
**Life Skills Development Among Upper Primary Students in Hong Kong:
Brief Report on Follow-Up Survey**

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ABSTRACT

This paper reports the results from a follow-up survey of 3813 Grade 6 (P6) students in 55 primary schools in Hong Kong. A previous study had assessed the students' perceived self-efficacy in applying life skills across the four domains of academic development, personal development, social development, and career and talent development. This follow-up survey had two purposes: firstly to identify any significant association between certain student characteristics recorded at Time 1 and students' life skills self-efficacy scores obtained in Time 2; and secondly to assess any changes that had occurred in students' level of self-efficacy after 12 months from the first survey. Findings indicated that students' Time 2 scores in all four domains were moderately correlated ($r = .3$ to $.4$) with students' positive relationships in the family and in school. Results also showed that students' self-efficacy scores generally remained relatively stable over the 12-month period. However, small improvements were detected in self-efficacy in 'problem-solving', 'communication', and 'boy-girl relationships' ($p < .01$). During the same period declines were observed in self-efficacy scores related to 'engagement in learning' and 'personal talent development', with smaller declines noted also in areas of 'career exploration' and 'coping with bullying' ($p < .05$). The findings are discussed in terms of students' increasing maturation, development and experience. Implications for possible school intervention and support are identified.

Key Words: self-efficacy; life skills; guidance and counseling; Chinese; talent development; problem solving; communication

INTRODUCTION

Life skills are the everyday competencies that facilitate an individual's academic progress, personal and social development, and positive career planning. Examples include study skills, work habits, interpersonal relationship skills, knowledge of self and others, self-management and leadership skills, financial management, decision-making, and problem solving (Gysbers & Henderson, 2000; Yuen, Lau, Leung, Shea, Chan, Hui, & Gysbers, 2003). Gazda, Childers, and Brooks (1987) suggest that such life skills are essential in four key domains, namely: family, school, community, and work.

Locally and internationally there is a growing concern that students often seem to lack adequate life skills (e.g. College Entrance Examination Board, 1986; Education Commission, 2000a; Watts, 2001), yet in an ever-changing society it is essential that all students become confident and competent in applying these skills. It is recognised now that schools (and guidance programs within schools) play an essential role in supporting students' life skills development.

Researchers have only recently begun to examine life skills development of students in schools and to determine the environmental and contextual factors that influence acquisition and enhancement of these skills. The evidence to date seems to support a view that there is a positive relationship between an individual's competence in life skills and his or her emotional adjustment (Darden, Ginter, & Gazda, 1996; Darden, Gazda, & Ginter, 1996), and it is believed that deficits in life skills may contribute to delinquent behavior (Farrell & White, 1998; Orpinas & Horne, 2006).

Most of the research to date has involved adolescents, but it is clear that the foundations for life skill development are established in the primary school years. As Erikson (1968) asserts, the greatest challenge for children in the primary years is to develop a sense of personal competence and to acquire positive work habits.

It is also evident that for optimum personal development and autonomy as learners in school students must monitor their own level of competence in acquiring and applying such life skills and must work toward improving these skills and understandings where this is necessary. That is to say, all students need to develop positive beliefs about their own *self-efficacy* in applying life skills. 'Self-efficacy' is the term used by psychologists to describe an individual's perception concerning his or her own competence and confidence in particular activities or endeavours (Bandura, 1997; McInerney & McInerney, 2006; Tsang & Hui, 2006).

Supporting Life Skills Development

There is evidence to suggest that life skills acquisition can be facilitated through appropriate education and training (Gazda et al., 1987; Gazda, Ginter, & Horner, 2001; Gottfredson, Jones, & Gore, 2002). For example, from the mental health counseling perspective, Gazda et al. (1987) developed a 'life skills training' (LST) model for use in comprehensive mental health promotion within the general population; and in the context of schools in the US, school guidance services responded to a need for proactive intervention by developing comprehensive programs. In 1970's, Gysbers led a project to assist every American state in developing guides to implement counseling, career guidance, and placement programs in schools. The project set the course for the development and implementation of a K-12 comprehensive guidance program in the 1980's and early 1990's (e.g. Gysbers & Henderson, 2000; Lapan, Gysbers, & Sun, 1997; MacDonald & Sink, 1999).

Although the practicalities of teaching or training life skills are not the central focus of this particular study and report, it is still worth mentioning that the comprehensive guidance program referred to above consists of three key elements: content, organizational framework, and resources. Content consists of student life skills competencies grouped under the career, educational and personal-social domains. The organizational framework consists of structural

components and program components. The program components include guidance (life skills) curriculum, responsive services, individual planning, and system support. The resources include personnel, financial and political resources. There are two goals in the comprehensive school guidance program, firstly to “assist students to acquire competencies to handle current issues that affect their growth and development” (Gysbers, 1998, p.46) and secondly, to develop career consciousness in students to help them visualize and plan their future life roles, settings and events in order to make informed personal and career choices, and relate these to the present life events (Gysbers & Hendersen, 2006).

Using Bandura’s self-efficacy theory (Bandura, 1997) researchers in the US have also attempted to develop measures to assess student performance within this framework (Lapan, Gysbers, Multon, & Pike, 1997). The findings suggested that life skills self-efficacy scales such as these could be used for evaluation of the effectiveness of guidance and support programs in schools.

The Hong Kong Context

In Hong Kong, the government policy documents on comprehensive guidance programs have emphasized a need for systematic planning of developmental, preventive and remedial guidance activities along the lines of “whole person development and learning for life” (Education Commission, 2000b; Education Department, 2001; Education and Manpower Bureau, 2003). For primary schools in Hong Kong, the comprehensive student guidance program includes four components: policy and organization for creating a caring culture; support service for teachers and parents; personal growth education for developing the life skills competencies of all students; and responsive services such as early identification of students at risk, and individual and group counseling (Lec, 2003).

In primary schools, each student guidance professional in Hong Kong is responsible for about 950 students (i.e. 24 classes in one school), recently improved to the ratio of 1 to 18 classes or more (about 630 students) starting 2006/07, and acts as program manager, life skills education curriculum designer, educator in the classroom, consultant to teachers and parents, and student counselor. In 2003-2004, there were about 600 student guidance professionals serving schools. Guidance teams had been established in 96% of schools, and 12 % of the guidance teams were headed by the school principal or the vice-principal. Personal growth education (i.e. guidance curriculum) was implemented in 99% of the schools, with 71% of the sessions related to 'Personal & Social Development', 18% related to Academic Development, and 15% to Career Development (Lee, 2005).

In an on-going research project supported by the Quality Education Fund and the Hong Kong Research Grants Council, the present research team developed guidance curriculum materials and a set of self-efficacy inventories measuring Chinese adolescents' personal-social, academic and career and talent development, and a measure of teachers' perceptions of the level of implementation of the guidance program in their schools. Initial validation studies have shown the construct validities and internal consistencies of these measures to be adequate among Chinese adolescents (Yuen et al., 2004a; Yuen et al., 2004b; Yuen et al., 2004c; Yuen et al., 2005). In a survey using these scales to investigate students' self-efficacy beliefs related to their own life skills conducted in May 2005, a total of 13,660 upper primary students from 88 primary schools took part (Yuen et al, 2006). The present report provides information on a follow-up survey of P.5 students (now in P6) 12 months after the initial survey. In the following report the first survey is referred to as 'Time 1' and the follow-up survey as 'Time 2'.

Research Questions

1. To what extent are P.6 students' self-efficacy scores in Time 2 related to the student characteristics collected in Time 1 (i.e. parent education, family relationships, school relationships, community involvement, time spent on extra-curricular activities, and time spent on homework)?
2. To what extent have P.6 students changed after a period of 12 months in their self-efficacy beliefs concerning their own ability to apply life skills in various domains of academic, personal, social and career and talent development?

METHOD

Main Survey (Time 1)

Participants and Procedures

In May 2005, the Life Skills Development Project team in Hong Kong conducted a questionnaire survey of upper primary students. One hundred schools had been randomly selected from the Education and Manpower Bureau's list of primary schools in various regions of Hong Kong. Eighty-eight schools returned completed questionnaires (response rate of 88%). Of the eighty-eight schools responding, 93.1% were aided schools and 6.9% were private. The medium of instruction was Chinese in 95.6% of the schools, and English in 4.4%. In terms of students' gender, 97.2% of schools were co-educational, with 2.8% taking girls only.

In each school, classes of students were selected randomly to participate in the survey. In total 13,660 students completed the questionnaire (boys = 6,795; girls = 6,614; gender data missing on 251 students). Data indicated that the sample included students from the school years P4 (31.8%), P5 (41.1%), and P6 (27.2%). Data collected on the educational level of participants'

fathers and mothers revealed that 21.5% and 22.2% respectively had only primary or no education, 28.0% and 28.7% respectively had middle school education, 31.7% and 33.7% had high school education; and finally 18.8% and 15.4% respectively had some college education.

The students were asked to complete the *Life Skills Development Self-Efficacy Inventory (Primary Form)*, which includes the Academic Self-efficacy Scale (Primary Form; A-SES-P), Personal Self-efficacy Scale (Primary Form; P-SES-P), Social Self-efficacy Scale (Primary Form; S-SES-P), and Career and Talent Development Self-efficacy Scale (Primary Form; CTD-SES-P). The items in the subscales are clearly summarised in Appendix III of this report. Further details regarding student and family demographics and findings on the psychometric properties of the LSD-SEI are summarized in a separate report (Yuen et al., 2006).

Student characteristics were solicited by means of a 'personal data' form included with the survey questionnaire. Gender was coded as male = 0, female = 1. Students were also asked to indicate the levels of their parents' education (reported separately for mothers and for fathers) selecting a description from 7 categories ranging from 'no formal education' through to 'university post-graduate education'. Students were also asked to indicate their date and month of birth, and their class number.

The Follow-Up Survey (Time 2)

For the main survey in 2005 (Time 1), 5525 P.5 students from 88 primary schools had completed the questionnaires. In the follow-up survey in May 2006 (Time 2), questionnaires were sent to 55 primary schools that had agreed to participate in the follow-up. As a result, 3813 students (now in P6) in the 55 primary schools returned completed questionnaires. The researchers were able to match 3160 students' main survey questionnaires with their follow-up survey questionnaires by their date and month of birth and their class number as indicated in their personal particulars form.

Data collected on the educational level of participants' fathers and mothers revealed that 18.4% and 19.9% respectively had only primary or no education, 24.8% and 25.6% respectively had middle school education, 29.0% and 31.9% had high school education; and finally 18.0% and 13.9% respectively had some college education. Thus, the characteristics of the follow-up sample on such parameters as gender and parents' education closely approximated those of the original sample at Time 1. The personal particulars of the samples are shown in Appendix I.

Instrument

The *Life Skills Development Self-Efficacy Inventory (Primary Form)* was used again for this follow-up study. With the exception of the 'Avoiding Drugs, Drinking and Smoking' subscale, adequate evidence for validity and internal consistency of the instruments was obtained from the present samples. (See Appendix IV for details of the psychometric properties of the instrument).

It should be noted that the subscale dealing with self-efficacy in resisting drugs, alcohol and smoking was originally designed for use with adolescent students and was retained in this study as part of the *Life Skills Development Self-Efficacy Inventory*. In hindsight, it is now considered doubtful if questioning primary school students on self-efficacy related to drugs, smoking and alcohol is a valid strategy, because the students are being asked to respond to matters that are not within the personal daily life experience of the majority of children of this age. The students are likely therefore to invent responses to satisfy the researcher.

Analysis of Data

To answer research question 1, the students' scores for life-skills self-efficacy in Time 2 were correlated with the quantitative measures representing student characteristics at Time 1. Owing to missing data from some students on the specified student variables it was not possible to process data for all 3160 students. Correlation was conducted therefore for approximately 2400 cases for which complete data sets were available. (See Table 1)

To answer research question 2, the means and standard deviations for the total scores and for subscale scores were calculated, covering self-efficacy in the domains of academic development, personal development, social development and career development in Time 1 and Time 2. Paired sample t-tests were conducted to determine whether any changes in self-efficacy scores between Time 1 and Time 2 could be regarded as significant. Approximately 3000 paired-comparisons were available for processing. (See Table 2)

RESULTS

Research question 1: — 'To what extent are P.6 students' self-efficacy scores in Time 2 related to the student characteristics collected in Time 1?'

Pearson Product-Moment correlation yielded information summarised in Table 1. It can be noted at once that the majority of correlation coefficients are very small, although in most cases statistically significant. It must be remembered that conducting correlation calculations with a large sample size quite often produces such a result, with very small coefficients being deemed significant. It is necessary therefore to apply common sense when determining which correlation coefficients are large enough to be of genuine interest. With this in mind, Table 1 reveals that across all four domains of life skills there is a positive correlation of between .30

and .40 between students' self-efficacy scores and their measures of family relationships and school relationships. It would appear that students' positive relationships within the family and within the school situation are moderately associated with students' higher self-efficacy. All other student variables depicted in Table 1 are only weakly associated with self-efficacy.

Table 1. Correlation of P.6 Students' Life Skill Self-Efficacy Scores in Time 2 with Student Variables Collected at Time 1

Variables	Academic Self-efficacy in Time 2 (n=2410)	Personal Self-efficacy in Time 2 (n=2401)	Social Self-efficacy in Time 2 (n=2212)	Career and Talent Development Self-Efficacy in Time 2 (n=2465)
Gender	.099**	-.001*	.122**	.091**
Age	-.080**	-.036**	-.057**	-.076**
Father's education	.106**	.097**	.097**	.096**
Mother's education	.107**	.114**	.112**	.106**
Family relationships	.311**	.297**	.331**	.296**
School relationships	.401**	.355**	.418**	.372**
Physical exercise	.066**	.110**	.066**	.082**
Homework	-.056**	-.067**	-.044*	-.078**
Revision	.071**	.059**	.062**	.064**
Leisure reading	.086**	.060**	.060**	.061**
Computer games	-.153**	-.105**	-.142**	-.150**
School extra-curricular activities	.031	.001	.034	.030
Community extra-curricular activities	.062**	.042*	.044*	.049**
Volunteer services	-.031	-.042*	-.045*	-.025

Note. * $p < .05$, ** $p < .01$, one-tailed; gender coded Male=0 Female=1

Research question 2: — 'To what extent have P.6 students changed in their self-efficacy beliefs related to life skills after a period of 12 months?'

Means, standard deviations, and difference scores from the self-efficacy scale and subscales at Time 1 and Time 2 were calculated for the sub-sample of students whose questionnaires could be matched from both administrations. The findings are presented in Table 2.

In both Time 1 and Time 2, the mean scores for the subscales are all above 26 (out of a possible 36), suggesting that in general the students have maintained a reasonable level of confidence in applying life skills, and their scores have remained reasonably stable over this time span. As Table 2 shows, of the 23 scale and subscale comparisons made in the table, 15 reflect a very slight (in most cases insignificant) decline in perceived self-efficacy. In particular, small but statistically significant ($p < .01$) declines were observed in students' beliefs about their own ability to maintain 'involvement in their own learning', 'talent development', and in their ability to 'avoid drugs, smoking and alcohol'. (But, as pointed out above, the subscale assessing drugs, smoking and alcohol may not be valid or reliable, and the data from this subscale are best ignored). Small but significant ($p < .05$) declines were also recorded in the areas of, 'career exploration' and 'coping with bullying'.

Table 2 also reveals that 8 out of 23 comparisons showed a small gain in self-efficacy from Time 1 to Time 2. The life skills areas where students showed some significant gains in confidence included 'problem solving', 'communication' and 'boy-girl relationships'. The possible reasons for these gains are discussed later.

Table 2. Changes in Life Skills Self-Efficacy Among Grade 5/6 Students After A 1-year Period

Scales (<i>italic</i>) and Subscales	Time 1 Score		Time 2 Score		Paired differences			
	Mean	SD	Mean	SD	Mean	SD	t value	p
<i>Academic Development</i> (n=2708)	112.38	18.54	112.01	17.92	-.37	17.19	-1.134	.2570
Applying study skills (n=2967)	27.11	5.24	27.15	4.97	.04	5.02	.458	.6473
Time management (n=2994)	27.22	5.72	27.15	5.33	-.07	5.61	-.681	.4957
Creative and critical thinking (n=2992)	27.48	5.23	27.54	4.93	.06	5.22	.673	.5013
Involvement in learning (n=2981)	30.07	4.71	29.77	4.71	-.30	4.50	-3.599**	.0003
<i>Personal Development</i> (n=2630)	108.18	17.73	108.07	16.84	-.12	16.53	-.361	.7182
Positive self-concept (n=3001)	27.39	5.22	27.24	5.00	-.15	5.12	-1.579	.1143
Problem solving (n=3007)	25.97	5.07	26.43	4.61	.46	4.91	5.187**	.0000
Self-management (n=2935)	27.24	4.93	27.22	4.66	-.03	4.86	-.281	.7785
Self reflection (n=2968)	26.95	5.00	26.80	4.68	-.15	4.95	-1.685	.0922
<i>Social Development</i> (n=2184)	225.06	35.28	225.51	33.81	.45	32.09	.653	.5140
Communication skills (n=2964)	26.26	5.36	26.74	5.05	.48	5.02	5.237**	.0000
Respect and accepting others (n=2947)	28.45	5.02	28.58	4.60	.13	4.82	1.506	.1321
Family responsibility (n=2946)	27.44	5.81	27.39	5.57	-.04	5.69	-.392	.6954
Boy-girl relationships (n=2943)	27.02	6.00	28.22	5.24	1.20	6.05	10.773**	.0000
Conflict management (n=2934)	27.24	5.40	27.38	4.95	.15	5.35	1.507	.1319
Coping with bullying (n=2970)	27.41	5.81	27.14	5.43	-.26	5.96	-2.417*	.0157
Leadership (n=2964)	26.76	5.96	26.60	5.69	-.17	5.72	-1.575	.1153
Avoiding drugs, drinking and smoking (n=2970)	32.11	4.04	31.71	4.19	-.40	4.32	-5.056**	.0000
<i>Career and Talent Development</i> (n=2836)	85.14	14.86	84.61	14.01	-.53	14.16	-2.007*	.0449
Talent development (n=3006)	28.87	5.28	28.60	4.98	-.27	5.16	-2.900**	.0038
Positive work habits (n=3009)	27.95	5.30	27.91	5.08	-.04	5.14	-.447	.6549
Career exploration (n=3010)	28.14	5.45	27.93	5.04	-.21	5.53	-2.041*	.0414

Note: 1 = extremely lacking in confidence, 2 = not confident, 3 = a little lacking in confidence, 4 = confident, 5 = quite confident, 6 = extremely confident. As there are six items in each subscale, a subscale minimum score could be 6 and maximum score could be 36.

*p < .05, **p < .01

DISCUSSION

Perhaps the most interesting finding from this follow-up survey is the moderate association found between P6 students' positive relationships within the families and in schools and their level of self-efficacy. It would appear that students who enjoy good relationships within their families tend to be those students who also have confidence in their own ability to make academic progress and become competent in personal and social development and later career planning. While it is beyond the scope of schools to change and improve relationships within families, it is important that teachers, guidance personnel and others working in primary schools recognise that unhappy or unstable relationships at home can have a detrimental influence on children's normal acquisition of life skills and on their confidence in applying such skills. Students from homes where interpersonal relationships are problematic may be particularly vulnerable and at risk, and may require additional support in school to build confidence in their own potential ability to make progress in academic, social, and personal development.

Schools do have an important role in establishing and maintaining positive relationships among students and teachers, and among the students themselves. This survey has yielded some evidence that students with positive relationships in school tend to be those who display greater confidence in their own ability to apply life skills, and who continue to gain in self-efficacy as time goes by. It is likely that contemporary teaching methods such as cooperative learning and collaborative groupwork, together with increased opportunities in school for participation in social interaction through cultural, social and sporting activities, all help to foster better student relationships. It is not possible to say, of course, whether enjoying good relationships in school is one of the factors that *causes* students to increase their life skills self-efficacy, or whether students who already have confidence in their life skills are those who find it easy to establish and maintain good relationships. Whatever the association is between

social relationships and self-efficacy, teachers and other personnel do need to be alert to the fact that a few students who experience poor relationships in school may also lack confidence in their own competence in life skills, and may need active support in establishing friendships with peers and positive working relationships with staff. It is here that activities particularly associated with high quality guidance programs in schools — such as those described in the introduction — have much to offer.

In relation to the measured changes that occurred between Time 1 and Time 2, the first conclusion to draw from the data reported above is that in this sample of P6 students, confidence in applying life skills is reasonably stable over a period of 12 months. It had been hypothesized that as primary students become older and a little more mature their beliefs in their own efficacy in applying life skills might decline slightly in some areas as they gain more experience from their successes and failures in life. In other words, as they get older they may gain a rather more realistic perspective of their own capabilities and weaknesses; and this more realistic perspective might impact upon their responses to some sections of the questionnaire. There is some minor support for this view from the fact that of the 23 difference scores between Time 1 and Time 2 as recorded in Table 2, 15 differences (65.2%) revealed a lower mean at Time 2. However, without exception, these differences were very small and only reached statistical significance at $p < .01$ level in 3 cases, namely 'involvement in learning', 'talent development', and 'ability to resist drugs, smoking and alcohol', and at $p < .05$ level in 2 cases, namely 'career exploration' and 'coping with bullying'.

The slight decline in confidence concerning students' involvement in learning could perhaps be due to the fact that P.6 students go through many tasks of sitting for tests and interviews in preparation for entry to middle schools, and this experience may have made them think more cautiously about their own abilities related to learning in school. The same pressure may also make them more aware of the need to develop any special skills and talents they may have in

order to prepare themselves later for the world of work, and this may cause them to be a little less confident in the area of 'talent development'.

Perhaps no great importance should be attached to the slight decline in self-efficacy related to 'career exploration' and 'coping with bullying' because the change in mean score at Time 2 for these items is extremely small (less than .3 of a mark). It is important here not to over interpret such small changes. On the other hand, it may be that as P6 students get older and prepare for middle school a few of them may begin to give some serious thought for the first time to what they will aim for as a career after leaving school. These thoughts, and perhaps pressure from parents at home, may make a few students a little anxious and less confident in matters related to career planning, as reflected in the slightly decreased questionnaire score.

Regarding the very slight decline in self-efficacy in ability to cope with bullying, it is possible that as they get older some students may witness a few more occurrences of bullying inside and outside school, and this experience may gradually shake their confidence in their own ability to deal with such a situation if it happens to them. Indeed, some of the students with poorly developed life skills may themselves have been victims of bullying.

On the positive side, the slight increase in students' confidence in relating to members of the opposite sex (e.g. making friends with persons of the opposite sex, understanding their views, and communicating more effectively with them) almost certainly reflects a normal progression in children's social and emotional development. In early primary school years, boys tend to relate mainly to other boys in terms of friendships and shared activities, while girls tend to relate more closely to other girls. Boys' interests and behaviours in the early years are often described as less mature than those of the girls (Eggen & Kauchak, 1997). But in the upper primary years these differences tend to diminish and the interactions between girls and boys increase, particularly in co-educational schools and in classrooms where cooperative learning and groupwork activities are used frequently. Maturation and experience may also account for

the small increase in self-efficacy related to solving everyday problems. As children progress into upper primary school they are less dependent on others to solve their problems. The small gains in self-efficacy related to communication skills may reflect a growing confidence in voicing their own ideas, participating in class discussions, and interacting with an ever-widening range of peers and adults. Later, this confidence in communicating is sometimes diminished for a while when the students reach puberty and face the challenges and personal doubts associated with early adolescence (Ormrod, 2000).

CONCLUSION

In summary, over a period of one year in which P5 students become P6 students, they do not display any dramatic changes in their perceived level of self-efficacy in life skills. The small changes that were identified in this survey can be almost all accounted for by normal human development, maturation and experience in a school environment.

This study has focused on the association between *student characteristics* and the development of life skills self-efficacy. Future studies should examine more closely the association between life skills development and *school characteristics*. In particular, we need to consider the possible effects of school programs such as the comprehensive guidance and counseling programs referred to in the introduction, which are intended to enhance students' life skills (Gysbers, Hughey, Starr, & Lapan, 1992). To what extent are these programs effective in supporting students, parents and teachers, and advancing students' life skills development over time? Additional research is needed to clarify the complex relationships between changes in life skills self-efficacy, student characteristics and *school characteristics* (Lapan, Gysbers, & Petroski, 2001). There is a need to conduct longitudinal research of sufficient duration to study the long-term effects of guidance and counseling programs in

Hong Kong. It is hoped that the opportunity will arise to collect such data at regular intervals over a longer period of time.

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APPENDIX I

Details of Participants in the Time 1 and Time 2 Samples

	Time 1 Sample		Time 2 Sample		Matched Follow-Up Sample	
	Frequency	%	Frequency	%	Frequency	%
Grade						
P.5	5525	100	-	-	-	-
P.6	-	-	3813	100	3160	100.0
Gender						
Boys	2739	49.6	1902	49.5	1541	48.8
Girls	2705	49.0	1882	48.9	1586	50.2
Missing data	81	1.5	62	1.6	33	1.0
Immigrant status						
Born in HK	4415	79.9	2516	66.0	2516	79.6
Not born in HK	1033	18.7	610	16.0	610	19.3
Missing data	77	1.4	687	18.0	34	1.1
Social security						
Family receiving	701	12.7	379	9.9	379	12.0
Family not receiving	4660	84.3	2671	70.0	2671	84.5
Missing data	164	3.0	763	20.0	110	3.5
Textbook allowance						
Receiving	1705	30.9	957	25.1	957	30.3
Not receiving	3648	66.0	2089	54.8	2089	66.1
Missing	172	3.1	767	20.1	114	3.6
Mother's educational Level						
No formal education	258	4.7	130	3.4	130	4.1
Primary	868	15.7	500	13.1	500	15.8
Junior secondary	1465	26.5	809	21.2	809	25.6
Senior secondary	1691	30.6	1007	26.4	1007	31.9
Postsecondary	246	4.5	154	4.0	154	4.9
University	402	7.3	246	6.5	246	7.8
Postgraduate	80	1.4	37	1.0	37	1.2
Missing data	515	9.3	930	24.4	277	8.8
Father's educational Level						
No formal education	226	4.1	112	2.9	112	3.5
Primary	851	15.4	472	12.4	472	14.9
Junior secondary	1422	25.7	783	20.5	783	24.8
Senior secondary	1571	28.4	917	24.0	917	29.0
Postsecondary	235	4.3	140	3.7	140	4.4
University	545	9.9	360	9.4	360	11.4
Postgraduate	126	2.3	71	1.9	71	2.2
Missing data	549	9.9	958	25.1	305	9.7

APPENDIX II

Students' Self-Reported Use of Time Spent on Various Activities in Time 1 and Time 2

Type of Activity	P.5 Sample in Time 1 (n=5196 students)		P.6 Sample in Time 2 (n= 2982 students)	
	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>
<i>Daily activities (minutes)</i>				
Physical exercises	34.74	37.92	35.11	35.94
Homework	72.09	53.20	71.51	52.47
Revising school subjects	42.69	47.64	43.67	48.67
Leisure reading	32.33	35.15	33.17	37.03
Electronic games	52.71	68.58	50.29	64.12
<i>Weekly activities (hours)</i>				
School extra-curricular activities	2.49	5.52	2.50	5.45
Community extra-curricular activities	2.08	4.54	2.15	4.62
Voluntary services	.94	3.12	.96	3.21

APPENDIX III

The Life Skills Development Inventories (Upper Primary Form)

Academic Self-Efficacy Scale (Primary Form)

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Please read the following statements carefully and indicate how much confidence you have in performing these skills or behaviours. Please circle the appropriate number for each statement to describe your degree of confidence.

1 = extremely lacking in confidence, 2 = not confident, 3 = a little lacking in confidence, 4 = confident, 5 = quite confident, 6 = extremely confident

I am confident that I can.....

1.SS	Apply important study skills such as note-taking, summarizing, memorizing, using reference materials.	1	2	3	4	5	6
2.TM	Design my own study timetable, and act accordingly.	1	2	3	4	5	6
3.CC	Reflect upon the possible ways of tackling school tasks, and the consequence.	1	2	3	4	5	6
4.IL	Establish harmonious working relationship with classmates.	1	2	3	4	5	6
5.SS	Ask questions actively in class.	1	2	3	4	5	6
6.TM	Know how to value, and make use of, time.	1	2	3	4	5	6
7.CC	View new information and ideas from a new angle.	1	2	3	4	5	6
8.IL	Establish good working relationship with teachers.	1	2	3	4	5	6
9.SS	Master skills for collecting information on Internet.	1	2	3	4	5	6
10.TM	Manage my study time appropriately.	1	2	3	4	5	6
11.CC	Express myself very clearly in class.	1	2	3	4	5	6
12.IL	Value the resources and facilities in the school.	1	2	3	4	5	6
13.SS	Apply effective answering techniques in exams and tests.	1	2	3	4	5	6
14.TM	Finish allocated work within the specified time.	1	2	3	4	5	6
15.CC	Differentiate subjective opinion from objective facts.	1	2	3	4	5	6

16.II.	Participate in Sports Day.	1	2	3	4	5	6
17.SS	Use reading comprehension skills effectively	1	2	3	4	5	6
18.TM	Plan my approach before I start schoolwork.	1	2	3	4	5	6
19.CC	Generate a number of ways to solve problems.	1	2	3	4	5	6
20.II.	Obey the rules of school and classroom.	1	2	3	4	5	6
21.SS	Write clearly and effectively to convey my meaning.	1	2	3	4	5	6
22.TM	Arrange my leisure time properly.	1	2	3	4	5	6
23.CC	Be curious about the things around me.	1	2	3	4	5	6
24.II.	Help teachers, school and classmates actively.	1	2	3	4	5	6

Subscales:

Study skills = SS (items 1, 5, 9, 13, 17, 21); Time management = TM, (items 2, 6, 10, 14, 18, 22); Critical and creative thinking = CC (items 3, 7, 11, 15, 19, 23); Involvement in Learning = II. (items, 4, 8, 12, 16, 20, 24).

Personal Self-Efficacy Scale-Primary Form

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Please read the following statements carefully and indicate how much confidence you have in performing these skills or behaviours. Please circle the appropriate number for each statement to describe your degree of confidence.

1 = extremely lacking in confidence, 2 = not confident, 3 = a little lacking in confidence, 4 = confident, 5 = quite confident, 6 = extremely confident

I am confident that I can.....

1.PS	Recognise my own ideals in life.	1	2	3	4	5	6
2.PB	Positively search for ways to solve problems.	1	2	3	4	5	6
3.SM	Follow sound eating habits and balanced diet.	1	2	3	4	5	6
4.SR	Be clear about what is in my mind.	1	2	3	4	5	6
5.SR	Recognise my strengths.	1	2	3	4	5	6
6.PB	Stay calm when facing problems.	1	2	3	4	5	6
7.SM	Keep myself happy.	1	2	3	4	5	6
8.SR	Set myself clear goals.	1	2	3	4	5	6
9.PS	Know my own capability.	1	2	3	4	5	6
10.PB	Generate lots of ways to solve one problem.	1	2	3	4	5	6
11.SM	Maintain my weight.	1	2	3	4	5	6
12.SR	Plan the ways to achieve my goals step by step.	1	2	3	4	5	6
13.PS	Make good use of my strengths.	1	2	3	4	5	6
14.PB	Recognise the main sources of stress.	1	2	3	4	5	6
15.SM	Spend pocket money responsibly.	1	2	3	4	5	6
16.SR	Evaluate the things that I do.	1	2	3	4	5	6
17.PS	Be satisfied with myself.	1	2	3	4	5	6
18.PB	Identify the influences of stress on myself.	1	2	3	4	5	6
19.SM	Plan when to take a rest.	1	2	3	4	5	6
20.SR	Listen to and refer to the opinion of others.	1	2	3	4	5	6
21.PS	Be assured of my abilities.	1	2	3	4	5	6
22.PB	Stay optimistic when facing problems.	1	2	3	4	5	6
23.SM	Maintain exercise habit.	1	2	3	4	5	6
24.SR	I have the courage to keep evaluating myself.	1	2	3	4	5	6

Subscales:

Positive self-concept = PS (items 1, 5, 9, 13, 17, 21); Problem solving = PB (items 2, 6, 10, 14, 18, 22); Self-management = SM (items 3, 7, 11, 15, 19, 23); Self-reflection = SR (items 4, 8, 12, 16, 20, 24).

Social Self-Efficacy Scale- Primary Form

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Please read the following statements carefully and indicate how much confidence you have in performing these skills or behaviours. Please circle the appropriate number for each statement to describe your degree of confidence.

1 = extremely lacking in confidence, 2 = not confident, 3 = a little lacking in confidence, 4 = confident, 5 = quite confident, 6 = extremely confident

I am confident that I can.....

1.CS	Express myself clearly in English.	1	2	3	4	5	6
2.RA	Respect what my classmates think.	1	2	3	4	5	6
3.FR	Be concerned about my family, and help them actively.	1	2	3	4	5	6
4.BG	Establish a friendship with the opposite sex.	1	2	3	4	5	6
5.CM	Anticipate possible conflicts among the classmates before it is too late.	1	2	3	4	5	6
6.CB	Tell the teachers if I know a classmate is being bullied.	1	2	3	4	5	6
7.LS	Lead my classmates to discuss together.	1	2	3	4	5	6
8.AD	Resist taking drugs.	1	2	3	4	5	6
9.CS	Express my feelings.	1	2	3	4	5	6
10.RA	Stand in others' shoes, and consider the feelings of my classmates.	1	2	3	4	5	6
11.FR	Communicate with my family by effective means.	1	2	3	4	5	6
12.BG	Recognize the difference between friendship and romance.	1	2	3	4	5	6
13.CM	Solve any misunderstanding among my classmates so as to avoid conflict.	1	2	3	4	5	6
14.CB	Express my feelings with courage when my classmates are being bullied.	1	2	3	4	5	6
15.LS	Be capable of organizing and planning activities.	1	2	3	4	5	6
16.AD	Resist smoking.	1	2	3	4	5	6
17.CS	Express myself in Putonghua.	1	2	3	4	5	6
18.RA	Cooperate and accomplish games with classmates.	1	2	3	4	5	6
19.FR	Manage any problem in family relationships calmly.	1	2	3	4	5	6
20.BG	Understand how to get along with the opposite sex.	1	2	3	4	5	6
21.CM	React appropriately to the circumstances when facing conflict.	1	2	3	4	5	6
22.CB	Keep calm to solve the problem if you know your classmates are being bullied.	1	2	3	4	5	6

23.LS	Call on and encourage other classmates to join activities.	1	2	3	4	5	6
24.AD	Resist overindulging in playing computer games.	1	2	3	4	5	6
25.CS	Express myself with confidence.	1	2	3	4	5	6
26.RA	Listen to classmates' opinions patiently.	1	2	3	4	5	6
27.FR	Talk freely with my family members.	1	2	3	4	5	6
28.BG	Stand in others' shoes and consider the feelings of the opposite sex.	1	2	3	4	5	6
29.CM	Maintain positive social relationship even in a conflict.	1	2	3	4	5	6
30.CB	Face a problem optimistically if I know my classmates are being bullied.	1	2	3	4	5	6
31.LS	Manage any conflicts generated when leading an activity.	1	2	3	4	5	6
32.AD	Be considerate about the influence of smoking on myself, my friends and my family.	1	2	3	4	5	6
33.CS	Express my opinions appropriately.	1	2	3	4	5	6
34.RA	Get along genuinely with my classmates	1	2	3	4	5	6
35.FR	Use appropriate ways to express my feelings to my family.	1	2	3	4	5	6
36.BG	Express my feelings and opinions to the opposite sex.	1	2	3	4	5	6
37.CM	Keep a positive attitude when facing a conflict.	1	2	3	4	5	6
38.CB	Step in to help classmates if they are bullied.	1	2	3	4	5	6
39.LS	Allocate the work appropriately to group members when leading an activity.	1	2	3	4	5	6
40.AD	Be aware of the harmful influence of drug abuse on myself, my friends and my family.	1	2	3	4	5	6
41.CS	Express myself by body language such as eye and gesture.	1	2	3	4	5	6
42.RA	Listen to classmates' feelings with patience.	1	2	3	4	5	6
43.FR	Stand in others' shoes and consider the feelings of my family.	1	2	3	4	5	6
44.BG	Listen to the feelings of the opposite sex.	1	2	3	4	5	6
45.CM	Positively search for reconciliation when in conflict with classmates.	1	2	3	4	5	6
46.CB	Have the courage to express my feelings and opinions if I am bullied by classmates.	1	2	3	4	5	6
47.LS	Help to accomplish the group goal in cooperative activities.	1	2	3	4	5	6
48.AD	Be considerate about the harmful influence on myself, my friends and my family of spending too long playing computer games.	1	2	3	4	5	6

Subscales:

Communication skills = CS (items 1, 9, 17, 25, 33, 41); Respect and accept others = RA (items 2, 10, 18, 26, 34, 42); Family responsibility = FR (items 3, 11, 19, 27, 35, 43); Boy-girl relationship = BG (items 4, 12, 20, 28, 36, 44); Conflict management = CM (items 5, 13, 21, 29, 37, 45); Coping with bullying = CB (items 6, 14, 22, 30, 38, 46); Leadership skills = LS (items 7, 15, 23, 31, 39, 47); Avoiding drugs, drinking, smoking, and computer-game excesses = AD (items 8, 16, 24, 32, 40, 48).

Career and Talent Development Self-Efficacy Scale-Primary Form

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Please read the following statements carefully and indicate how much confidence you have in performing these skills or behaviours. Please circle the appropriate number for each statement to describe your degree of confidence.

1 = extremely lacking in confidence, 2 = not confident, 3 = a little lacking in confidence, 4 = confident, 5 = quite confident, 6 = extremely confident

I am confident that I can.....

1.TD	Explore my capabilities in academic subjects.	1	2	3	4	5	6
2.WA	Work autonomously.	1	2	3	4	5	6
3.CE	Explore my career path and goal.	1	2	3	4	5	6
4.TD	Recognise my potential strengths in extra-curricular activities.	1	2	3	4	5	6
5.WA	Have the courage to take up responsible tasks.	1	2	3	4	5	6
6.CE	Identify the necessary personal qualities and skills of staff required of different jobs.	1	2	3	4	5	6
7.TD	Achieve the academic goal I set myself.	1	2	3	4	5	6
8.WA	Work systematically on allocated tasks.	1	2	3	4	5	6
9.CE	Tell people the reason why I need to work.	1	2	3	4	5	6
10.TD	Choose recreational activities in which I am interested.	1	2	3	4	5	6
11.WA	Finish allocated work on time.	1	2	3	4	5	6
12.CE	Inform others of the job that I would like and have confidence in.	1	2	3	4	5	6
13.TD	Actively participate in different kinds of activities and contests to enhance my experience.	1	2	3	4	5	6
14.WA	Take the initiative to help others.	1	2	3	4	5	6
15.CE	Recognise different kinds of jobs and careers.	1	2	3	4	5	6
16.TD	Achieve the goals set in extra-curricular activities.	1	2	3	4	5	6
17.WA	Allocate time appropriately for studying, playing and taking rest.	1	2	3	4	5	6
18.CE	Cultivate my interests according to the career I choose.	1	2	3	4	5	6

Subscales:

Talent development – TD (items 1, 4, 7, 10, 13, 16); Positive Work Habits – WA (items, 2, 5, 8, 11, 14, 17);
Career exploration – CE (items 3, 6, 9, 12, 15, 18).

APPENDIX IV

Psychometric Properties of *Life Skills Development Self-Efficacy Inventory* for P.5/P.6 Students at Time 1 and Time 2

Scale and Sub-scale	Time	Reliability	Fitness Index			
		Cronbach Alpha	CFI	SRMR	RMSEA	90% CI
<i>Academic Development</i>	1 (n=5525)	.945	.919	.039	.060	.059-.062
	2 (n=3813)	.950	.915	.041	.066	.064-.068
Applying study skills	1 (n=5525)	.804	.995	.013	.029	.021-.037
	2 (n=3813)	.819	.992	.015	.038	.029-.048
Time management	1 (n=5525)	.867	.991	.016	.048	.041-.056
	2 (n=3813)	.879	.993	.015	.045	.036-.054
Creative and critical thinking	1 (n=5525)	.844	.997	.010	.025	.018-.033
	2 (n=3813)	.866	1.000	.005	.000	.000-.015
Involvement in learning	1 (n=5525)	.787	.964	.031	.078	.071-.085
	2 (n=3813)	.814	.954	.036	.096	.088-.106
<i>Personal Development</i>	1 (n=5525)	.929	.901	.040	.059	.057-.060
	2 (n=3813)	.936	.885	.043	.068	.067-.070
Positive self-concept	1 (n=5525)	.825	.978	.023	.066	.059-.073
	2 (n=3813)	.854	.976	.025	.078	.069-.087
Problem solving	1 (n=5525)	.795	.939	.043	.100	.092-.107
	2 (n=3813)	.812	.952	.038	.094	.086-.104
Self-management	1 (n=5525)	.713	.963	.030	.060	.053-.067
	2 (n=3813)	.725	.961	.032	.064	.055-.074
Self reflection	1 (n=5525)	.798	.950	.040	.091	.083-.098
	2 (n=3813)	.810	.942	.044	.105	.096-.114

Scale and Sub-scale	Time	Reliability	Fitness Index			
		Cronbach Alpha	CFI	SRMR	RMSEA	90% CI
<i>Social Development</i>	1 (n=5525)	.965	.871	.076	.053	.052-.054
	2 (n=3813)	.970	.869	.081	.058	.057-.059
Communication skills	1 (n=5525)	.779	.978	.029	.061	.053-.068
	2 (n=3813)	.801	.989	.020	.045	.036-.055
Respect and accepting others	1 (n=5525)	.845	.989	.018	.051	.043-.058
	2 (n=3813)	.857	.992	.017	.045	.036-.055
Family responsibility	1 (n=5525)	.870	.992	.015	.045	.038-.053
	2 (n=3813)	.891	.992	.015	.052	.043-.061
Boy-girl relationship	1 (n=5525)	.850	.965	.037	.093	.086-.101
	2 (n=3813)	.859	.954	.045	.113	.104-.122
Conflict management	1 (n=5525)	.844	.987	.021	.055	.048-.062
	2 (n=3813)	.865	.993	.014	.042	.033-.052
Coping with bullying	1 (n=5525)	.843	.984	.024	.059	.052-.067
	2 (n=3813)	.863	.984	.023	.065	.056-.074
Leadership	1 (n=5525)	.872	.991	.017	.050	.042-.057
	2 (n=3813)	.894	.992	.016	.051	.042-.061
Avoiding drugs, drinking and smoking	1 (n=5525)	.722	.683	.116	.241	.233-.248
	2 (n=3813)	.756	.733	.116	.243	.234-.252
<i>Career and Talent Development</i>	1 (n=5525)	.942	.945	.030	.061	.059-.063
	2 (n=3813)	.949	.939	.033	.069	.067-.071
Talent development	1 (n=5525)	.852	.986	.021	.058	.051-.066
	2 (n=3813)	.870	.981	.023	.074	.065-.083
Work habits and values	1 (n=5525)	.847	.994	.015	.037	.029-.045
	2 (n=3813)	.866	.994	.014	.039	.030-.049
Career exploration	1 (n=5525)	.863	.988	.019	.055	.048-.063
	2 (n=3813)	.879	.982	.022	.073	.064-.082

Note: CFI = Comparative fit index; SRMR=Standardized root-mean-square residual; RMSEA = Root mean square error of approximation; CI=Confidence interval