015b).

However, the present study suggests that for most, schools are not considered to be equally "good". This may stem from two things. First, school stratification is a salient feature of our education system. Students are segregated based on their academic performance, and the "best and brightest" are placed in elite secondary schools. Placement in such schools, in turn, is perceived to facilitate academic achievement. Second, because meritocracy is a key guiding principle for Singapore society, academic performance is strongly associated with career prospects and economic status. As a result, placement in elite secondary schools may be associated with greater prestige, as well as better opportunities for future economic success.

This study underscores the need for a broader definition of success, rather than one that is narrowly based on academic excellence. Besides fuelling anxieties to secure places in elite schools, an overemphasis on academic performance may also come at the expense of other crucial areas, such as the child's character development. Hence, even as we seek to identify the best and the brightest among our students, this identification should not be limited to the academic domain. However, it must be noted that whether in the academic or non-academic domain, rich and resourceful parents would find ways to give their children a competitive edge. Furthermore, elite schools are perceived to offer better opportunities not only in the academic domain, but also in non-academic areas.

Therefore, it is also important to address a widening social inequality that may begin from a young age. This could mean reducing the disparity in opportunities for students in elite and non-elite schools. For as long as such differences persist, class differences could remain entrenched. Schools play a critical role in levelling up children from less privileged backgrounds, and indeed, a fundamental principle of our education system is to provide all children with opportunities to realise their potential, regardless of their family background. Yet, the findings suggest that because of its influence on children's aspirations, school stratification may have the unintended consequence of contributing to socio-economic inequalities.

In short, we need to help build an inclusive society where every individual is valued not just for academic achievement, but also for strengths in other domains. We also need to recognise that in all domains, one's achievements cannot be simply ascribed to individual effort and ability. Success also hinges upon family circumstances as well as the opportunities afforded by society. For a long time, we have seen the route to success described as a single ladder – meaning, usually, an academic ladder. And then, it turns out that children are not all starting at the same rung of the ladder, and this difference is perpetuating. But maybe we need a fresh metaphor. Maybe what is needed is scaffolding, with many routes upwards, or even sideways. We can then find ways to compensate for children who are finding particular routes difficult, or who are starting on lower levels than

their more fortunate peers. This is an uphill task, but the government is already moving in the right direction to build an inclusive society and level the playing field for all children.

We hope this monograph would encourage more thinking and discussion about how we can best achieve this vision – a less stratified society where children not only aim to reach the highest level of success, but also desire to connect with and help those at lower levels; a society where such hopes and dreams remain accessible to all children.

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APPENDIX A: INTERVIEW GUIDE (FOCUS GROUP DISCUSSIONS)

1. Indicators of social class

a) What do you understand by social class? How do you know if someone is of a high social class?

b) Imagine that everyone in Singapore is all on this ladder (show picture of ladder). At the top of the ladder are people who have the highest social class.
   i) Where would you place yourself? Why?
   ii) If you have to place someone on this ladder, what do you need to know about him/her?
   iii) What is the most important thing you need to know?

2. School stereotypes

a) Which school are you from? What is your school like?
   i) How do you feel about your school? Do you like your school?
   ii) Is your school better than other schools? Or are there schools that are better than your school?

b) What are some examples of good schools?
   i) What makes the school good?
   i) (List the names of some top schools.) What do you call this group of schools? What do these schools have in common? What do you call all the other schools?
   ii) How is this type of school different from the other schools?

APPENDIX B: SCHOOL TYPE CLASSIFICATION

Table B1 *Classification of primary schools*

Type 1	Type 2	Type 3
1. Anglo-Chinese School (Primary) * 2. Anglo-Chinese School (Junior) 3. Catholic High School (Primary)* 4. CHIJ St Nicholas Girls' School (Primary) 5. Henry Park Primary School* 6. Methodist Girls' School (Primary) 7. Nan Hua Primary School* 8. Nanyang Primary School* 9. Raffles Girls' Primary School* 10. Rosyth School* 11. Singapore Chinese Girls' School (Primary) 12. St Hilda's Primary School* 13. St Joseph's Institution Junior 14. St Stephen's School 15. Tao Nan School* *GEP schools	1. Ai Tong Primary School 2. Canossa Convent Primary School 3. CHIJ (Katong) Primary School 4. CHIJ (Kellock) Primary School 5. CHIJ Our Lady of Good Counsel 6. CHIJ Our Lady of the Nativity 7. CHIJ Our Lady Queen of Peace 8. CHIJ Primary School (Toa Payoh) 9. Chongfu Primary School 10. De La Salle Primary School 11. Fairfield Methodist Primary School 12. Geylang Methodist Primary School 13. Holy Innocents' Primary School 14. Hong Wen School 15. Kheng Cheng School 16. Kong Hwa School 17. Kuo Chuan Presbyterian Primary School 18. Maha Bodhi School 19. Maris Stella High (Primary) 20. Marymount Convent School 21. Mee Toh School 22. Nan Chiau Primary School 23. Ngee Ann Primary School 24. Paya Lebar Methodist Girls' School (Primary) 25. Pei Chun Public School 26. Pei Hwa Presbyterian Primary School 27. Poi Ching Primary School *28.* Red Swastika Primary School *29.* St Andrew's Junior School *30.* St Anthony's Canossian Primary School *31.* St Gabriel's Primary School *32.* St Margaret's Primary School	All other schools (143 schools)

Table B2 *Classification of secondary schools*

Type 1	Type 2	Type 3
1. Anglo-Chinese School (Independent)* 2. Catholic High School (Secondary) 3. Cedar Girls' Secondary School 4. CHIJ St Nicholas Girls' School (Secondary) 5. Dunman High School 6. Hwa Chong Institution* 7. Methodist Girls' School (Secondary)* 8. Nanyang Girls' High School* 9. National Junior College 10. NUS High School* 11. Raffles Institution* 12. Raffles Girls' Secondary School* 13. River Valley High School 14. Singapore Chinese Girls' School (Secondary)* 15. St Joseph's Institution (Secondary)* 16. Temasek Junior College 17. Victoria School *Independent schools	1. Anderson Secondary School 2. Anglican High School 3. Bukit Panjang Government High School 4. CHIJ Katong Convent 5. CHIJ Secondary (Toa Payoh) 6. Chung Cheng High School (Main) 7. Commonwealth Secondary School 8. Crescent Girls' School 9. Dunman Secondary School 10. Fairfield Methodist Secondary School 11. Maris Stella High School 12. Nan Hua High School 13. Ngee Ann Secondary School 14. Paya Lebar Methodist Girls' School (Secondary) *15.* St Anthony's Canossian Secondary School 16. St Hilda's Secondary School 17. St Margaret's Secondary School 18. Tanjong Katong Girls' School 19. Tanjong Katong Secondary School 20. Temasek Secondary School 21. Xinmin Seconday School 22. Yishun Town Secondary School 23. Zhonghua Secondary School	All other schools (126 schools)

APPENDIX C: QUESTIONNAIRE FOR STUDENTS

SURVEY ON CHILDREN'S SELF-CONCEPT AND ASPIRATIONS

Hello, my name is _____ . We are asking children in Singapore how they feel about themselves and schools in Singapore, and we would like to ask you some questions too. This is not a test, and there is no right or wrong answer. No one else will know what you said. Please answer as honestly as you can. Thank you!

Interviewer's Name		**Supervisor's Name**	
Parent's Name		**Child's Name**	

Address	Blk:	Unit:	Postal Code:
	Street:		

Date of Successful Interview		(dd/mm/yyyy)
Interview Start Time		(24 hr, hh:mm)
Language(s) used in interview		

PART A: DEMOGRAPHICS

A1 **Gender**

1 ☐ Male 2 ☐ Female

A2 **Age** _____ Years

A3 **Race**

1 ☐ Chinese 2 ☐ Malay

3 ☐ Indian 4 ☐ Others, please specify: _____

A4 **This year you are in:**

1 ☐ Primary 4

2 ☐ Primary 5

3 ☐ Primary 6

4 ☐ Secondary 1

5 ☐ Secondary 2

6 ☐ Secondary 3

7 ☐ Secondary 4

A5 **Your stream is:**

1 ☐ Primary School Gifted Education Program (GEP)

2 ☐ Primary School Non-Gifted Education Program

3 ☐ Integrated Program (IP)

4 ☐ Express

5 ☐ Normal (Academic)

6 ☐ Normal (Technical)

A6 **Your school is:** _____

PART B: ASPIRATIONS - For child in PRIMARY SCHOOL

Please skip to **PART C** if you **are not in PRIMARY SCHOOL**

B1 **Which secondary school would you like to go to?**

1 ☐

Please specify: _____

2 ☐ Not sure

3 ☐ Doesn't matter

SKIP TO B3

B2 **How sure are you that you will go to this school?**

1 ☐ Not sure at all

2 ☐ A little sure

3 ☐ Quite sure

4 ☐ Very sure

B3 **What is the highest level of education you would to complete?**

1 ☐ Secondary school

2 ☐ ITE/ Vocational

3 ☐ Junior College

4 ☐ Polytechnic

5 ☐ University

6 ☐ Postgraduate

B4 **How sure are you that you will complete this level of education?**

1 ☐ Not sure at all

2 ☐ A little sure

3 ☐ Quite sure

4 ☐ Very sure

B5 **What job you would like to have when you grow up?**

1 ☐

Please specify: _____

2 ☐ Not sure

3 ☐ Doesn't matter

SKIP TO D1

B6 **How sure are you that you will have this job when you grow up?**

1 ☐ Not sure at all

2 ☐ A little sure

3 ☐ Quite sure

4 ☐ Very sure

PART C: ASPIRATIONS - For child in SECONDARY SCHOOL

Please skip to PART D if you **are not in SECONDARY SCHOOL**

C1 **Which post-secondary institution would you like to go to?**

1 ☐

Please specify: _____

2 ☐ Not sure

3 ☐ Doesn't matter

SKIP TO C3

C2 **How sure are you that you will go to this post-secondary institution?**

1 ☐ Not sure at all

2 ☐ A little sure

3 ☐ Quite sure

4 ☐ Very sure

C3 **What is the highest level of education you would to complete?**

1 ☐ Secondary school

2 ☐ ITE/ Vocational

3 ☐ Junior College

4 ☐ Polytechnic

5 ☐ University

6 ☐ Postgraduate

C4 **How sure are you that you will complete this level of education?**

1 ☐ Not sure at all

2 ☐ A little sure

3 ☐ Quite sure

4 ☐ Very sure

C5 **What job you would like to have when you grow up?**

1 ☐

Please specify: _____

2 ☐ Not sure

3 ☐ Doesn't matter

SKIP TO D1

C6 **How sure are you that you will have this job when you grow up?**

1 ☐ Not sure at all

2 ☐ A little sure

3 ☐ Quite sure

4 ☐ Very sure

PART D: SUBJECTIVE SOCIAL STATUS

Imagine all the children/teenagers in Singapore are on this ladder [show picture of ladder].
Please tell me where you would place yourself on this ladder, from 1 to 10.

		Where would you place <u>yourself</u> on the ladder?
D1	At the top of the ladder are the children/teenagers with the richest parents in Singapore. And at the bottom are the children/teenagers with the poorest parents. Where would you place yourself on this ladder?	1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐ 9☐ 10☐
D2	Now, at the top of the ladder are the children/teenagers who live in the biggest and most expensive houses in Singapore. And at the bottom are the children/teenagers who live in the smallest and cheapest houses. Where would you place yourself on this ladder?	1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐ 9☐ 10☐
D3	Now, at the top of the ladder are the children/teenagers with the highest exam scores in Singapore. And at the bottom are the children/teenagers with the lowest exam scores. Where would you place yourself on this ladder?	1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐ 9☐ 10☐

PART E: ACADEMIC SELF-CONCEPT

I am going to read to you some thoughts that children/teenagers may have about themselves in school, and I want you to tell me whether you think they are true about yourself.

		Not true at all	A little true	Quite true	Very true
E1	I can follow the lessons easily.	1☐	2☐	3☐	4☐
E2	I daydream a lot in class.	1☐	2☐	3☐	4☐
E3	If I work hard, I think I can go to University.	1☐	2☐	3☐	4☐
E4	I pay attention to the teacher during lessons.	1☐	2☐	3☐	4☐
E5	I study hard for my tests.	1☐	2☐	3☐	4☐
E6	My teachers feel that I am poor in my work.	1☐	2☐	3☐	4☐
E7	I am usually interested in my schoolwork.	1☐	2☐	3☐	4☐
E8	I often forget what I have learned.	1☐	2☐	3☐	4☐
E9	I will do my best to pass all subjects.	1☐	2☐	3☐	4☐
E10	I often feel like quitting school.	1☐	2☐	3☐	4☐
E11	I am good in most of my school subjects.	1☐	2☐	3☐	4☐
E12	I am always waiting for lessons to end.	1☐	2☐	3☐	4☐
E13	I always do poorly in tests.	1☐	2☐	3☐	4☐
E14	I am able to help my classmates in their schoolwork.	1☐	2☐	3☐	4☐
E15	Most of my classmates are smarter than I am.	1☐	2☐	3☐	4☐
E16	I am able to do better than my friends in most subjects.	1☐	2☐	3☐	4☐

PART F: PERCEPTION OF OTHERS' SOCIAL STATUS

Imagine all the children/teenagers in Singapore are on this ladder [show picture of ladder].
I am going to ask you some questions about a student from a normal (average) primary/secondary school, and a student from a very good primary/secondary school.
Please tell me where you think each student would be on this ladder, from 1 to 10.

F1	At the top of the ladder are the children/teenagers with the richest parents in Singapore. And at the bottom are the children/teenagers with the poorest parents. Where would this student be on the ladder?	Where would you place a student from **a NORMAL** (average) Primary/ Secondary school on the ladder?									
		1☐	2☐	3☐	4☐	5☐	6☐	7☐	8☐	9☐	10☐
		Where would you place a student from **a VERY GOOD** Primary/ Secondary school on the ladder?									
		1☐	2☐	3☐	4☐	5☐	6☐	7☐	8☐	9☐	10☐
F2	Now, at the top of the ladder are the children/teenagers who stay in the biggest and most expensive houses in Singapore. And at the bottom are the children/teenagers who stay in the smallest and cheapest houses. Where would this student be on the ladder?	Where would you place a student from **a NORMAL** (average) Primary/ Secondary school on the ladder?									
		1☐	2☐	3☐	4☐	5☐	6☐	7☐	8☐	9☐	10☐
		Where would you place a student from **a VERY GOOD** Primary/ Secondary school on the ladder?									
		1☐	2☐	3☐	4☐	5☐	6☐	7☐	8☐	9☐	10☐
F3	Now, at the top of the ladder are the children/teenagers with the highest exam scores in Singapore. And at the bottom are the children /teenagers with the lowest exam scores. Where would this student be on the ladder?	Where would you place a student from **a NORMAL** (average) Primary/ Secondary school on the ladder?									
		1☐	2☐	3☐	4☐	5☐	6☐	7☐	8☐	9☐	10☐
		Where would you place a student from **a VERY GOOD** Primary/ Secondary school on the ladder?									
		1☐	2☐	3☐	4☐	5☐	6☐	7☐	8☐	9☐	10☐

PART G: PERCEPTION OF OTHERS' ACADEMIC ABILITY AND EFFORT

I am going to read to you some thoughts that children/teenagers may have about themselves in school, and I want you to tell me whether you think they are true about each of these students from the normal and very good schools.

		A student from **a <u>NORMAL</u>** (average) Primary/ Secondary school				A student from **a <u>VERY GOOD</u>** Primary/ Secondary school			
		Not true at all	**A little true**	**Quite true**	**Very true**	**Not true at all**	**A little true**	**Quite true**	**Very true**
G1	This student can follow the lessons easily.	1☐	2☐	3☐	4☐	1☐	2☐	3☐	4☐
G2	This student daydreams a lot in class.	1☐	2☐	3☐	4☐	1☐	2☐	3☐	4☐
G3	If this student works hard, he/she can go to University.	1☐	2☐	3☐	4☐	1☐	2☐	3☐	4☐
G4	This student pays attention to the teacher during lessons.	1☐	2☐	3☐	4☐	1☐	2☐	3☐	4☐
G5	This student studies hard for tests.	1☐	2☐	3☐	4☐	1☐	2☐	3☐	4☐
G6	Teachers feel that this student is poor in his/her work.	1☐	2☐	3☐	4☐	1☐	2☐	3☐	4☐
G7	This student is usually interested in his/her schoolwork.	1☐	2☐	3☐	4☐	1☐	2☐	3☐	4☐
G8	This student often forgets what he/she has learnt.	1☐	2☐	3☐	4☐	1☐	2☐	3☐	4☐
G9	This student will do his/her best to pass all subjects.	1☐	2☐	3☐	4☐	1☐	2☐	3☐	4☐
G10	This student often feels like quitting school.	1☐	2☐	3☐	4☐	1☐	2☐	3☐	4☐
G11	This student is good in most of his/her school subjects.	1☐	2☐	3☐	4☐	1☐	2☐	3☐	4☐
G12	This student is always waiting for lessons to end.	1☐	2☐	3☐	4☐	1☐	2☐	3☐	4☐
G13	This student always does poorly in tests.	1☐	2☐	3☐	4☐	1☐	2☐	3☐	4☐

Figure C1 *Picture of ladder (for Sections D and F)*

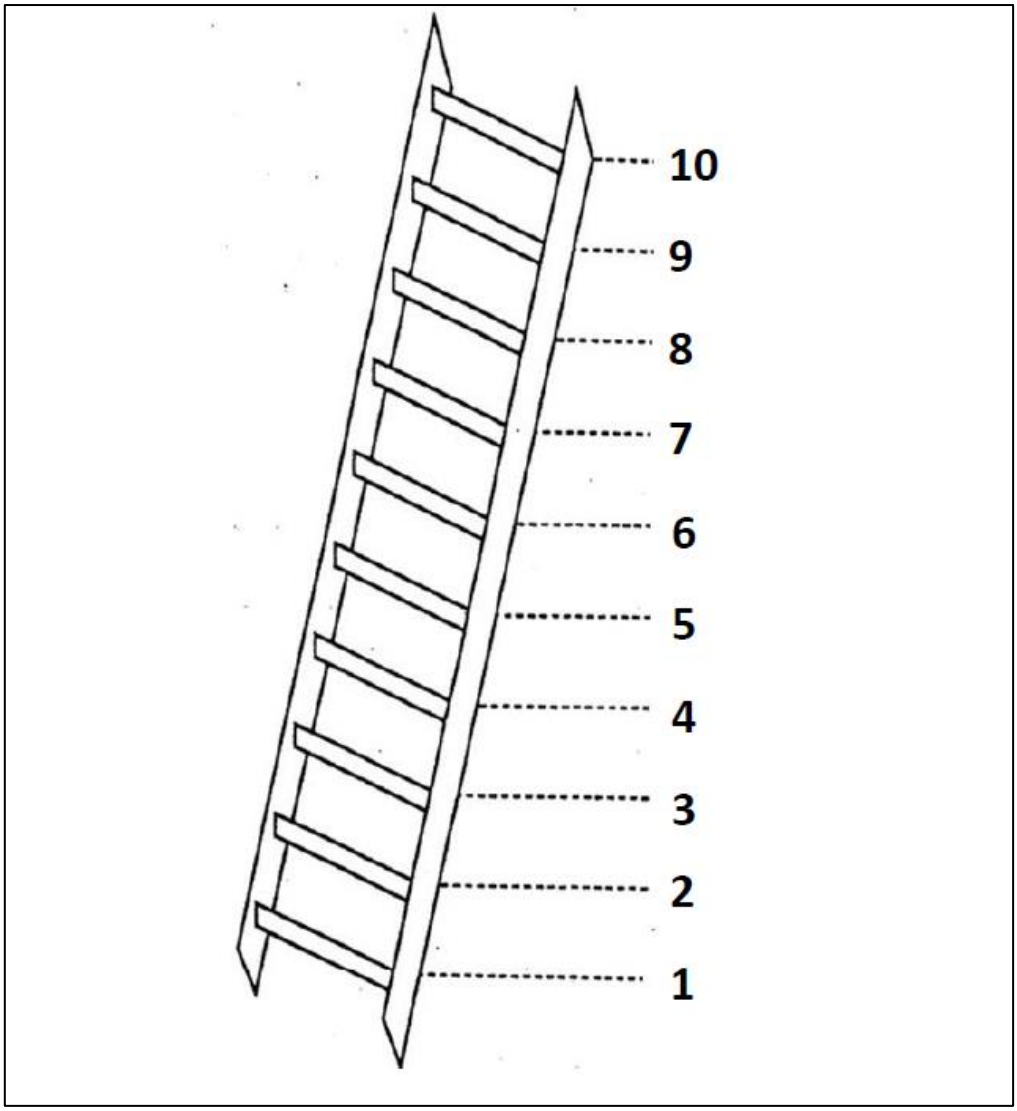

Image adapted from Goodman et al. (2001). The MacArthur Scale of Subjective Social Status – Youth Version. Adolescents' Perceptions of Social Status: Development and Evaluation of a New Indicator. *Pediatrics*, *108*(2), 1-8. Retrieved from http://pediatrics.aappublications.org/content/108/2/e31

APPENDIX D: QUESTIONNAIRE FOR PARENTS

SURVEY ON CHILDREN'S SELF-CONCEPT AND ASPIRATIONS

Hello, my name is _____. We are conducting this survey on behalf of Singapore Children's Society to find out more about parents' and children's aspirations, and we would like to hear your views. We are interested in what parents and their children have to say. May I interview you first and then speak with one of your children please?
Please be assured that your responses will be kept strictly confidential.

Interviewer's Name		**Supervisor's Name**	
Respondent's Name			
Address	Blk:	Unit:	Postal Code:
	Street:		

Date of Successful Interview		(dd/mm/yyyy)
Interview Start Time		(24 hr, hh:mm)
Language(s) used in interview		

1. **Is your child a Singaporean or Permanent Resident?** Yes 1☐ No 0☐

2. **Is your child currently a student between Primary 4 to Secondary 4 at a mainstream school?** Yes 1☐ No 0☐

A1 **Relationship to child** Mother 1☐ Father 2☐

PART A: DEMOGRAPHICS

A2 **Which type of housing are you currently living in?**

1☐ 1-room flat
2☐ 2-room flat
3☐ 3-room flat
4☐ 4-room flat
5☐ 5-room flat
6☐ Executive/ Masionette flat
7☐ Condominium/ Private apartment
8☐ Landed property

A3 **Monthly household income (S$)**

1☐	Below 2,000	7☐	7000-7,999
2☐	2,000-2,999	8☐	8000-8,999
3☐	3,000-3,999	9☐	9000-9,999
4☐	4,000-4,999	10☐	10,000-11,999
5☐	5000-5,999	11☐	12,000-14,999
6☐	6000-6,999	12☐	15,000 & over

A4 **Age** ☐ Years

A5 **Race**

1 ☐ Chinese
2 ☐ Malay
3 ☐ Indian
4 ☐ Others, please specify: ☐

A6 **How many members are there in your immediate family (including yourself)?** *Please specify:* ☐

A7 **What is the highest level of education you have completed?**

1 ☐ No qualification
2 ☐ PSLE
3 ☐ Lower Secondary
4 ☐ O'Level
5 ☐ NITEC
6 ☐ A'Level
7 ☐ Diploma
8 ☐ Bachelor's
9 ☐ Postgraduate

A8 **What is the highest level of education your spouse has completed?**

1 ☐ No qualification
2 ☐ PSLE
3 ☐ Lower Secondary
4 ☐ O'Level
5 ☐ NITEC
6 ☐ A'Level
7 ☐ Diploma
8 ☐ Bachelor's
9 ☐ Postgraduate
10 ☐ Not applicable (single-parent household)

PART B: RATING OF CHILD'S ACADEMIC ABILITY

B1 **What does your child usually score in tests and exams in school?**

1 ☐ Mostly As
2 ☐ As and Bs
3 ☐ Mostly Bs
4 ☐ Bs and Cs
5 ☐ Mostly Cs
6 ☐ None of the above
7 ☐ Don't know

PART C: ASPIRATIONS - For parent with child in PRIMARY SCHOOL

Please skip to **PART D** if your child **is not in PRIMARY SCHOOL**

C1 **Which secondary school would you like your child to go to**

1 ☐

Please specify: _____

2 ☐ Not sure

3 ☐ Doesn't matter

SKIP TO C3

C2 **How sure are you that your child will go to this school?**

1 ☐ Not sure at all

2 ☐ A little sure

3 ☐ Quite sure

4 ☐ Very sure

C3 **What is the highest level of education you would like your child to complete?**

1 ☐ Secondary school

2 ☐ ITE/ Vocational

3 ☐ Junior College

4 ☐ Polytechnic

5 ☐ University

6 ☐ Postgraduate

C4 **How sure are you that your child will complete this level of education, given his/her academic ability?**

1 ☐ Not sure at all

2 ☐ A little sure

3 ☐ Quite sure

4 ☐ Very sure

C5 **What job would you like your child to hold when he/she grows up?**

1 ☐

Please specify: _____

2 ☐ Not sure

3 ☐ Doesn't matter

END SURVEY

C6 **How sure are you that your child will hold this job when he/she grows up?**

1 ☐ Not sure at all

2 ☐ A little sure

3 ☐ Quite sure

4 ☐ Very sure

PART D: ASPIRATIONS - For parent with child in SECONDARY SCHOOL

Please skip this part if your child **is not in SECONDARY SCHOOL**

D1 **Which post-secondary institution would you like your child to go to?**

1 ☐

Please specify: _____

2 ☐ Not sure

3 ☐ Doesn't matter

SKIP TO C3

D2 **How sure are you that your child will go to this institution?**

1 ☐ Not sure at all

2 ☐ A little sure

3 ☐ Quite sure

4 ☐ Very sure

D3 **What is the highest level of education you would like your child to complete?**

1 ☐ Secondary school

2 ☐ ITE/ Vocational

3 ☐ Junior College

4 ☐ Polytechnic

5 ☐ University

6 ☐ Postgraduate

D4 **How sure are you that your child will complete this level of education, given his/her academic ability?**

1 ☐ Not sure at all

2 ☐ A little sure

3 ☐ Quite sure

4 ☐ Very sure

D5 **What job would you like your child to hold when he/she grows up?**

1 ☐

Please specify: _____

2 ☐ Not sure

3 ☐ Doesn't matter

END SURVEY

D6 **How sure are you that your child will hold this job when he/she grows up?**

1 ☐ Not sure at all

2 ☐ A little sure

3 ☐ Quite sure

4 ☐ Very sure

APPENDIX E: CODING SCHEME FOR OPEN-ENDED ITEMS

Table E1 *Coding of post-secondary institutions*

Type 1 Post-secondary institutions Junior Colleges with IP	**Type 2 Post-secondary institutions** All other Junior Colleges	**Type 3 Post-secondary institutions** All Polytechnics and Institutes of Technical Education
1. Anglo-Chinese School (Independent) 2. Dunman High School 3. Hwa Chong Institution 4. National Junior College 5. Eunoia Junior College 6. NUS High School 7. Raffles Institution 8. River Valley High 9. St Joseph's Institution 10. Temasek Junior College 11. Victoria Junior College	1. Anderson Junior College 2. Anglo-Chinese Junior College 3. Catholic Junior College 4. Innova Junior College 5. Jurong Junior College 6. Meridian Junior College 7. Nanyang Junior College 8. Pioneer Junior College 9. Serangoon Junior College 10. St Andrew's Junior College 11. Tampines Junior College 12. Yishun Junior College	1. Nanyang Polytechnic 2. Ngee Ann Polytechnic 3. Republic Polytechnic 4. Singapore Polytechnic 5. Temasek Polytechnic 6. ITE College Central 7. ITE College East 8. ITE College West

Table E2 *Coding of jobs*

Job type	Definition	Examples
Specialised professions	High-paying professions/Jobs requiring at least a university degree	CEO, Doctor, Dentist, Scientist, Vet, Engineer, Architect, Pilot, Banker, Accountant, Lawyer
Non-specialised professions	Jobs requiring at least a diploma	Teacher, Nurse, Librarian, Therapist, Social Worker, Childcare teacher
Others	Jobs that do not require a diploma	Policeman, Fireman Actor, Musician, Singer, Designer, Artist Real Estate Agent, Insurance Agent Chef, Baker Businessman, Restaurant Owner

APPENDIX F: KEY STATISTICS

Table F1 *Number of schools represented in the sample*

	Number of schools			
	Type 1	**Type 2**	**Type 3**	**Total**
Primary school	14	28	50	92
Secondary school	17	20	61	98

Table F2 *Demographics of respondents by school type and sampling method for primary school students*

Demographic Variable	**TYPE 1 (N=100)**		**TYPE 2 (N=100)**	
	% of Cluster (N=50)	**% of Referral (N=50)**	**% of Cluster (N=46)**	**% of Referral (N=54)**
Gender				
Male	50.0	38.0	37.0	44.4
Female	50.0	62.0	63.0	55.6
Ethnicity				
Chinese	86.0	96.0	80.5	90.7
Malay	8.0	2.0	4.3	3.7
Indian	6.0	2.0	13.0	3.7
Others	0	0	2.2	1.9
Educational level				
P4	36.0	26.0	37.0	33.3
P5	24.0	30.0	37.0	38.9
P6	40.0	44.0	26.1	27.8
Academic stream				
GEP	22.0	24.0	0	0
Non-GEP	78.0	76.0	100	100
Parent respondent				
Mother	80.0	90.0	71.7	74.1
Father	20.0	10.0	28.3	25.9
Housing*				
Private	22.0	56.0	2.2	44.4
Public	78.0	44.0	97.8	55.6
Parent respondent's educational attainment				
Degree holder	70.0	78.0	47.8	46.3
Non-degree holder	30.0	22.0	52.2	53.7
Household income				
< $10,000	58.0	46.0	78.3	64.8
>$10,000	42.0	54.0	21.7	35.2

Table F3 *Demographics of respondents by school type and sampling method for secondary school students*

Demographic Variable	TYPE 1 (N=101)		TYPE 2 (N=100)	
	% of Cluster (N=56)	% of Referral (N=45)	% of Cluster (N=60)	% of Referral (N=40)
Gender				
Male	55.4	35.6	53.3	57.5
Female	44.6	64.4	46.7	42.5
Ethnicity				
Chinese	71.4	97.8	73.3	77.5
Malay	8.9	0	10.0	7.5
Indian	12.5	2.2	11.7	7.5
Others	7.1	0	5.0	7.5
Educational level				
Sec 1	26.8	11.1	16.7	20.0
Sec 2	28.6	37.8	23.3	20.0
Sec 3	25.0	20.0	25.0	35.0
Sec 4	19.6	31.1	35.0	25.0
Academic stream				
IP	78.6	75.6	0	0
Express	21.4	24.4	80.0	82.5
Normal (Academic)	0	0	10.0	12.5
Normal (Technical)	0	0	10.0	5.0
Parent respondent				
Mother	80.4	91.1	73.3	70.0
Father	19.6	8.9	26.7	30.0
Housing*				
Private	19.6	44.4	6.7	30.0
Public	80.4	55.6	93.3	70.0
Parents' educational attainment				
Degree holder	48.2	60.0	20.0	30.0
Non-degree holder	51.8	40.0	80.0	70.0
Household income				
< $10,000	67.9	46.7	81.7	65.0
>$10,000	32.1	53.3	18.3	35.0

*p<.01

Table F4 *Demographic statistics of the overall sample*

Age of Participant	**Range**	**Average (*SD*[26])**
Parents	28-65 years	44.0 years (5.4 years)
Students	9-17 years	12.8 years (2.0 years)
Gender of Student	**N**	**%**
Male	298	49.6
Female	303	50.4
Relationship of Parent with Student	**N**	**%**
Mother	463	77.0
Father	138	23.0
Ethnicity of Student	**N**	**%**
Chinese	433	72.0
Malay	73	12.1
Indian	73	12.1
Others	22	3.7
Educational Level of Student	**N**	**%**
P4	100	16.6
P5	94	15.6
P6	106	17.6
Sec 1	67	11.1
Sec 2	81	13.5
Sec 3	72	12.0
Sec 4	81	13.5
Academic Stream of Student	**N**	**%**
Primary school		
Gifted Education Programme (GEP)	23	3.8
Non-GEP	277	46.1
Secondary school		
Integrated Programme (IP)	78	13.0
Express	157	26.1
Normal (Academic)	40	6.7
Normal (Technical)	26	4.3
Educational Attainment of Parent	**N**	**%**
None	8	1.3
PSLE	26	4.3
Lower Sec	32	5.3
'O'level	113	18.8
NITEC	21	3.5
'A'level	29	4.8
Diploma	123	20.5
Bachelor's degree	182	30.3
Postgraduate degree	67	11.1

[26] Standard deviation

Housing type	N	%
1-room flat	3	0.5
2-room flat	14	2.3
3-room flat	68	11.3
4-room flat	184	30.6
5-room flat	154	25.6
Executive flat	62	10.3
Condominium or Private Apartment	86	14.3
Landed Property	30	5.0

Monthly Household Income	N	%
Below 2000	37	6.2
2000-2999	53	8.8
3000-3999	58	9.7
4000-4999	67	11.1
5000-5999	56	9.3
6000-6999	49	8.2
7000-7999	41	6.8
8000-8999	49	8.2
9000-9999	28	4.7
10000-11999	55	9.2
12000-14999	49	8.2
15000&over	59	9.8

Table F5 *Principal component analysis (with varimax rotation) on socio-economic status and subjective social status*

Variable	Items	Factor loadings	% variance accounted for by factor
Socio-economic status (SES)	Mean of both parents' educational attainment	.782	67.9
	Housing type	.816	
	Monthly per capita household income	.872	
Subjective social status for *primary* school students	Family wealth	.822	53.9
	Housing	.792	
	Exam scores	.559	
Subjective social status for *secondary* school students	Family wealth	.905	57.1
	Housing	.852	
	Exam scores	.410	

Table F6 *Primary school students' aspirations*

Level of educational aspirations	N	%
Secondary school	1	0.3
Institute of Technical Education	3	1.0
Junior College	11	3.7
Polytechnic	30	10.0
University	206	68.7
Postgraduate	49	16.3

Level of school aspirations	N	%
Type 1 secondary school	113	37.7
Type 2 secondary school	42	14.0
Type 3 secondary school	63	21.0
Not sure	71	23.7
Doesn't matter	11	3.7

Level of career aspirations	N	%
Specialised professions	104	34.7
Non-specialised professions	26	8.7
Others	74	24.7
Not sure	89	29.7
Doesn't matter	7	2.3

Table F7 *Secondary school students' aspirations*

Level of educational aspirations	**N**	**%**
Institute of Technical Education	3	1.0
Polytechnic	24	8.0
University	219	72.8
Postgraduate	55	18.3
Level of school aspirations	**N**	**%**
Type 1 post-secondary institution	92	30.6
Type 2 post-secondary institution	42	14.0
Type 3 post-secondary institution	67	22.3
Not sure	71	23.6
Doesn't matter	29	9.6
Level of career aspirations	**N**	**%**
Specialised professions	100	33.2
Non-specialised professions	22	7.3
Others	40	13.3
Not sure	130	43.2
Doesn't matter	9	3.0

Table F8 *Parental aspirations for children in primary school*

Level of educational aspirations	**N**	**%**
Secondary school	1	0.3
Institute of Technical Education	2	0.7
Polytechnic	23	7.7
University	208	69.3
Postgraduate	66	22.0
Level of school aspirations	**N**	**%**
Type 1 secondary school	112	37.3
Type 2 secondary school	43	14.3
Type 3 secondary school	58	19.3
Not sure	54	18.0
Doesn't matter	33	11.0
Level of career aspirations	**N**	**%**
Specialised professions	63	21.0
Non-specialised professions	22	7.3
Others	23	7.7
Not sure	73	24.3
Doesn't matter	119	39.7

Table F9 *Parental aspirations for children in secondary school*

Level of educational aspirations	**N**	**%**
Institute of Technical Education	1	0.3
Junior College	1	0.3
Polytechnic	20	6.6
University	213	70.8
Postgraduate	66	21.9
Level of school aspirations	**N**	**%**
Type 1 post-secondary institution	82	27.2
Type 2 post-secondary institution	32	10.6
Type 3 post-secondary institution	34	11.3
Not sure	42	14.0
Doesn't matter	111	36.9
Level of career aspirations	**N**	**%**
Specialised professions	69	22.9
Non-specialised professions	11	3.7
Others	20	6.6
Not sure	40	13.3
Doesn't matter	161	53.5

Table F10 *Jobs most frequently cited in students' and their parents' career aspirations*

	Educational level of the student			
	Primary school		**Secondary school**	
	Student	**Parent**	**Student**	**Parent**
1	Doctor	Doctor	Doctor	Doctor
2	Teacher	Teacher	Lawyer	Engineer
3	Veterinarian	Entrepreneur	Engineer	Lawyer
4	Policeman	Engineer	Accountant	Teacher
5	Scientist	Lawyer	Psychologist	Banker

Table F11 *Chi-square analyses for comparison between primary school types*

Variable	Item	*N*	*df*	χ^2
Demographics	Ethnic composition	300	6	56.7*
	Housing type	300	2	38.0*
	Parent's educational attainment	300	2	34.7*
	Household income	300	2	31.1*
Students' aspirations	Level of educational aspirations	300	10	22.26
	Confidence in attaining educational aspirations	299+	6	9.67
	Level of school aspirations	300	8	47.58*
	Level of career aspirations	300	8	18.26
Parental aspirations	Level of educational aspirations	300	8	14.96
	Confidence in attaining educational aspirations	299+	2	3.81
	Level of school aspirations	300	8	64.71*
	Level of career aspirations	300	8	11.14

*p <.05

+missing data

Table F12 *Chi-square analyses for comparison between secondary school types*

Variable	Item	*N*	*df*	χ^2
Demographics	Ethnic composition	301	6	39.6*
	Housing type	301	2	30.3*
	Parent's educational attainment	301	2	34.9*
	Household income	301	2	32.4*
Students' aspirations	Level of educational aspirations	301	6	35.99*
	Confidence in attaining educational aspirations	301	6	46.84*
	Level of school aspirations	301	8	143.57*
	Level of career aspirations	301	8	14.79
Parental aspirations	Level of educational aspirations	301	8	35.71*
	Confidence in attaining educational aspirations	301	8	39.72*
	Level of school aspirations	301	6	122.01*
	Level of career aspirations	301	8	7.05

*$p < .01$

Table F13 *One-way ANOVA analyses for comparison between primary school types*

Variable	Mean (*SD*)			*F*-ratio	Significant Post-hoc Differences	Effect size (η^2)
	Type 1 (n=100)	**Type 2** (n=100)	**Type 3** (n=100)			
SES	.569 (.840)	.090 (.846)	-.659 (.909)	51.13*	Type 1>Type 2 Type 1>Type 3 Type 2>Type 3	.26
Subjective social status	6.31 (1.12)	6.00 (.998)	6.09 (1.22)	1.93	-	-
Academic self-concept	50.5 (6.51)	49.5 (5.97)	49.7 (6.77)	.74	-	-

*p<.01

Table F14 *One-way ANOVA analyses for comparison of secondary school types*

Variable	Mean (*SD*)			*F*-ratio	Significant Post-hoc Differences	Effect size (η^2)
	Type 1 (n=101)	**Type 2** (n=100)	**Type 3** (n=100)			
SES	.592 (.859)	.013 (.959)	-.612 (.794)	47.82*	Type 1>Type 2 Type 1>Type 3 Type 2>Type 3	.24
Subjective social status	6.37 (.718)	6.00 (.913)	5.78 (1.07)	10.75*	Type 1>Type 2 Type 1>Type 3	.07
Academic self-concept	48.8 (5.44)	47.2 (5.86)	48.2 (6.72)	1.76	-	-

*p<.01

Two-way mixed ANOVA analyses

Table F15 *Descriptive statistics for primary school students*

Variable	Target	Mean (*SD*)			
		Type 1	**Type 2**	**Type 3**	**Overall**
Perceived social status	Self	6.31 (1.12)	6.00 (1.00)	6.09 (1.22)	6.13 (1.12)
	"Normal" school	5.62 (1.05)	5.73 (.95)	5.92 (1.10)	5.75 (1.04)
	"Very Good" school	7.41 (1.34)	7.63 (1.25)	8.14 (1.20)	7.72 (1.30)
Perceived academic competence	Self	42.00 (5.42)	41.56 (5.12)	41.58 (5.65)	41.71 (5.42)
	"Normal" school	38.48 (5.00)	38.16 (4.91)	38.41 (5.09)	38.35 (4.98)
	"Very Good" school	42.74 (4.40)	42.66 (4.43)	44.32 (4.12)	43.24 (4.37)

Table F16 *Descriptive statistics for secondary school students*

Variable	Target	Mean (*SD*)			
		Type 1	**Type 2**	**Type 3**	**Overall**
Perceived social status	Self	6.37 (.72)	6.00 (.91)	5.83 (1.07)	6.07 (.94)
	"Normal" school	5.50 (.90)	5.58 (.96)	5.70 (.90)	5.59 (.93)
	"Very Good" school	7.21 (.97)	7.38 (1.27)	7.36 (1.29)	7.32 (1.30)
Perceived academic competence	Self	41.06 (4.67)	39.57 (4.96)	40.37 (5.51)	40.34 (5.08)
	"Normal" school	36.98 (4.67)	35.53 (4.96)	36.94 (5.51)	36.49 (5.18)
	"Very Good" school	41.83 (3.31)	42.56 (4.31)	43.51 (4.02)	42.63 (3.95)

Table F17 *Two-way mixed ANOVA analyses for primary school students*

Variable	Type of comparison	Mean differences				Interaction effect	
		Type 1	Type 2	Type 3	Overall	*F*-ratio	Effect size (η^2)
Perceived social status	"Normal" vs. "Very Good"	1.79	1.90	2.22	1.97	2.39	
	Self vs. "Normal"	.69	.28	.17	.38	4.04*	.03
	Self vs "Very Good"	1.10	1.63	2.05	1.59	9.60*	.06
Perceived academic competence	"Normal" vs. "Very Good"	4.26	4.50	5.91	4.89	2.03	
	Self vs. "Normal"	3.52	3.40	3.17	3.36	.39	
	Self vs "Very Good"	.74	1.10	2.74	1.53	4.29*	.03

*$p < .01$

Table F18 *Two-way mixed ANOVA analyses for secondary school students*

Variable	Type of comparison	Mean differences				Interaction effect	
		Type 1	Type 2	Type 3	Overall	*F*-ratio	Effect size (η^2)
Perceived social status	"Normal" vs. "Very Good"	1.71	1.80	1.66	1.73	1.13	
	Self vs. "Normal"	.87	.43	.13	.48	22.41*	.13
	Self vs "Very Good"	.84	1.38	1.90	1.25	7.40*	.05
Perceived academic competence	"Normal" vs. "Very Good"	4.85	7.03	6.57	6.15	3.38	
	Self vs. "Normal"	4.08	4.04	3.43	3.85	.37	
	Self vs "Very Good"	.77	2.99	3.14	2.30	6.02*	.04

*$p<.01$

Table F19 *Chi-square analyses for within-school type differences in level of school aspirations*

Variable	School type	*N*	*df*	χ^2
School affiliation (primary school)	Type 1	100	4	2.14 (n.s)
Academic stream (secondary school)	Type 1	93	4	16.48**
	Type 2	85	4	19.65**
	Type 3	93	4	12.47*

*$p < .05$
**$p < .01$

Fig. F1 *Partial mediation of the relationship between SES and secondary school students' confidence by school type (z = 2.54, p < .05). The value in the bracket below the bottom path indicates the effect after the mediator was included in the model.*

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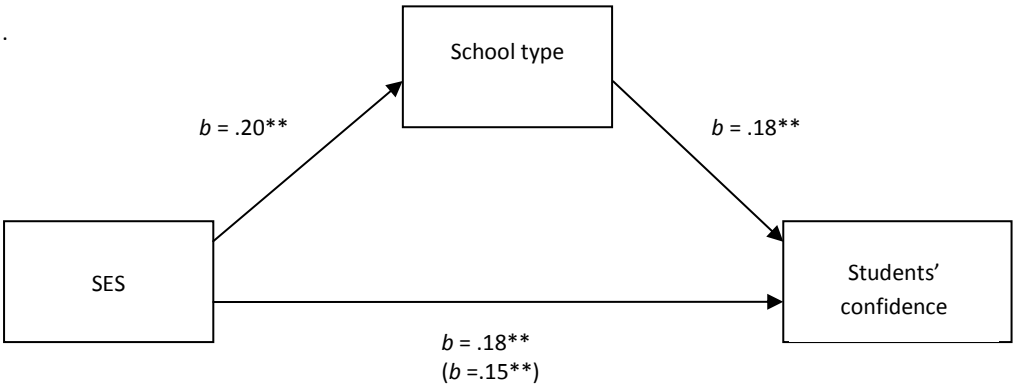
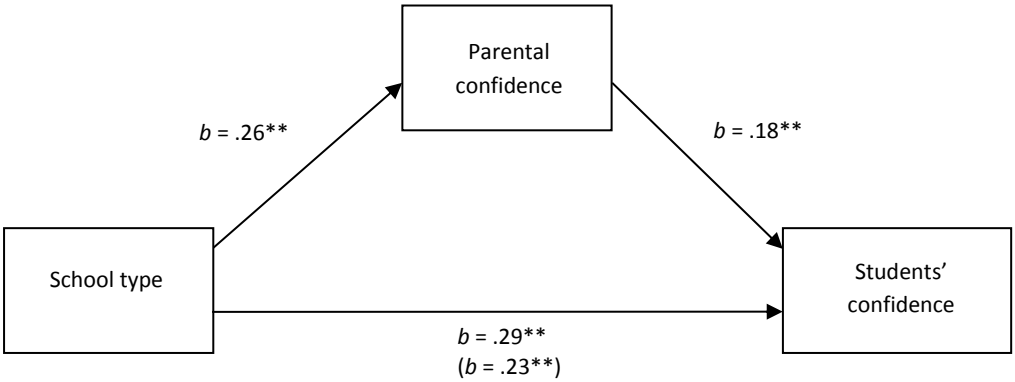


Fig. F2 *Partial mediation of the relationship between school type and secondary school students' confidence by parents' confidence (z = 1.98, p < .05). The value in the bracket below the bottom path indicates the effect after the mediator was included in the model.*



**$p<.01$

Table F20 *Regression analyses predicting confidence for primary school students*

Independent variables	Block 1 *B*	Block 2 *B*	Block 3 *B*	*SE*	Odds ratio	95% CI
SES	.13	.11	-.05	.17	.95	.68 – 1.34
Gender						
Male					Ref[27]	
Female	.17	.16	.15	.27	1.16	.68 – 1.97
Ethnicity						
Chinese					Ref	
Malay	.25	.25	.33	.49	1.39	.53 – 3.64
Indian	.91	.94	.36	.49	1.43	.55 – 3.73
Others	.26	.31	-.21	.83	.81	.16 – 4.16
Parent's rating of academic performance	-.43**	-.43**	.04	.14	1.04	.79 – 1.36
School type						
Non-elite					Ref	
Elite		.15	.26	.32	1.29	.69 – 2.41
Parents' confidence						
Low confidence					Ref	
High confidence			1.57**	.34	4.82	2.47 – 9.43
Academic self-concept			.12**	.03	1.13	1.07 – 1.18
χ^2	28.08**	28.36**	78.17**			
Nagelkerke R^2	.12	.12	.31			
Percentage correct	64.2	64.2	73.2			

**p <.01

[27] "Ref" denotes that the specific group in question was designated as the reference group in the analysis.

Table F21 *Regression analyses predicting confidence for secondary school students*

Independent variable	Block 1 *B*	Block 2 *B*	Block 3 *B*	*SE*	Odds ratio	95% CI
SES	.76**	.62**	.53**	.17	1.70	1.21 – 2.39
Gender						
Male					Ref	
Female	-.08	-.10	.02	.28	1.02	.59 – 1.78
Ethnicity						
Chinese					Ref	
Malay	-.096	-.039	-.28	.44	.76	.32 – 1.80
Indian	1.45**	1.61**	1.18	.49	3.24	1.23 – 8.52
Others	-.94	-.81	-1.10	.64	.33	.10 – 1.16
Parent's rating of academic performance	-.42**	-.34**	-.10	.15	.91	.68 – 1.21
School type						
Non-elite					Ref	
Elite		.95**	.81**	.35	2.25	1.14 – 4.44
Parents' confidence						
Low confidence					Ref	
High confidence			.97**	.32	2.63	1.40 – 4.92
Academic self-concept			.09**	.03	1.10	1.04 – 1.16
χ^2	63.12**	71.61**	95.20**			
Nagelkerke R^2	.26	.29	.37			
Percentage correct	71.4	71.4	74.8			

**p <.01

APPENDIX G: TABLE OF RESPONDENTS FOR FOLLOW-UP STUDY

Participant no.	*Child's school type*	*Child's educational level/stream*	*Child's gender*
6	Elite	P5 (Non-GEP)	F
7	Elite	P6 (Non-GEP)	M
9	Elite	P6 (GEP)	M
19	Elite	P6 (Non-GEP)	F
20	Elite	P6 (Non-GEP)	F
1	Non-elite (Type 3)	P5 (Non-GEP)	F
2	Non-elite (Type 2)	P6 (Non-GEP)	M
5	Non-elite (Type 2)	P5 (Non-GEP)	F
11	Non-elite (Type 2)	P6 (Non-GEP)	F
12	Non-elite (Type 2)	P6 (Non-GEP)	F
3	Elite	Sec 3 (IP)	F
10	Elite	Sec 3 (Express)	F
14	Elite	Sec 4 (Express)	F
15	Elite	Sec 2 (Express)	F
17	Elite	Sec 4 (Express)	M
4	Non-elite (Type 3)	Sec 4 (Express)	F
8	Non-elite (Type 2)	Sec 4 (Express)	M
13	Non-elite (Type 3)	Sec 3 (Express)	F
16	Non-elite (Type 2)	Sec 2 (Express)	F
18	Non-elite (Type 3)	Sec 3 (Express)	M

APPENDIX H: INTERVIEW GUIDE (FOLLOW-UP STUDY)

Parental involvement

1. How are you involved in your child's education?
2. Does your child come to you when he/she is facing difficulties in school? What advice/help do you give to your child when he/she is facing difficulties in school?

School type

(if child is in secondary school)

1. When your child was in P6, how did you help your child choose his/her secondary school?

(if child is in primary school)

1. How will you help your child has to choose his/her secondary school?
2. What do you think is important when choosing your child's secondary school?
3. What do you think makes a "good" secondary school?
4. How important is it to select a "good" secondary school?
5. How important is the primary school compared to secondary school?

Parental aspirations

1. What is the highest level of education you want your child to complete?
2. Why this level of education?
3. What other factors influence your aspiration for your child?
4. How sure are you that your child will complete this level of education, based on his/her academic ability?
5. What else would influence his/her chances of completing this level of education?