
**Connectedness and Life Skills Development among
Primary Students in Hong Kong:
A Brief Report**

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CONTENTS

	Page
ACKNOWLEDGEMENTS	1
ABSTRACT	2
INTRODUCTION	3
METHOD	5
RESULTS	10
DISCUSSION	13
REFERENCES	21
APPENDIX I	23
APPENDIX II	24
APPENDIX III	25
APPENDIX IV	34

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ABSTRACT

This paper reports results from a survey of 13,490 primary school students in Hong Kong. The purpose of the study was to assess students' level of self-efficacy in applying life skills across four domains comprising academic development, personal development, social development, and career development. Four dimensions of connectedness were also assessed, namely, students' connectedness to parents, school, peers and teachers. Students' level of self-efficacy in applying life skills, and their degrees of connectedness, were then analysed in relation to salient student characteristics. Findings indicated that the students perceived themselves to possess positive life skills across the four domains. Students in Year 3 (P.3) had slightly higher scores in self-efficacy and connectedness than those in P.5. Girls appeared slightly more confident than boys in their own ability to apply personal, social, academic, and career and talent development skills, and had slightly better connectedness to parents, schools, peers and teachers. The findings also indicated that connectedness to parents, school, peers and teachers are associated significantly with students' self-efficacy in applying life skills in all areas. School relationships represented a significant predictor of students' academic efficacy, social efficacy, personal efficacy and career efficacy. Students who reported participating in extra-curricular physical exercises tended to have higher self-efficacy scores in all 4 areas of self-efficacy. It is recommended that the school administrators, guidance professionals and class-teachers could work together to enhance students' connectedness to school and their self-efficacy in applying life skills.

Key Words: self-efficacy; life skills; adolescent; Chinese; career development; talent development

INTRODUCTION

In many parts of the world, there is growing interest in the concept of ‘education for life’. Students are now expected to master a set of generic transferable skills to enhance their functioning in various life roles such as learners, friends, siblings, parents, workers, and citizens (Education Commission, 2002; Gysbers & Hendersen, 2000). A student’s ‘life skills’ comprise a set of everyday competencies that facilitate academic progress, personal and social development, and career planning (Yuen et al., 2003). Bandura’s self-efficacy theory (1997) provides a sound conceptual framework for assessing students’ beliefs concerning their own life skill competencies (Lapan, Gysbers, Multon, & Pike, 1997).

The purpose of this study was to assess primary school students’ level of self-efficacy in applying life skills across the four domains of academic development, personal development, social development, and career development, as well as their connectedness to parents, schools, peers and teachers, and then examine any relationships between students’ level of self-efficacy, connectedness, their personal characteristics, and factors within their schools.

The research questions generated for this study were:

1. How confident are primary school students in their own ability to apply life skills?
2. How ‘connected’ do primary school students feel to their parents, school, peers and teachers?
3. To what extent is students’ life skill development positively related to student personal characteristics of gender, immigrant status, parent education level, connectedness to parents, schools, peers and teachers, time spent on leisure activities, and time spent on school and community extra-curricular activities?

The research questions are exploratory in nature. No previous data exist on students' beliefs about their own competence in applying necessary life skills. Similarly, the relationships between level of competence and student personal characteristics have not been investigated previously. Although the concept of 'connectedness' has been studied in a wide variety of contexts, it has not been explored in relation to self-efficacy or life skills acquisition. It was anticipated, however, that higher levels of confidence and competence in applying life skills might be positively and reciprocally related to students' connectedness to parents, schools, peers and teachers, and in students' willingness to be involved in community activities and extra-curricular activities. In addition, effective study skills in the academic domain, together with motivation to work towards a specific career goal, might also be related positively to overall competence in life skills and to school connectedness.

Definition of Terms

Within this report the following terms are used fairly frequently. They represent key concepts associated with the areas of school life that provide the focus for this research study.

- *Life skills*: 'Life skills' are the everyday competencies that facilitate academic progress, personal and social development, and career planning. Examples include: study skills, interpersonal relationship skills, self-management and leadership skills, and skills in problem solving (Yuen et al., 2003).
- *Self-efficacy*: This term is used to describe an individual's perception and beliefs concerning his or her own competence in a particular activity or endeavour (Bandura, 1997; McInerney & McInerney, 2002).

- *Connectedness*: In general terms, ‘connectedness’ is a person’s positive response to feelings of belonging and relatedness; for example in the family setting, in the peer group and in the community (Karcher, Holcomb, & Zambrabo, 2006). In the context of schools, connectedness is reflected in students’ belief that adults in the school care about them as individuals, as well as about their learning. The students who feel most connected to their school perceive that their teachers are supportive and caring. They feel physically and emotionally safe. These students tend to like school, have a sense of belonging, and have good friends within the school setting, and participate in more extra-curricular activities. Previous research has indicated that students who feel connected to school do better academically and also are less likely to be involved in risky health behaviors such as drug use, cigarette smoking, early sex, violence and suicidal thoughts (Blum, 2005; Cohen, 2007).

METHOD

Stage 1: Preparation

The preparatory stage involved several focus group meetings with students, conducted in three primary schools in Hong Kong. Each focus group comprised a sample of P.4 or P.6 students (n = 52). The purpose of these group meetings was to explore students’ perceptions of the skills and behaviours they believe necessary for operating effectively in school, home and community. Students were also asked to provide real-life examples of these skills, and to suggest how such skills might be acquired. Finally students were asked to comment on how effective they perceive teachers to be in helping them acquire life skills (particularly for relating positively to teachers and peers). (See Appendix 1 for students’ Focus Group discussion topics).

Focus group meetings for teachers and guidance personnel were conducted at the University of Hong Kong. These groups could be described as ‘panels of experts,’ with knowledge and experience relevant to children’s connectedness and acquisition of life skills. These experts provided the researchers with insights into school-based factors that can contribute to children’s connectedness and development of life skills, with particular reference to the enhancement of relations between students, teachers, and peers. They were also asked to comment on the nature of the guidance activities and levels of support for students provided in their schools. (See Appendix II for details of the issues raised with the teacher Focus Groups).

The data obtained from focus group discussions led to four tentative conclusions, namely:

- (1) students’ life skills in primary school were confirmed to be important in four separate domains: academic, social, personal, and career orientation;
- (2) students’ self-confidence in applying life skills might be enhanced by their participation in specific learning experiences within the classroom and beyond;
- (3) in most schools, guidance and counseling activities that may positively influence students’ life skills are already provided;
- (4) teachers perceived that teacher support, peer support and children’s community involvement all contribute to a positive school environment, which may influence students’ acquisition and application of life skills.

Stage 2: Main Survey

Participants and Procedures

In May 2010, 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 schools returned completed questionnaires (response rate of 80.0%). The features of the schools were as follows: (i) funding, 83.6% aided schools, 9.6% government schools, 2.7% private schools, 4.1% direct subsidized schools; (ii) medium of instruction, 96.2% Chinese, 3.8% English; (iii) student gender, 95% co-educational, 2.5% girls, and 2.5% boys.

In each school, classes of students were selected randomly to participate in the survey. In total 13,490 students completed the questionnaire (boys = 6,771; girls = 6,372; gender data missing on 347 students). Data indicated that the sample included students from the school years P.3 (44.9%) and P.5 (54.5%). Of the 13,490 students involved in the survey, 10,511 (77.9%) were born in Hong Kong. Data collected on the educational level of participants' fathers and mothers revealed that 13.6% and 13.9% respectively had only primary or no education, 14.8% and 15.6% respectively had middle school education, 25.5% and 28.2% had high school education; and finally 18.9% and 15.9% respectively had some college education. Further details regarding student and family demographics are summarised in Table 1.

The students were asked to complete one part of the *Life Skills Development Self-Efficacy Inventory (Primary Form)*, which includes four main scales, i.e. 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 questionnaires were administered to the students in their class periods. Details of these instruments are described below. To ensure that the time involved in completing the instruments was appropriate for students of this age range, the *Life Skills Development Self-Efficacy Inventory* was subdivided into the four existing sub-scales, and each student completed only one sub-scale, not the entire inventory. The sub-scales were assigned randomly, with all students completing the *Hemingway Measure of Adolescent Connectedness* (Karcher, 2003a) and *one* of the four self-efficacy scales. The actual numbers of students completing each sub-scale are reported within Tables 3, 5 and 7.

Data Collection Instruments

The *Life Skills Development Self-Efficacy Inventory (Primary form)* was designed specifically for this study, and comprises 4 main scales covering academic, personal, social and career life skills. Each of the four main self-efficacy scales contains within it a number of smaller sub-scales representing different clusters of skills or behaviours. Each sub-scale contains 6 items together with a Likert-type rating scale (see Appendix IV). The instruments were piloted with a sample of upper primary students to check clarity and readability. Adequate evidence for validity and internal consistency of the instruments were obtained from the present samples (see Table 3).

The *Hemingway Measure of Adolescent Connectedness* is a self-report instrument that includes subscales that assess engagement in the forms of caring for and involvement in close relationships and important contexts. Four of the Hemingway subscales, namely connectedness to parents, school, peers, and teachers were adopted in the current study.

Satisfactory psychometric properties and internal consistency of the scales have been shown across several samples from multiple validity studies (Karcher 2001; 2003b). Responses to

each of the items are made using a five-point, Likert-type response scale which ranges from (1) not true at all, (2) not really true, (3) sort of true, (4) true, to (5) very true. The Hemingway is one of the few self-report measures of adolescent connectedness that has undergone considerable empirical scrutiny and has generated considerable evidence of validity (Karcher, 2003a). Adequate evidence for validity and internal consistency of the shortened instrument were obtained from the present samples (see Table 5).

Personal Data Form

Student characteristics were solicited by means of a personal data form included with the survey questionnaire. Students' school *grade levels* were coded using P.3 = 1 and P.5 =2, and *gender* was coded as male = 0 and 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'. To measure involvement in various leisure activities, students were asked to estimate in minutes their average time spent daily in physical exercise, homework, revision, leisure reading, computer games, prayer, chatting with families, chatting with friends, chatting with teachers, and in hours, their average time spent daily in sleeping. Students were also asked to estimate in hours their average time spent per week in extra-curricular activities in uniform activities, music activities, voluntary service activities, sports, drawing, religion and drama.

Analysis of Data

To answer the first research question, the means and standard deviations (SDs) for the total scores and for subscale scores were calculated, covering self-efficacy in the domains of academic, personal, social, and career development, as well as connectedness to parents,

schools, peers and teachers. The second research question was answered by conducting multivariate analysis of variance (MANOVA). Finally, hierarchical regression analyses were performed to further explore the interrelationships among student variables, connectedness and confidence in self-efficacy.

RESULTS

In answer to the first research question, Table 3 reports the students' confidence in their own ability in applying life skills in the four domains. Given that the maximum rating score possible in any scale and subscale is 6, scores above 4.4 can be taken as reflecting moderate to high confidence in one's ability to apply the skills in that domain. Mean self-ratings below 3 would suggest a definite lack of confidence in one's competence in that particular skill or behaviour. As no sub-scale scores below 3 were reported in Table 3, it would appear that the primary school students in this study possess reasonably positive views of their own self-efficacy in the four life-skill domains. The fact that all subscale scores being higher than or equal to 4.4 appears to suggest moderate to high confidence in one's ability to apply the skills in that domain. Refer to Appendix IV to identify the exact questions students were asked in all these areas.

In order to answer the first part of research question 2 (i.e. to what extent is students' life skill development related to student personal characteristics of gender, and school grade level), two multivariate analyses of variance (MANOVAs) were applied using gender (i.e. 'boy vs. girl') and school grade levels (i.e. P.3 vs P.5) with dependent variables of academic, social, personal, and career self-efficacy ratings. The results indicated that girls reported higher levels of self-efficacy than boys in the academic life skills domain ($F(1, 2931) = 85.208$,

$p < .001$, Partial Eta Squared = .028; boys' mean = 4.52, SD = .89; girls' mean = 4.80, SD = .75), in the personal domain ($F(1, 2994) = 28.678$, $p < .001$, Partial Eta Squared = .009; boys' mean = 4.49, SD = .93; girls' mean = 4.67, SD = .86), and in social life skills subscale ($F(1, 2396) = 63.090$, $p < .001$, Partial Eta Squared = .026; boys' mean = 4.55, SD = .92; girls' mean = 4.82, SD = .75), and in career decision efficacy ($F(1, 3172) = 65.296$, $p < .001$, Partial Eta Squared = .020; boys' mean = 4.55, SD = .97; girls' mean = 4.80, SD = .79) (see Table 5).

It was also found that P.3 students scored significantly higher than P.5 students in the total score of the academic development ($F(1, 2977) = 57.769$, $p < .001$, Partial Eta Squared = .019; P.3's mean = 4.80, SD = .88; P.5's mean = 4.57, SD = .78), personal development ($F(1, 3061) = 29.318$, $p < .001$, Partial Eta Squared = .009; P.3's mean = 4.67, SD = .96; P.5's mean = 4.50, SD = .85), social development ($F(1, 2447) = 27.471$, $p < .001$, Partial Eta Squared = .018; P.3's mean = 4.79, SD = .88; P.5's mean = 4.60, SD = .83), and career development ($F(1, 3221) = 28.454$, $p < .001$, Partial Eta Squared = .009; P.3's mean = 4.76, SD = .94; P.5's mean = 4.60, SD = .85) (see Table 7).

Two multivariate analyses of variance (MANOVAs) were applied using gender (i.e. 'boy vs. girl') and school grade levels (i.e. P.3 vs P.5) with dependent variables of Hemingway connectedness to parents, school, peers, and teachers. The results indicated that girls reported higher levels of connectedness than boys to parents ($F(1, 11016) = 150.133$, $p < .001$, Partial Eta Squared = .013; boys' mean = 3.76, SD = .70; girls' mean = 3.92, SD = .64), school ($F(1, 11016) = 439.147$, $p < .001$, Partial Eta Squared = .038; boys' mean = 3.57, SD = .76; girls' mean = 3.85, SD = .66), peers ($F(1, 11016) = 255.054$, $p < .001$, Partial Eta Squared = .023; boys' mean = 3.54, SD = .76; girls' mean = 3.75, SD = .67), and teachers ($F(1, 11016) = 506.594$, $p < .001$, Partial Eta Squared = .044; boys' mean = 3.45, SD = .76; girls' mean = 3.76, SD = .65) (see Table 6).

It was also found that P.3 students scored significantly higher than P.5 students in the Hemingway connectedness to parents ($F(1, 11219) = 73.605, p < .001$, Partial Eta Squared = .007; P.3's mean = 3.90, SD = .66; P.5's mean = 3.79, SD = .68), school ($F(1, 11219) = 155.006, p < .001$, Partial Eta Squared = .014; P.3's mean = 3.80, SD = .74; P.5's mean = 3.63, SD = .71), peers ($F(1, 11219) = 82.563, p < .001$, Partial Eta Squared = .007; P.3's mean = 3.71, SD = .75; P.5's mean = 3.59, SD = .70), and teachers ($F(1, 11219) = 56.079, p < .001$, Partial Eta Squared = .005; P.3's mean = 3.66, SD = .73; P.5's mean = 3.56, SD = .72) (see Table 8).

To address the additional factors implicated in the second research question (parental education level, connectedness to parents, schools, peers and teachers, time spent on leisure activities, and time spent on extra-curricular activities), a stepwise regression analysis was conducted to investigate the amount of variance contributed by those predictor variables to students' life skills self-efficacy scores. The summary of basic data describing parental education status can be located in Appendix III. Basic data on students' connectedness to parents, schools, peers and teachers, time spent on leisure activities, and time spent on school and community extra-curricular activities can be found in Appendix III.

Using these data, a regression analysis was conducted. Since grade and gender had effects on students' self-efficacy in the overall ANOVA results, grade and gender were included as predictors. The variables were added to the analysis in the following sequence: *step 1*, gender and grade level; *step 2*, mother's education, father's education; *step 3*, family relationships, relationships with school, relationships with peers, and relationships with teachers; *step 4*, students' daily time spent in physical exercise, homework, revision, leisure reading, computer games, prayer, chatting with family, chatting with friends, chatting with teachers and sleep;

and *step 5*, students' weekly time spent in school extra-curricular uniform activities, music activities, volunteer services, sports, drawing, religion and drama.

Table 9 shows the results from the regression analysis. It is noteworthy that connectedness to parents and school connectedness were remarkably consistent predictors in students' self-efficacy, accounting for between 45.9% and 46.6% additional variance across the 4 domains after controlling for the effects of gender, grade, father's education and mother's education. Students reporting high level of connectedness to parents and school connectedness tended to have higher scores in self-efficacy. School connectedness represented a significant predictor of students' academic efficacy, social efficacy, personal efficacy and career efficacy. Fathers' education levels yielded a significant main effect on student's academic, personal and career self-efficacy, while mothers' education levels yielded a significant main effect on students' personal, social and career self efficacy. Students who reported participating in physical exercises tended to have higher self-efficacy scores in all 4 areas of self efficacy. Finally, it can be noted in Table 9 that grade level is inversely related to level of self-efficacy, suggesting that as students increase in age they become slightly less certain of their own self-efficacy in all four domains.

DISCUSSION

In general, it is reassuring to find that students in school grades P.3 to P.5 in Hong Kong are reasonably confident in their own ability to apply essential life skills in the academic, personal, social and career domains. It does seem, however, that students' relatively high levels of self-efficacy in P.3 tend to decline a little as they get older. As illustrated in Table 7, the younger students reported the highest degree of confidence across all life skill domains

and in all subscales. This finding may reflect an increasing capacity for realistic self-appraisal as students gain more experience in life. It may also be a natural developmental feature of the primary years where individuals begin to recognise more clearly and honestly their own strengths and weaknesses, and perhaps become a little less confident that they can ‘do everything well’. McInerney and McInerney (2002, p.380) have remarked: “As children’s notions of what constitutes effort, ability, achievement, success and failure develop over time, so also do their beliefs about their competencies”.

When looking at gender differences in this study, it is important to remember that with such a large sample of students it is relatively common to find that very small differences between mean scores on particular questionnaire items or subscales prove to be statistically significant. One must not lose sight of the fact that many of the differences reported in Table 5 (for example) *are* small, and one must guard against over zealous interpretation of data. Partington (1995) warns that for most comparisons between boys and girls on such measures there is a considerable overlap in scores, even when statistically significant differences are found. With this caution in mind, it can be seen that in this study girls appeared to be more confident than boys in their ability to apply life skills in academic, personal, social and career and talent development domains. Their mean self-efficacy ratings were higher than the boys’ in every subscale in the *Life Skills Development Self-Efficacy Inventory*. It is most evident in their higher scores in respecting and accepting of others, family responsibilities, and in boy-girl relationships. Perhaps this finding is not surprising because other studies have found girls to be more perceptive of, and interested in, human relationships than are boys of the same age (e.g. Gilligan, 1982), and girls are often said to be more advanced in language and social skills (Ormrod 2003). Girls in this study were also more confident than boys about their positive involvement in learning, and in applying life skills in the careers domain, particularly in relation to work attitudes and talent development. Ormrod (2003) has confirmed from other

studies that girls are generally more concerned than boys about working hard and doing well in school. This is particularly the case in the primary school years, where girls are often described as being ‘more mature’ in their behaviour and attitudes than are boys of a similar age.

Although some significant differences were found between boys and girls in their relative level of confidence in applying life skills, this finding does not lead us to make any recommendation for differentiated treatment. As stressed already, the differences tended to be small, and although very interesting to note, they are educationally unimportant. We agree with Partington (1995, p.181) when he concludes that, “Our examination of gender-linked differences has uncovered no compelling evidence which indicates that teachers should treat boys and girls differently”.

The findings from the regression analysis indicate that connectedness to parents, school, peers and teachers are significant factors contributing to the enhancement of students’ confidence in applying life skills across the four domains. Of course, it is impossible to tell from this study whether the students who feel highly confident about their own ability to apply necessary life skills in the academic, personal, social and career domains develop that confidence *because* they also have positive relationships with teachers and peers in school — or whether their efficacy in applying life skills leads them also to develop good relationships with teachers and other students. Which comes first? Or is there a *reciprocal* relationship between effective life skills and positive relationships in school? If it had been found that positive relationships in school predicted efficacy only in the social domain, the reciprocity would be easy to understand. It is less easy to interpret why positive relationships in school also predict academic self-efficacy, personal self-efficacy, and self-efficacy in making career decisions and choices. However, the implications from this finding must be that schools have a strong

responsibility to do all that is possible to foster connectedness between teachers and students and among students themselves. Progress in this direction may well have indirect benefits in terms of students' enhanced acquisition of other life skills that are essential for personal, academic and career growth.

It is also important to investigate further the possibility that deficits in life skills in the academic and personal domains may impede the formation of connectedness to parents, schools, peers and teachers. For example, there is some evidence that students with learning difficulties in the academic domain also experience problems in forming easy friendships in school and may also develop negative attitudes toward school (e.g. Hutchinson, Freeman & Bell, 2002; Kavale and Forness, 1996). There is little doubt that the development of life skills should be a very high priority for such students. It is in such areas that school counseling and guidance services or activities have a particularly important role to play in helping students become better connected emotionally to their schools.

Limitation of the Study

The number of students participating in this study was large ($n = 13,490$) and reasonable confidence can be placed on the overall pattern of results obtained; but there is one specific limitation that needs to be acknowledged. Any study that uses the strategy of self-reporting by students to obtain raw data is open to some criticism. When asked, 'How confident are you in applying life skills in this area?' did the students in this study simply respond in a way that would present themselves in the most positive light? Self-worth theory suggests that most individuals will act in ways to protect their own self-image (Covington, 1992) and this may have influenced students' responses in this study. However, the fact that students completed

the *Life Skills Development Self-Efficacy Inventory* anonymously should have minimized any tendency toward ‘self-promotion’ in their responses.

Future research might seek to investigate primary school students’ actual application of life skills and efficacy more objectively through direct classroom observation and discussion with their teachers and parents. Similarly, students’ connectedness to school could be appraised through direct observation and reporting by relevant others (teachers; parents; peers), rather than through student self-reporting methods.

Implications for administrators, guidance professionals and class-teachers

The reciprocal and interdependent relationships that exist between life skills, self-efficacy, and school connectedness were confirmed in this study. Students with well developed life skills (and confidence in applying them) tend to be those who also have positive beliefs concerning their self-efficacy and feelings of connectedness to school, peers and family. Conversely, students who are deficient in life skills tend to doubt their own efficacy in many school-related areas; and they do not feel as strongly connected to school, teachers or peers. To improve this situation, schools must place due emphasis on teaching effective life skills, building students’ confidence in their own abilities, enhancing their social skills and competencies, and helping students to feel they are valued and contributing members of the school community. In other words, there is very much more to effective ‘whole-person’ education than merely teaching specific curriculum content and preparing students for examinations. To some extent, it is reassuring to find that most students in this study felt confident in their current ability to apply relevant life skills in key areas of academic, personal and social development. However, as noted earlier in this report, when students get older they tend to lose some confidence in their own abilities. It is therefore important that teachers continue to teach and reinforce essential age-appropriate life skills explicitly to students as

they move on through the primary and secondary school years. In the academic domain for example, teachers need to cover not only curriculum content but also demonstrate effective ways of analyzing problems, tackling assignments, accessing sources of information, thinking critically, and asking relevant questions. These academic life skills are entirely compatible with the objectives of recent reforms in education in Hong Kong. In the social domain, connectedness to school and self-efficacy are closely associated with having good relationships with peers and teachers. For this reason, teachers need to be on the lookout for any students who seem to lack social skills and are isolated, neglected or marginalized by their peers. It is not always easy to help such students make friends, but sometimes specific group work and paired activities in the classroom, plus extra-curricular pursuits and activities of a social and interactive nature within the school's guidance programme can provide necessary opportunities. If a student can be helped to become more socially competent it is likely that he or she will feel more positively connected to school and more positive about themselves.

Since it appears that school connectedness predicts significantly students' academic efficacy, social efficacy, personal efficacy and career efficacy, administrators should implement whole-school policies that support a caring supportive social learning environment (Gysbers, 2003). These policies should reflect an important 'pastoral care' emphasis in the school — an emphasis that highlights the need to help all students feel valued, respected, supported, and safe. Guidance professionals and class-teachers should work together to enhance students' positive connectedness to school and to foster their self-efficacy in applying life skills. This is particularly important for P.5 pre-adolescents who could be undergoing the transitions to puberty, a stage that brings additional stresses, uncertainties and challenges. Guidance professionals should involve class-teachers and all other school personnel in engaging students more fully in the school guidance programme. Many of the activities now included in

comprehensive guidance programmes are designed to increase students' personal life skills, enhance their feelings of self-worth, and develop social and communication skills necessary for establishing and maintaining friendships.

Guidance professionals could involve class-teachers and all other school personnel in engaging students more fully in the school learning community (Li, Lerner, & Lerner, 2010). Class-teachers and subject teachers could collaborate to model and develop positive academic and social behaviors in their classrooms. Two groups of students in schools are particularly at risk of developing poor attitudes towards school, and to feel alienation rather than connection. One group comprises a few academically gifted or specifically talented students who become alienated from school because the teaching approach or curriculum content does not challenge them sufficiently, or because their particular talents are unrecognized and ignored. These students may have well-developed life skills and have no doubts about their self-efficacy in most domains; their poor attitude toward school stems from diminished motivation through boredom and frustration. For these students, the answer lies in early recognition of their abilities and then the provision of a more challenging curriculum. Fortunately, schools in Hong Kong are now attempting to provide better opportunities for gifted and talented students. Such provision is needed in every school. The second group comprises students who are persistently low achievers. Their difficulties may stem from many and diverse causes, but one common failing is that they usually lack many of the essential life skills related to academic study, and are also poor in self-management, punctuality, reliability, and school attendance. Their self-efficacy belief is weak in relation to the demands of school, and this weakness is reinforced by their persistent failure to reach required standards of work. Teachers and guidance personnel always find it difficult to bring about change in members of this group, but the starting point has to be the teaching of effective life skills and coping strategies that help them achieve more satisfactory (and satisfying) results within the classroom. Often,

‘attribution retraining’ is needed to help these students become more aware of the actual causes of their difficulties and how best to overcome their problems (McInerney & McInerney, 2002). ‘Descriptive praise’ is also necessary — praise that clearly specifies the aspect of a student’s work that is praiseworthy (e.g., “Well done Man Yi. You have summarized that information from the Web in your own words. And I like the way you have used subheadings in your report.”)

Another approach to helping these lower-achieving students relate more positively to school is to encourage and recognize other specific abilities they may have. This can be done in collaboration with parents through extra-curricular activities and by accessing community resources, for example in sports or performing arts (Lee, 1997). The fact that extra-curricular activities — particularly those concerned with physical activities and exercise — were found in this study to be positively related to students’ self-efficacy and school connectedness suggests that teachers should encourage students to participate more fully in such activities. However, this may be a difficult goal to achieve with students who have become very alienated from school. This should not be seen by teachers and guidance professionals as an insurmountable obstacle, but rather as a challenge to their own skills and initiative in discovering ways to help these students feel more successful and become more connected to school and school life.

REFERENCES

- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W.H. Freeman.
- Blum, R. (2005). *School connectedness: Improving the lives of students*. Baltimore, MD: Johns Hopkins Bloomberg School of Public Health. Online document accessed on 10 December 2010 at: <http://cecp.air.org/download/MCMonographFINAL.pdf>
- Cohen, R. (2007). School connectedness. *The School Mediator*, 7, 11: 1. Online document accessed 10 December 2010 at: http://www.schoolmediation.com/newsletters/2007/11_07.html
- Covington, M. (1992). *Making the grade: a self-worth perspective on motivation and school reform*. Cambridge, MA: Harvard University Press.
- Education Commission (2002). *Learning for life, learning through life: Reform proposals for the education system in Hong Kong*. Hong Kong: The Education Commission.
- Gilligan, C. (1982). *In a different voice*. Cambridge, MA: Harvard University Press.
- Green, S.B., Salkind, N.J., & Akey, T.M. (2000). *Using SPSS for Windows: Analyzing and Understanding Data* (2nd Edition). Upper Saddle River, NJ: Merrill-Prentice Hall.
- Gybsers, N.C. (2003). Improving the life skills curriculum and the comprehensive guidance program: Concepts and strategies. In M. Yuen, P. S. Y. Lau, and associates (eds.), *Life skills development and comprehensive guidance program: theories and practices* (pp. 22-29). Hong Kong: Life Skills Development Project, Faculty of Education, The University of Hong Kong.
- Gysbers, N.C. & Hendersen, P. (2000). *Developing and managing your school guidance program*. Alexandria, VA: American Counseling Association.
- Hutchinson, N.L., Freeman, J.G. & Bell, K.S. (2002). Children and adolescents with learning disabilities: Case studies of social relations in inclusive classrooms. In B.Y.L. Wong & M. Donahue (2002). *The social dimensions of learning disabilities* (pp.189-214). Mahwah, NJ: Erlbaum.
- Kavale, K. & Forness, S. (1996). Social skills deficits and learning disabilities: A meta-analysis. *Journal of Learning Disabilities*, 29, 226-237.

- Karcher, M. J. (2001, August). Measuring adolescent connectedness: Four validation studies. Poster presented at the annual convention of the American Psychological Association, San Francisco, CA.
- Karcher, M. J. (2003a). The Hemingway: Measure of Adolescent Connectedness: Validation studies. *ERIC/CASS* no. CG032433.
- Karcher, M. J. (2003b). *The Hemingway—Measure of Adolescent Connectedness: A manual for interpretation and scoring*. Unpublished manuscript, University of Texas at San Antonio.
- Karcher, M., Holcomb, M.R. & Zambrano E. (2006). Measuring adolescent connectedness: A guide for school-based assessment and program evaluation. In H. L. K. Coleman & C. Yeh (Eds.). *Handbook of school counseling*. Mahwah, NY: Lawrence Erlbaum.
- Lapan, R.T., Gysbers, N.C., Multon, K.D. & Pike, G.R. (1997). Developing guidance competency self-efficacy scales for high school and middle school students. *Measurement and Evaluation in Counseling and Development*, 30, 4-31.
- Lee, S. (1997). Daily experiences and adjustment of gifted low-income urban children at home and school. *Roeper Review: A Journal on Gifted Education*, 20(1), 35-38.
- Li, Y., Lerner, J. V. & Lerner, R. M. (2010). Personal and ecological assets and academic competence in early adolescence: The mediating role of school engagement. *Journal of Youth and Adolescence*, 39(7), 801-815.
- McInerney, D.M. & McInerney, V. (2002). *Educational psychology: Constructing learning* (3rd ed.). Sydney: Prentice Hall.
- Ormrod, J.E. (2003). *Educational psychology: Developing learners* (4th ed.). Upper Saddle River, NJ: Merrill-Prentice Hall.
- Partington, G. (1995). Human diversity and schools: Culture and gender. In F. Maltby, N. Gage & D. Berliner (Eds) *Educational psychology: An Australian and New Zealand perspective* (pp.154-215), Brisbane: Wiley.
- Yuen, M., Shea, P. M.K., Leung, T.K.M., Hui, E.K. P., Lau, P. S.K., Chan, R. M.C. (2003). Enhancing students' life skills development. In M. Yuen, P. S. Y. Lau, and associates (eds.), *Life skills development and comprehensive guidance program: theories and practices* (pp. 5-21). Hong Kong: Life Skills Development Project, Faculty of Education, The University of Hong Kong.

Appendix I

Student Focus Group Discussion Guide

Note: The text below is a translation. The questions and topics were presented in written Chinese, and the actual vocabulary used was also simpler for students to comprehend. Where it was necessary, specific terms were explained to the students before they encountered them in the questionnaire.

Connectedness

1. What does “connectedness” mean to you? Please share with us your experiences of connectedness to teachers, peers, parents and community.
2. What guidance activities do you find most useful for enhancing your “connectedness” with teachers, peers, parents and community? What activities are least useful?
3. What do teachers do that you find have most positive impacts on you and the school? What other things the teachers could have done?
4. What activities would you suggest the school should implement that would enhance your relations with teachers, peers, parents and community?
5. How do your connectedness with teachers, peers, parents and community influence your self confidence and personal growth?

Life Skills

6. What are the ‘life skills’ that you use most successful and happy in school, at home, and in the community? Please elaborate with concrete examples and share with us how you apply life skills in various areas.
7. How have you acquired or developed “life skills” in school, at home and in the community. Please elaborate with concrete examples. .
8. What guidance activities do you find most useful for life skills development? What activities do you think are less useful?
9. What do the teachers do that you find useful for developing your life skills? What would you suggest teachers to do more of, to help you develop life skills necessary for success and happiness in school and at home?
10. What activities do you suggest the school should implement that would enhance your life skills development? Any additional comments or suggestions?
11. Any additional comments or suggestions?

Appendix II

Teacher Focus Group Discussion Guide

1. From your experiences in your schools, how has the implementation of guidance programs enhanced students' connectedness (e.g. relationship with peers, teachers, and the school as a whole, parents and the community)? Please quote any examples of good practices that you would like to share.
2. From your experiences in your schools, how has the implementation of guidance programs enhanced students' academic attainments and academic self-efficacy? Any examples of good practices that you would like to share illustrating these.
3. From your experiences in your schools, how has the implementation of guidance programs enhanced students' personal-social life skills development (e.g. social behaviors and teacher-student and peer relationships in school)? Any examples of good practices that you would like to share illustrating these.
4. From your experiences in your schools, how has the implementation of guidance programs enhanced students' talent performance, work attitudes and career development life skills (e.g. awareness of one's interests and strengths, development of leisure and hobbies)? Any examples of good practices that you would like to share illustrating these.
5. From your experiences in your schools, how is the students' connectedness and life skills development positively related to student characteristics (i.e. gender, grade, ethnic background, immigrant status, parents' education, parental support and control, community involvement, time spent on extra-curriculum activities, and time spent on homework)? Any examples that you would like to share illustrating these?
6. From your experience in your schools, how has students' connectedness and life skills influenced schools' implementation of guidance programs? Any examples that you would like to share illustrating these.
7. Anything other issues and good practices that you would like to share and discuss with the group.

Appendix III

Table 1

Student and family characteristics

Students: N = 13,490	Frequency	%
Grade		
P.3.	6055	44.9
P.5	7348	54.5
Missing data	87	0.6
Gender		
Boys	6771	50.2
Girls	6372	47.2
Missing data	347	2.6
Immigrant status		
Born in HK	10511	77.9
Not born in HK	2695	20.0
Missing data	284	2.1
Mother's educational level		
No formal education	621	4.6
Primary	1261	9.3
Junior secondary	2111	15.6
Senior secondary	3801	28.2
Postsecondary	431	3.2
University	1364	10.1
Postgraduate	353	2.6
Missing data	3548	26.3
Father's educational level		
No formal education	645	4.8
Primary	1191	8.8
Junior secondary	2003	14.8
Senior secondary	3439	25.5
Postsecondary	446	3.3
University	1597	11.8
Postgraduate	519	3.8
Missing data	3650	27.1

Table 2
Students' Time Spent on Activities

Type of Activity	N = 11081	
	Mean	SD
<i>Daily activities (minutes)</i>		
Physical exercises	34.69	37.47
Homework	59.72	48.32
Revision	39.16	44.23
Leisure reading	30.78	34.53
Computer games	50.92	65.42
Prayer	5.50	10.39
Chat with family	31.56	44.09
Chat with friends	28.68	40.65
Chat with teachers	9.32	18.95
Time spent in sleeping (hours)	8.42	1.58
<i>Weekly activities (hours)</i>		
Time spent in uniform group activities	0.67	1.73
Time spent in music activities	1.05	2.54
Time spent in voluntary services	0.61	1.82
Time spent in sport activities	1.82	3.63
Time spent in drawing activities	0.82	1.86
Time spent in religious activities	0.74	2.14
Time spent in drama activities	0.45	1.54

Table 3

Psychometric properties of the *Life Skills Development Self-Efficacy Inventories (Upper Primary form)*

Scale and Sub-scale	No. of items	Item means mean	Item variances mean	Reliability		Fitness Index			
				Cronbach Alpha	χ^2	df	CFI	SRMR	RMSEA 90% CI
<i>Academic Development (N = 3382)</i>	24	4.67	.70	.948	3331.618	246	.921	.034	.061 (.059-.063)
Study Skills	6	4.58	.83	.814	94.671	9	.985	.019	.053 (.044-.063)
Time Management	6	4.55	.95	.865	58.887	9	.994	.012	.040 (.031-.051)
Creative and Critical Thinking	6	4.58	.83	.832	33.826	9	.996	.011	.029 (.019-.039)
Involvement	6	4.88	.77	.810	196.205	9	.966	.027	.078 (.069-.088)
<i>Personal Development (N = 3370)</i>	24	4.58	.82	.948	3557.493	246	.917	.034	.063 (.061-.065)
Positive Self	6	4.64	1.01	.854	61.351	9	.993	.013	.042 (.032-.052)
Problem solving	6	4.46	1.02	.840	244.448	9	.965	.031	.088 (.079-.098)
Self Management	6	4.59	.92	.778	82.661	9	.983	.020	.049 (.040-.059)
Self Reflection	6	4.59	.94	.837	317.367	9	.954	.034	.101 (.091-.110)
<i>Social Development (N = 2954)</i>	42	4.69	.73	.964	8818.195	798	.880	.052	.058 (.057-.059)
Communication Skills	6	4.50	.98	.790	118.709	9	.978	.029	.064 (.054-.075)
Respect and Affect Others	6	4.75	.87	.853	31.058	9	.997	.010	.029 (.018-.040)
Family Responsibility	6	4.68	1.08	.870	77.413	9	.991	.015	.051 (.041-.061)
Relationships	6	4.54	1.12	.824	224.519	9	.962	.033	.090 (.080-.100)
Conflict Management	6	4.51	1.05	.847	71.520	9	.990	.016	.049 (.038-.059)
Leadership	6	4.40	1.26	.879	124.994	9	.985	.019	.066 (.056-.077)
Avoiding Addiction	6	5.18	.86	.788	1630.960	9	.739	.092	.247 (.237-.257)
<i>Career and Talent Development (N = 3484)</i>	18	4.69	.78	.941	2383.926	132	.930	.035	.070 (.068-.072)
Talent Development	6	4.73	.94	.861	272.660	9	.968	.027	.092 (.083-.101)
Work Attitudes	6	4.59	.94	.863	58.877	9	.994	.012	.040 (.031-.050)
Career Exploration	6	4.69	.85	.828	103.592	9	.985	.018	.055 (.046-.065)

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

Table 4

Psychometric properties of *Hemingway Measure of Adolescent Connectedness* (Karcher, 2007; Chinese short form, Yuen et al., 2010).

Scale	Number of items	Item means mean	Item variances mean	Reliability		Fitness Index			
				Cronbach alpha	χ^2	df	CFI	SRMR	RMSEA (CI)
Parents	6	3.83	1.20	.676	349.151	9	.981	.022	.053 (.048-.058)
School	6	3.70	1.19	.749	985.592	9	.944	.035	.090 (.085-.095)
Peers	6	3.63	1.35	.687	180.392	9	.988	.015	.038 (.033-.043)
Teachers	6	3.59	1.44	.658	2124.970	9	.871	.066	.132 (.128-.137)

Note: CFI = Comparative fit index; RMSEA = Root mean square error of approximation; CI=90% Confident Interval; N = 13430

Table 5
Gender differences in life skills self-efficacy

Scale and Sub-scale	Gender	Item means mean	Item variances mean	F-value	P	η^2																																																																																																																																																																																																														
<i>Academic Development</i>	Boys (N=1440)	4.52	.79	85.208	.000	.028																																																																																																																																																																																																														
	Girls (N=1493)	4.80	.56				Study Skills	Boys	4.46	.92	43.970	.000	.015	Girls	4.68	.70	Time Management	Boys	4.39	1.03	64.223	.000	.021	Girls	4.67	.83	Creative and Critical Thinking	Boys	4.48	.93	36.903	.000	.012	Girls	4.67	.72	Involvement	Boys	4.66	.87	177.525	.000	.057	Girls	5.08	.57	<i>Personal Development</i>	Boys (N=1581)	4.49	.87	23.478	.000	.009	Girls (N=1415)	4.67	.74	Positive Self	Boys	4.56	1.08	14.447	.000	.005	Girls	4.71	.91	Problem solving	Boys	4.41	1.05	10.218	.005	.003	Girls	4.50	.97	Self Management	Boys	4.47	1.00	48.941	.000	.016	Girls	4.71	.81	Self Reflection	Boys	4.48	1.03	33.356	.000	.011	Girls	4.69	.85	<i>Social Development</i>	Boys (N=1207)	4.55	.85	63.090	.000	.026	Girls (N=1191)	4.82	.57	Communication Skills	Boys	4.33	1.15	52.176	.000	.021	Girls	4.64	.81	Respect and Affect Others	Boys	4.58	1.03	71.919	.000	.029	Girls	4.90	.67	Family Responsibility	Boys	4.51	1.22	58.091	.000	.024	Girls	4.83	.88	Relationships	Boys	4.37	1.33	49.105	.000	.020	Girls	4.68	.90	Conflict Management	Boys	4.41	1.20	16.767	.000	.007	Girls	4.60	.90	Leadership	Boys	4.26	1.40	29.822	.000	.012	Girls	4.52	1.09	Avoiding Addiction	Boys	5.04	.95	54.360	.000	.022	Girls	5.32	.75	<i>Career and Talent Development</i>	Boys (N=1621)	4.55	.95	65.296	.000	.020	Girls (N=1553)	4.80	.62	Talent Development	Boys	4.62	1.11	30.465	.000	.010	Girls	4.82	.78	Work Attitudes	Boys	4.42	1.10	79.436	.000	.026	Girls	4.74	.76	Career Exploration	Boys	4.55	1.03	49.948	.000
Study Skills	Boys	4.46	.92	43.970	.000	.015																																																																																																																																																																																																														
	Girls	4.68	.70				Time Management	Boys	4.39	1.03	64.223	.000	.021	Girls	4.67	.83	Creative and Critical Thinking	Boys	4.48	.93	36.903	.000	.012	Girls	4.67	.72	Involvement	Boys	4.66	.87	177.525	.000	.057	Girls	5.08	.57	<i>Personal Development</i>	Boys (N=1581)	4.49	.87	23.478	.000	.009	Girls (N=1415)	4.67	.74	Positive Self	Boys	4.56	1.08	14.447	.000	.005	Girls	4.71	.91	Problem solving	Boys	4.41	1.05	10.218	.005	.003	Girls	4.50	.97	Self Management	Boys	4.47	1.00	48.941	.000	.016	Girls	4.71	.81	Self Reflection	Boys	4.48	1.03	33.356	.000	.011	Girls	4.69	.85	<i>Social Development</i>	Boys (N=1207)	4.55	.85	63.090	.000	.026	Girls (N=1191)	4.82	.57	Communication Skills	Boys	4.33	1.15	52.176	.000	.021	Girls	4.64	.81	Respect and Affect Others	Boys	4.58	1.03	71.919	.000	.029	Girls	4.90	.67	Family Responsibility	Boys	4.51	1.22	58.091	.000	.024	Girls	4.83	.88	Relationships	Boys	4.37	1.33	49.105	.000	.020	Girls	4.68	.90	Conflict Management	Boys	4.41	1.20	16.767	.000	.007	Girls	4.60	.90	Leadership	Boys	4.26	1.40	29.822	.000	.012	Girls	4.52	1.09	Avoiding Addiction	Boys	5.04	.95	54.360	.000	.022	Girls	5.32	.75	<i>Career and Talent Development</i>	Boys (N=1621)	4.55	.95	65.296	.000	.020	Girls (N=1553)	4.80	.62	Talent Development	Boys	4.62	1.11	30.465	.000	.010	Girls	4.82	.78	Work Attitudes	Boys	4.42	1.10	79.436	.000	.026	Girls	4.74	.76	Career Exploration	Boys	4.55	1.03	49.948	.000	.018	Girls	4.80	.70						
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	Girls	4.67	.72				Involvement	Boys	4.66	.87	177.525	.000	.057	Girls	5.08	.57	<i>Personal Development</i>	Boys (N=1581)	4.49	.87	23.478	.000	.009	Girls (N=1415)	4.67	.74	Positive Self	Boys	4.56	1.08	14.447	.000	.005	Girls	4.71	.91	Problem solving	Boys	4.41	1.05	10.218	.005	.003	Girls	4.50	.97	Self Management	Boys	4.47	1.00	48.941	.000	.016	Girls	4.71	.81	Self Reflection	Boys	4.48	1.03	33.356	.000	.011	Girls	4.69	.85	<i>Social Development</i>	Boys (N=1207)	4.55	.85	63.090	.000	.026	Girls (N=1191)	4.82	.57	Communication Skills	Boys	4.33	1.15	52.176	.000	.021	Girls	4.64	.81	Respect and Affect Others	Boys	4.58	1.03	71.919	.000	.029	Girls	4.90	.67	Family Responsibility	Boys	4.51	1.22	58.091	.000	.024	Girls	4.83	.88	Relationships	Boys	4.37	1.33	49.105	.000	.020	Girls	4.68	.90	Conflict Management	Boys	4.41	1.20	16.767	.000	.007	Girls	4.60	.90	Leadership	Boys	4.26	1.40	29.822	.000	.012	Girls	4.52	1.09	Avoiding Addiction	Boys	5.04	.95	54.360	.000	.022	Girls	5.32	.75	<i>Career and Talent Development</i>	Boys (N=1621)	4.55	.95	65.296	.000	.020	Girls (N=1553)	4.80	.62	Talent Development	Boys	4.62	1.11	30.465	.000	.010	Girls	4.82	.78	Work Attitudes	Boys	4.42	1.10	79.436	.000	.026	Girls	4.74	.76	Career Exploration	Boys	4.55	1.03	49.948	.000	.018	Girls	4.80	.70																										
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	Girls	5.08	.57				<i>Personal Development</i>	Boys (N=1581)	4.49	.87	23.478	.000	.009	Girls (N=1415)	4.67	.74	Positive Self	Boys	4.56	1.08	14.447	.000	.005	Girls	4.71	.91	Problem solving	Boys	4.41	1.05	10.218	.005	.003	Girls	4.50	.97	Self Management	Boys	4.47	1.00	48.941	.000	.016	Girls	4.71	.81	Self Reflection	Boys	4.48	1.03	33.356	.000	.011	Girls	4.69	.85	<i>Social Development</i>	Boys (N=1207)	4.55	.85	63.090	.000	.026	Girls (N=1191)	4.82	.57	Communication Skills	Boys	4.33	1.15	52.176	.000	.021	Girls	4.64	.81	Respect and Affect Others	Boys	4.58	1.03	71.919	.000	.029	Girls	4.90	.67	Family Responsibility	Boys	4.51	1.22	58.091	.000	.024	Girls	4.83	.88	Relationships	Boys	4.37	1.33	49.105	.000	.020	Girls	4.68	.90	Conflict Management	Boys	4.41	1.20	16.767	.000	.007	Girls	4.60	.90	Leadership	Boys	4.26	1.40	29.822	.000	.012	Girls	4.52	1.09	Avoiding Addiction	Boys	5.04	.95	54.360	.000	.022	Girls	5.32	.75	<i>Career and Talent Development</i>	Boys (N=1621)	4.55	.95	65.296	.000	.020	Girls (N=1553)	4.80	.62	Talent Development	Boys	4.62	1.11	30.465	.000	.010	Girls	4.82	.78	Work Attitudes	Boys	4.42	1.10	79.436	.000	.026	Girls	4.74	.76	Career Exploration	Boys	4.55	1.03	49.948	.000	.018	Girls	4.80	.70																																				
<i>Personal Development</i>	Boys (N=1581)	4.49	.87	23.478	.000	.009																																																																																																																																																																																																														
	Girls (N=1415)	4.67	.74				Positive Self	Boys	4.56	1.08	14.447	.000	.005	Girls	4.71	.91	Problem solving	Boys	4.41	1.05	10.218	.005	.003	Girls	4.50	.97	Self Management	Boys	4.47	1.00	48.941	.000	.016	Girls	4.71	.81	Self Reflection	Boys	4.48	1.03	33.356	.000	.011	Girls	4.69	.85	<i>Social Development</i>	Boys (N=1207)	4.55	.85	63.090	.000	.026	Girls (N=1191)	4.82	.57	Communication Skills	Boys	4.33	1.15	52.176	.000	.021	Girls	4.64	.81	Respect and Affect Others	Boys	4.58	1.03	71.919	.000	.029	Girls	4.90	.67	Family Responsibility	Boys	4.51	1.22	58.091	.000	.024	Girls	4.83	.88	Relationships	Boys	4.37	1.33	49.105	.000	.020	Girls	4.68	.90	Conflict Management	Boys	4.41	1.20	16.767	.000	.007	Girls	4.60	.90	Leadership	Boys	4.26	1.40	29.822	.000	.012	Girls	4.52	1.09	Avoiding Addiction	Boys	5.04	.95	54.360	.000	.022	Girls	5.32	.75	<i>Career and Talent Development</i>	Boys (N=1621)	4.55	.95	65.296	.000	.020	Girls (N=1553)	4.80	.62	Talent Development	Boys	4.62	1.11	30.465	.000	.010	Girls	4.82	.78	Work Attitudes	Boys	4.42	1.10	79.436	.000	.026	Girls	4.74	.76	Career Exploration	Boys	4.55	1.03	49.948	.000	.018	Girls	4.80	.70																																														
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	Girls	4.83	.88				Relationships	Boys	4.37	1.33	49.105	.000	.020	Girls	4.68	.90	Conflict Management	Boys	4.41	1.20	16.767	.000	.007	Girls	4.60	.90	Leadership	Boys	4.26	1.40	29.822	.000	.012	Girls	4.52	1.09	Avoiding Addiction	Boys	5.04	.95	54.360	.000	.022	Girls	5.32	.75	<i>Career and Talent Development</i>	Boys (N=1621)	4.55	.95	65.296	.000	.020	Girls (N=1553)	4.80	.62	Talent Development	Boys	4.62	1.11	30.465	.000	.010	Girls	4.82	.78	Work Attitudes	Boys	4.42	1.10	79.436	.000	.026	Girls	4.74	.76	Career Exploration	Boys	4.55	1.03	49.948	.000	.018	Girls	4.80	.70																																																																																																																														
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* η^2 = the effect size eta squared. Green, Salkind, and Akey (2000) indicated that the range of effect sizes for eta squared is .01

(small), .06(medium), and .14 (large).

Table 6
Gender differences in Hemingway Connectedness

Sub-scale		Gender		F-value	P	η^2
		Item means mean	Item variance mean			
Parents connectedness	Boys (N=5602)	3.75	.48	145.05	.000	.013
	Girls (N=5416)	3.91	.42			
School connectedness	Boys	3.56	.58	426.97	.000	.037
	Girls	3.85	.43			
Peers connectedness	Boys	3.53	.58	243.91	.000	.022
	Girls	3.74	.45			
Teachers connectedness	Boys	3.45	.58	476.43	.000	.041
	Girls	3.75	.44			

* η^2 = the effect size eta squared. Green, Salkind, and Akey (2000) indicated that the range of effect sizes for eta squared is .01 (small), .06 (medium), and .14 (large).

Table 7
Grade differences in self-efficacy in applying life skills

Scale and Sub-scale	Grade	Item means mean	Item variances mean	F-value	P	η^2	
<i>Academic Development</i>	P.3 (N=1281)	4.80	.77	57.769	.000	.019	
	P.5 (N=1698)	4.57	.61				
	Study Skills	P.3	4.69	.96	51.508	.000	.017
		P.5	4.47	.69			
	Time Management	P.3	4.67	1.04	47.907	.000	.016
P.5		4.44	.85				
Creative and Critical Thinking	P.3	4.69	.94	45.640	.000	.015	
	P.5	4.49	.73				
Involvement	P.3	4.98	.81	47.200	.000	.016	
	P.5	4.79	.71				
<i>Personal Development</i>	P.3 (N=1312)	4.67	.92	29.138	.000	.009	
	P.5 (N=1751)	4.50	.73				
	Positive Self	P.3	4.72	1.10	18.861	.000	.006
		P.5	4.56	.93			
	Problem solving	P.3	4.52	1.18	11.697	.001	.004
P.5		4.40	.89				
Self Management	P.3	4.70	1.00	37.368	.000	.012	
	P.5	4.49	.85				
Self Reflection	P.3	4.69	1.04	36.046	.000	.012	
	P.5	4.49	.87				
<i>Social Development</i>	P.3 (N=1049)	4.79	.77	27.471	.000	.011	
	P.5 (N=1400)	4.60	.68				
	Communication Skills	P.3	4.59	1.02	33.197	.000	.013
		P.5	4.40	.96			
	Respect and Affect Others	P.3	4.83	.93	28.610	.000	.012
		P.5	4.67	.81			
	Family Responsibility	P.3	4.81	1.06	44.365	.000	.018
		P.5	4.55	1.05			
	Relationships	P.3	4.61	1.17	12.780	.001	.005
		P.5	4.46	1.09			
Conflict Management	P.3	4.58	1.15	17.866	.000	.007	
	P.5	4.49	.96				
Leadership	P.3	4.52	1.29	36.632	.000	.015	
	P.5	4.28	1.22				
Avoiding Addiction	P.3	5.13	1.08	1.709	.191	.001	
	P.5	5.21	.68				
<i>Career and Talent Development</i>	P.3 (N=1406)	4.76	.89	28.454	.000	.009	
	P.5 (N=1817)	4.60	.70				
	Talent Development	P.3	4.79	1.05	18.321	.000	.006
		P.5	4.66	.88			
Work Attitudes	P.3	4.69	1.07	45.869	.000	.014	
	P.5	4.48	.85				
Career Exploration	P.3	4.73	.99	14.394	.000	.004	
	P.5	4.62	.79				

* η^2 = the effect size eta squared. Green, Salkind, and Akey (2000) indicated that the range of effect sizes for eta squared is .01

(small), .06 (medium), and .14 (large).
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Table 8
Grade differences in Hemingway Connectedness

Sub-scale	Grade	Item means mean	Item variance mean	F-value	P	Eta square
Parents connectedness	P.3 (N=4795)	3.88	.45	73.605	.000	.007
	P.5 (N=6426)	3.79	.46			
School connectedness	P.3	3.78	.55	155.006	.000	.014
	P.5	3.63	.50			
Peers connectedness	P.3	3.69	.57	82.563	.000	.007
	P.5	3.58	.49			
Teachers connectedness	P.3	3.64	.55	56.079	.000	.005
	P.5	3.55	.52			

* η^2 = the effect size eta squared. Green, Salkind, and Akey (2000) indicated that the range of effect sizes for eta squared is .01 (small), .06 (medium), and .14 (large).

Table 9

Hierarchical regression analysis for prediction of primary school students' self-efficacy in academic, social, personal, and career and talent development.

Variable	Academic Development Self-efficacy (N = 1627)		Personal Development Self-efficacy (N = 1617)		Social Development Self-efficacy (N = 1281)		Career and Talent Development Self-Efficacy (N = 1675)	
	Beta	Change R ²	Beta	Change R ²	Beta	Change R ²	Beta	Change R ²
Step 1		.057**		.022**		.053**		.026**
Grade	-.187**		-.128**		-.099**		-.108**	
Gender	.143**		.075**		.202**		.121**	
Step 2		.030**		.023**		.030**		.029**
Father's education	.123**		.097**		.003		.068*	
Mother's education	.065		.070*		.170**		.125**	
Step 3		.459**		.460**		.461**		.466**
Parents connectedness	.155**		.243**		.194**		.213**	
School connectedness	.343**		.411**		.328**		.349**	
Peers connectedness	.196**		.122**		.217**		.159**	
Teachers connectedness	.183**		.076**		.137**		.128**	
Step 4		.011**		.020**		.017**		.019**
Physical exercise	.037*		.088**		.082**		.116**	
Homework	-.025		-.068**		.002		-.038*	
Revision	.028		.032		.032		.032	
Leisure reading	.053**		.036*		.023		.009	
Computer games	-.029		-.015		-.016		-.044**	
Pray	.037		.016		-.025		.011	
Chat with family	-.087		.047*		.000		-.007	
Chat with friends	.039*		-.035		.044		-.011	
Chat with teachers	-.006		.030		.055**		.020	
Sleep	.030		.021		.018		.030	
Step 5		.005		.004		.002		.006**
Uniform group activities	.048**		-.019		-.012		.042*	
Music activities	-.006		.020		-.008		.023	
Volunteer services	.005		.002		.004		.027	
Sport activities	.010		.030		-.008		.024	
Drawing activities	.038*		.012		.015		-.018	
Religious activities	-.025		.006		-.001		.019	
Drama activities	.012		.038*		.049*		.024	

Note. * $p < .05$, ** $p < .01$

Appendix IV

The Life Skills Development Inventories (Upper Primary Form)
(Yuen et al., 2005)

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.IL	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.IL	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.IL	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 = IL (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.PS	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	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).