
**Life skills development and school connectedness among senior
secondary students in Hong Kong**

A Brief Report

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ABSTRACT

This paper reports results from a survey of 12,241 Hong Kong senior secondary school students from 84 secondary schools. The purpose of the study was to assess students' level of self-efficacy in applying life skills across three domains comprising academic development, personal-social development, and career development. Students' level of self-efficacy in applying life skills was then analyzed in relation to their school connectedness. Findings indicated that the students perceive themselves to possess positive efficacy in applying life skills across the three domains. Students perceived themselves as effective in avoiding drugs, excessive smoking and drinking, being a responsible learner, understanding others, preparing for marriage and family responsibilities, becoming involved in relationships, and managing their leisure time. They rated themselves as slightly less confident in managing their learning time, study skills, peer learning, educational planning and leadership. School connectedness, including students' relations with teachers and other students, are associated significantly with students' self-efficacy in applying life skills in all areas.

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

INTRODUCTION

The concepts of lifelong learning and ‘learning to learn’ have been emphasized in the local as well as the global arena of education to encourage individuals’ sustainable development to keep up with this fast-changing world. For better functioning in various life roles such as learners, friends, siblings, parents, workers, and citizens, students need to master a set of generic transferable skills, i.e. ‘life skills’, that enhance their competencies in undergoing personal and social development, academic progress and career planning (Education Commission, 2002; Gysbers & Hendersen, 2000; Yuen et al., 2006).

Grounded in the sound conceptual framework of Bandura’s self-efficacy theory (1977), this study aimed to assess the level of self-efficacy among senior secondary students in applying life skills across the three domains of academic development, personal-social, and career development. Relationships between students’ level of self-efficacy, their personal characteristics, and their connectedness to peers and teachers were also investigated.

The research questions generated for this study were:

1. How confident are senior secondary school students in their own ability to apply life skills?
2. To what extent is students’ life skill development positively related to student personal characteristics of gender, immigrant status, parent education, parental support and control, community involvement, time spent on extra-curricular activities, time spent on homework, and school connectedness?

Based on prior research studies by the present research team (Yuen et al., 2006; Yuen et al., 2007), it was anticipated that higher levels of confidence and competence in applying life skills might be positively related to students school connectedness, parent support and control, and in students' willingness to be involved in community activities, time spent on homework and extra-curricular activities.

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*: As indicated above, '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).
- *School connectedness*: This term is defined as the magnitude of attachment, personal acceptance, respect, engagement, and support that students perceive in the school social environment (Goodenow, 1993; Libbey, 2004).

METHOD

Stage 1: Preparation

The preparatory stage involved several focus group meetings with students, conducted in three secondary schools. Each focus group comprised a sample of S.4 and S.6 students (n = 26). 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, and enhancing relationships among peers and teachers. (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 might be described as 'panels of experts' with knowledge and experience relevant to students' acquisition of life skills. These experts provided the researchers with insights into school-based factors that can contribute to students' 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 senior secondary school were confirmed to be important in four separate domains: academic, career, personal, and social orientation.
- (2) School connectedness in senior secondary school students included three domains: teacher relations, peer relations, and opportunities for achievement and leadership.
- (3) Students' self-confidence in applying life skills and their degree of school connectedness might be enhanced by family relations, their participation in guidance and counseling activities, talent development activities, community services, and school disciplinary policies and practices.
- (4) Teachers perceived that teacher support, peer support, and policy support 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 November 2007, the Life Skills Development Project team in Hong Kong conducted a questionnaire survey of senior secondary students. One hundred schools had been randomly selected from the Education and Manpower Bureau's list of secondary schools in various regions of Hong Kong. Eight-eight schools agreed to participate in the study and eighty-four schools returned completed questionnaires (response rate of 95.5%). The following brief data summarise the main characteristics of the schools: (i) *funding*: 85.7% aided schools, 1.3% private; 6.5% government; directly subsidized, 3.9% (ii) *medium of instruction*: 63.6% Chinese, 36.4% English; (iii) *student gender*: 76.6% co-educational, 11.7% girls, 11.7% boys.

In each school, classes of students were selected randomly and invited to participate in the survey. In total, 12,241 students completed the questionnaire (boys = 6,065; girls = 5,968; gender data missing on 208 students). Data indicated that the sample included students from the school years S4 (70.2%) and S6 (28.5%). Of the 12,241 students involved in the survey, 9145 (74.7%) were born in Hong Kong. About one third of the participants (35.7%) received textbook allowance, and 19.8% came from families on social security. Data collected on the educational level of participants' fathers and mothers revealed that 22.7% and 23.4% respectively had only primary or no education, 30.1% and 30.3% respectively had middle school education, 30.3% and 33.4% had high school education; and finally 12.6% and 8.9% respectively had some college education. Further details regarding student and family demographics are summarised in Table 1 (See Appendix III).

The students were asked to complete the *Life Skills Development Self-Efficacy Inventories (Senior Secondary Form)*, which includes the Academic Development Self-efficacy Inventory (AD-SEI), Personal-Social Development Self-efficacy Inventory (PSD-SEI), and Career Development Self-efficacy Inventory (CD-SEI). Details of these instruments are described below.

Data collection instruments

The *Life Skills Development Self-Efficacy Inventories (Senior Secondary Form)* were designed by the present research team specifically for senior secondary students in Hong Kong, and comprises 3 main scales covering academic, personal-social and career life skills (see Appendix IV). Each of the three main self-efficacy scales identified in Table 3 contains within it a number of smaller sub-scales representing

different clusters of skills or behaviours. Each sub-scale contains 4 items together with a Likert-type rating scale (Appendix IV). The instruments had been used in number of other studies with samples of senior secondary students from which adequate evidence for validity and internal consistency of the instruments was obtained (Yuen, Gysbers, Hui, Leung, Lau, Chan, Shea, & Ke, 2004a; 2004b; 2004c). The psychometric properties of Life Skills Development Self-Efficacy Inventories for the present sample are presented in Table 3 (See Appendix III).

The School Connectedness Scale (SCS, Yuen et al., 2008) consists of 8 items measuring connectedness with teachers and peers on a 6-point Likert scale ranging from 1 (strongly disagree) to 6 (strongly agree). Higher scores reflect greater connectedness. Based on a literature review of school connectedness (e.g., McNeely, Nonnemaker, & Blum, 2002; Whitlock, 2006) and the focus group data, the items were written by the first author of this report and validated by an expert panel of guidance professionals and educators for use in this study. The psychometric properties of Life Skills Development Self-Efficacy Inventory for the present sample are presented in Table 4 (See Appendix III).

The Parent Support Scale and Parent Control Scale (PSS and PCS; Coker & Borders, 2001; National Center for Educational Statistics, 1996) are four-item instruments measuring parents' support and control from the adolescents' perspective. Items are rated on a 6-point Likert scale ranging from 1 (strongly disagree) to 6 (strongly agree). Higher scores reflect greater parental support and control. The *PSS* and *PCS* were

translated into Chinese by the first author of the present study and back-translated by an independent translator. Items were reexamined and modified to ensure the meanings of the Chinese version were comparable to the original version. The psychometric properties of *PSS* and *PCS* for the present sample are presented in Table 5 (See Appendix III).

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 S4 = 1, S6 = 2; *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 are asked to indicate whether they were born in Hong Kong. If not, their number of years since arrival in Hong Kong. To measure involvement in various leisure activities, students were asked to estimate in minutes their average time spent daily in physical exercise, leisure reading, and electronic games. Students were also asked to estimate in hours their average time spent per week in homework, revision, extra-curricular activities, and in voluntary service activities.

Analysis of data

To answer the first research question, the means and standard deviations (SDs) for the total scores and for subscale scores from the instrument were calculated, covering self-efficacy in the domains of academic development, personal-social development,

and career development. The second research question was answered by first conducting multivariate analysis of variance (MANOVA) followed by univariate ANOVA. Finally, hierarchical regression analyses were performed to further explore the interrelationships among student variables, school 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 three domains. Given that the rating score possible for each item is from one to six, mean item scores for each subscale above 3.5 can be taken as reflecting moderate to high confidence in one's ability to apply the skills in that domain. Mean self-ratings below 3.5 would suggest a definite lack of confidence in one's competence in that particular skill or behaviour.

As there are no sub-scale scores below 3.5 reported in Table 3 it would appear that the senior secondary school students in this study possess reasonably positive views of their own self-efficacy in the three life-skill domains. The results indicate that students perceived themselves as effective in avoiding drugs, excessive smoking and drinking, being a responsible learner, understanding others, preparing for marriage and family responsibilities, becoming involved in relationships, and managing their

leisure time (mean self-ratings higher than 4.5), They rated themselves as slightly less confident (but certainly not markedly so) in time management, study skills, peer learning, educational planning and leadership (mean self-ratings lower than 4.2).

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) a multivariate analysis of variance (MANOVA) was applied using a 2 x 2 design (that is, 'boy vs. girl' : 'school grade levels S4 vs S6), with dependent variables of academic, personal-social, and career self-efficacy ratings. Significant main effects were found for gender (Wilks' Lamda = .99, $F(3,10076) = 25.92$, $p < .001$, Partial Eta Squared = .008). Significant main effects were found also for grade level (Wilks' Lamda = .99, $F(3,10076) = 20.60$, $p < .001$, Partial Eta Squared = .006). The interaction effect of gender by grade was not significant (Wilks' Lamda = 1.00, $F(3,10076) = .51$, $p < .001$, Partial Eta Squared = .000), suggesting that gender difference does not vary with grade level, and grade difference does not vary with gender.

To investigate further the significant main effects, univariate analysis of variance (ANOVA) was conducted on each of the life skills self-efficacy subscales. The results indicated that boys reported higher levels of self-efficacy than girls in the

personal-social domain ($F(1, 10395) = 16.53, p < .000$, Partial Eta Squared = .002; boys' mean = 4.40, SD = 1.27; girls' mean = 4.39, SD = .90), in career development efficacy ($F(1, 10395) = 9.46, p < .001$, Partial Eta Squared = .001; boys' mean = 4.37, SD = 1.26; girls' mean = 4.33, SD = .91), but no significant difference in academic life skills subscale ($F(1, 10395) = 2.401, p > .05$, Partial Eta Squared = .000; boys' mean = 4.15, SD = 1.32; girls' mean = 4.16, SD = 1.03) (see Table 3 in Appendix III). For the subscale in handling setbacks, boys reported higher levels of self-efficacy than girls ($F(1, 10395) = 130.87, p < .000$, Partial Eta Squared = .013; boys' mean = 4.45, SD = .97; girls' mean = 4.28, SD = .80). However, the small effect sizes for other subscale scores suggest the gender differences were not very meaningful in the present context.

It is interesting to note in Table 7 that life-skill component assessed in the questionnaire revealed that students' confidence in their own self-efficacy differed with grade level, S.6 students reported lower scores than S.4 students in career self-efficacy score ($F(1, 10436) = 9.635, p < .01$, Partial Eta Squared = .001; S.4's mean = 4.36, SD = 1.04; S.6's mean = 4.32, SD = .96). There was no significant difference between S.4 and S.6 students for the personal-social self-efficacy score ($F(1, 10436) = .008, p > .05$, Partial Eta Squared = .000; S.4's mean = 4.41, SD = 1.05;

F.6's mean = 4.42, SD = .94) and for the academic self-efficacy score ($F(1,10436) = 2.957, p > .05$, Partial Eta Squared = .000; F.4's mean = 4.14, SD = 1.19; F.6's mean = 4.18, SD = 1.09). For the subscale in avoiding drugs, excessive drinking and smoking, S.4 students reported lower levels of self-efficacy than S.6 students ($F(1, 10395) = 129.950, p < .000$, Partial Eta Squared = .013; S.4' mean = 5.33, SD = 1.00; S.6's mean = 5.53, SD = .68). However, the small effect sizes for other subscale scores suggest the differences in grade were not very meaningful in the present context.

To address the additional factors implicated in the second research question (parent education, parental support and control, community involvement, time spent on extra-curricular activities, time spent on homework, and school connectedness) 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 Table 1 in Appendix III. Basic data on students' parental support and control, community involvement, time spent on extra-curricular activities, time spent on homework and school connectedness can be found in Tables 2 and 4.

Using these data, a regression analysis was conducted. Since grade and gender had effects on students' self-efficacy in the overall MANOVA results, grade and gender were included here 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*. Parents support, parents control; *step 4*. Students' weekly

time spent in homework, revision, school extra-curricular activities, and volunteer services; *Step 5*. Connectedness to peers and connectedness to teachers.

Table 8 shows the results from the regression analysis. It is noteworthy that family support and control and school connectedness were remarkably consistent predictors in students' self-efficacy, accounting for between 9% and 20% additional variance across the 3 domains after controlling for the effects of gender, grade, father's education and mother's education. Students reporting good parents support and good school connectedness tended to have higher scores in self-efficacy, particularly in personal-social life skills. School connectedness represented a significant predictor of students' academic efficacy, personal-social efficacy and career efficacy. Fathers' and mothers' education levels yielded a significant main effect on students' self-efficacy, in particular, academic development. Students who reported participating in extra-curricular activities and voluntary services tended to have higher self-efficacy scores, particularly in career development. Finally, it can be noted in that parental control is inversely related to level of self-efficacy, suggesting that as parents increase in control students become slightly less certain of their own self-efficacy in all three domains.

DISCUSSION

In general, it is reassuring to find that students in school grades S4 to S6 in Hong Kong are reasonably confident in their own ability to apply essential life skills in the academic, personal-social and career domains. Compared to personal-social and career self-efficacy, the students tend to display less confidence in academic self-efficacy.

It is also important to note that in Hong Kong S.6 students are those who were successful S.5 students and gained S.6 places because of their better academic performances in the Hong Kong Certificate Examination. S.6 students display higher self-efficacy than S.4 *only* for self-efficacy in avoiding excessive smoking, drinking and drug abuse. It does seem, however, that students' relatively high levels of career self-efficacy in S.4 tend to decline a little as they get older and their levels of personal-social self-efficacy and academic self-efficacy remain stable. 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 senior secondary school 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 well in the domain of career development.

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 6 (for example) are *very small*, and one must guard against over zealous interpretation of data. However, examining the effect sizes reveals that one important finding is that boys reported higher level of confidence than girls in handling setbacks.

The findings from the regression analysis indicate that parental support and control, as well as connectedness to teachers and peers, are significant factors contributing to the enhancement of students' confidence in applying life skills across the three 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 supportive parents and 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 as well as support parent-child relationships. Which comes first? Or is there a *reciprocal* relationship between effective life skills and school connectedness and parents support? 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-social self-efficacy, and self-efficacy in preparing for job search and achieving one's career goals. However, the implications from this finding must be that parents and schools have a strong responsibility to do all that is possible to foster positive connectedness between parents and children, 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 domains may impede the formation of positive interpersonal relationships at home and in school. For example, there is some evidence that gifted underachievers and students with learning difficulties in the academic domain also experience problems in forming easy friendships and productive teacher-student relationships in school and may also develop negative attitudes toward school (e.g. Hutchinson, Freeman & Bell, 2002; Kavale and Forness, 1996; Rimm, 2003). Parents may not find it easy to manage behaviours of children with learning difficulties. There is little

doubt that the development of life skills should be a very high priority for such students. It is in these areas that comprehensive developmental school counseling and guidance programmes would have a particularly important role to play.

LIMITATION OF THE STUDY

It should be noted that in this survey all participants offered to take part voluntarily. For this reason it is not known whether their responses truly reflect the views of all students in this age range. It is possible that students who volunteer for such research purposes might have more positive beliefs about their life skills than those who chose not to participate in the study.

In addition, when asked, ‘How confident are you in applying life skills in this area?’ it is important to consider whether the students in this study simply responded 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 Inventories* anonymously should have minimized any tendency toward ‘self-promotion’ in their responses.

In future, it would be interesting to conduct in-depth interviews with students, their teachers and their parents to clarify the interrelationships between students’ self-efficacy in applying life skills and their relations with parental support and control as well as their relations with teachers and peers in school.

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Appendix I

Student Focus Group Discussion Guide

[Note: The text below is a translation. The questions and topics were presented in written Chinese].

What are the ‘life skills’ that you use in school, at home, and in the community? Please provide us with some examples.

How have you acquired or developed these skills at home, in school, and in the community? Please provide us with some examples.

What does “connectedness to school” mean to you? Please illustrate with concrete examples. Tell us your own stories of connectedness to teachers, peers, and the school.

What guidance activities at school do you find most useful for life skills development and connectedness to school? What activities do you think are less useful?

What do teachers do that you find useful for developing your own life skills and connectedness to school? What would you suggest that teachers should do more of, to help you develop life skills?

What activities do you suggest the school should introduce that would help you to you to develop life skills?

What activities do you suggest the school should introduce that would help you to develop connectedness to school?

How does your connectedness to school influence your self-confidence and opportunities to apply life skills? Tell us you own stories of applying life skills in the areas of academic, personal-social, and career development.

Any additional comments or suggestions?

Appendix II

Teacher Focus Group Discussion Guide

[Note: The text below is a translation. The questions and topics were presented in written Chinese].

From your experiences in your schools, how would you describe key features of students' connectedness in your school? Any examples that you would like to share illustrating these.

In our survey, we find that the teachers' perceived level of teacher caring about students was positively correlated with students' relationships in school. Could you suggest examples to illustrate these findings?

The teachers' perceived level of implemented comprehensive guidance program activities was negatively associated with students' relationships in school. Could you suggest examples to illustrate these findings?

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.

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.

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.

From your experiences in your schools, how has the implementation of guidance program activities and caring teachers enhanced students' connectedness (e.g. relationship with peers, teachers, and the school as a whole)? Any examples of good practices that you would like to share illustrating these.

From your experiences in your schools, how is students' life skills development positively related to student characteristics (i.e. gender, immigrant status, parent 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.

From your experiences in your schools, how has students' life skills influenced schools' implementation of guidance program activities and caring behaviors of teachers? Any examples that you would like to share illustrating these.

Any 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 = 12,241	Frequency	%
Grade		
S.4.	8594	70.2
S.6	3490	28.5
Missing data	143	1.2
Gender		
Boys	6065	49.5
Girls	5968	48.8
Missing data	208	1.7
Immigrant status		
Born in HK	9145	74.7
Not born in HK	2877	23.5
Missing data	218	1.8
Mother's educational Level		
No formal education	498	4.1
Primary	2365	19.3
Junior secondary	3712	30.3
Senior secondary	4091	33.4
Postsecondary	706	5.8
University	198	1.6
Postgraduate	179	1.5
Missing data	490	4.0
Father's educational Level		
No formal education	408	3.3
Primary	2370	19.4
Junior secondary	3682	30.1
Senior secondary	3708	30.3
Postsecondary	994	8.1
University	292	2.4
Postgraduate	261	2.1
Missing data	525	4.3

Table 2
Students' Time Spent on Activities

Type of Activity	n=9356	
	<i>Mean</i>	<i>SD</i>
<i>Daily activities (minutes)</i>		
Physical exercises	33.19	46.40
Leisure reading	34.06	45.22
Electronic games	75.91	103.10
<i>Weekly activities (hours)</i>		
Time spent in home work	6.46	7.07
Time spent in revision	4.40	6.10
Time spent in extra-curricular activities	1.08	4.45
Time spent in voluntary services	2.84	5.77

Table 3
Psychometric properties of the *Life Skills Development Self-Efficacy Inventories*(Senior Secondary form)

Scale and Sub-scale	Number of items	Item means mean	Item variances mean	Reliability		Fitness Index			
				Cronbach Alpha	χ^2	df	CFI	SRMR	RMSEA 90% CI
<i>Academic Development</i>	20	4.16	1.16	.944	10507.232	160	.917	.046	.080 (.078-.081)
Time Management	4	4.01	1.18	.827	45.628	2	.997	.010	.046 (.035-.058)
Study & Examination Skills	4	4.03	1.16	.811	126.260	2	.991	.017	.078 (.067-.090)
Learning from Friends	4	4.09	1.17	.859	44.757	2	.998	.009	.046 (.035-.058)
Educational Planning	4	4.06	1.26	.841	17.709	2	.999	.006	.028 (.017-.040)
Being a Responsible Learner	4	4.62	1.01	.786	158.303	2	.986	.021	.087 (.076-.099)
<i>Personal-Social Development</i>	60	4.42	1.00	.968	105632.912	1710	.688	.061	.078 (.077-.078)
Understanding Self	4	4.30	1.06	.701	11.078	2	.999	.007	.021 (.010-.034)
Understanding Others	4	4.56	.84	.717	447.165	2	.945	.047	.148 (.137-.160)
Avoiding Drugs, Excessive Drinking and Smoking	4	5.39	.91	.846	30.632	2	.998	.008	.037 (.026-.050)
Marriage & family Responsibilities	4	4.55	.94	.791	164.437	2	.980	.028	.090 (.078-.102)
Handling Setbacks	4	4.36	.89	.794	237.968	2	.977	.028	.116 (.105-.128)
Health & Physical Training	4	4.25	1.05	.769	57.772	2	.994	.013	.053 (.041-.065)
Cooperation & Team Spirit	4	4.41	.82	.766	250.552	2	.975	.029	.111 (.100-.123)
Leadership Skills	4	4.11	1.05	.846	21.079	2	.999	.006	.031 (.020-.043)
Management of Stress & Emotion	4	4.27	1.16	.747	20.232	2	.998	.009	.030 (.019-.043)
Self-Evaluation Skills	4	4.38	.92	.790	11.991	2	.999	.006	.022 (.011-.035)
Thinking & Expression Skills	4	4.32	.85	.769	20.518	2	.998	.008	.030 (.019-.043)
Sexual Knowledge & Relationship	4	4.44	1.14	.872	4587.555	2	.813	.100	.476 (.465-.488)
Leisure Time Management	4	4.58	.93	.838	149.910	2	.990	.017	.086 (.074-.097)

Financial Management	4	4.20	1.41	.697	393.148	2	.952	.047	.139 (.128-.151)
Personal Goals Setting	4	4.24	1.00	.811	1216.841	2	.915	.061	.245 (.234-.257)
<i>Career Development</i>	24	4.36	1.00	.963	17996.918	237	.896	.043	.086 (.085-.087)
Career Planning	4	4.43	1.00	.834	33.022	2	.998	.008	.039 (.028-.051)
Gender Issues in Career	4	4.47	.98	.792	46.851	2	.996	.011	.047 (.036-.059)
Training Selection	4	4.39	.95	.840	115.506	2	.993	.015	.075 (.063-.086)
Job Hunt Preparation	4	4.22	1.12	.831	435.002	2	.973	.035	.146 (.134-.157)
Job Hunting	4	4.35	1.04	.812	55.650	2	.996	.011	.051 (.040-.063)
Career Goal Setting	4	4.29	.93	.858	45.434	2	.998	.009	.046 (.035-.058)

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 *School Connectedness Scale*

Scale	Number of items	Item means mean	Item variances mean	Reliability			Fitness Index		
				Cronbach alpha	χ^2	df	CFI	SRMR	RMSEA (CI)
Connectedness to Peers	4	4.62	1.13	.793	61.375	2	.996	.013	.054 (.043-.066)
Connectedness to teachers	4	4.05	1.33	.843	94.010	2	.994	.013	.067 (.056-.079)
Total Scale	8	4.34	1.23	.851	669.258	19	.980	.028	.058 (.054-.062)

Note: CFI = Comparative fit index; RMSEA = Root mean square error of approximation; CI=90% Confident Interval; n = 10224

Table 5
Psychometric properties of *Parents Support Scale* and *Parents Control Scale*

Scale	Number of items	Item means mean	Item variances mean	Reliability			Fitness Index		
				Cronbach alpha	χ^2	df	CFI	SRMR	RMSEA (CI)
Parents Support	4	3.19	1.75	.790	3126.692	2	.824	.131	.392 (.381-.404)
Parents Control	4	3.52	2.09	.699	63.917	2	.991	.016	.055 (.044-.067)

Note: CFI = Comparative fit index; RMSEA = Root mean square error of approximation; CI=90% Confident Interval; n = 10224

Table 6
Gender differences in life skills self-efficacy

Scale and Sub-scale		Item means mean	Item variances mean	F-value	P	Eta square
<i>Academic Development</i>	Boys	4.15	1.32	2.401	.121	.000
	Girls	4.16	1.03			
Time Management	Boys	4.03	1.32	3.728	.054	.000
	Girls	3.98	1.07			
Study & Examination Skills	Boys	4.07	1.29	20.624	.000	.002
	Girls	3.98	1.05			
Learning from Friends	Boys	4.06	1.35	10.279	.001	.001
	Girls	4.11	1.04			
Educational Planning	Boys	4.04	1.41	3.351	.067	.000
	Girls	4.07	1.14			
Being a Responsible Learner	Boys	4.54	1.18	65.920	.000	.006
	Girls	4.67	.88			
<i>Personal-Social Development</i>	Boys	4.40	1.27	16.533	.000	.002
	Girls	4.39	.90			
Understanding Self	Boys	4.34	1.16	33.839	.000	.003
	Girls	4.26	.95			
Understanding Others	Boys	4.48	1.00	7.744	.005	.001
	Girls	4.45	.81			
Avoiding Drugs, Excessive Drinking and Smoking	Boys	5.37	1.02	10.465	.001	.001
	Girls	5.42	.81			
Marriage & family Responsibilities	Boys	4.57	1.03	8.211	.004	.001
	Girls	4.53	.85			
Handling Setbacks	Boys	4.45	.97	130.866	.000	.013
	Girls	4.28	.80			
Health & Physical Training	Boys	4.31	1.14	53.973	.000	.005
	Girls	4.19	.95			
Cooperation & Team Spirit	Boys	4.40	.94	.167	.683	.000
	Girls	4.41	.70			
Leadership Skills	Boys	4.10	1.20	2.960	.085	.000
	Girls	4.13	.90			
Management of Stress & Emotion	Boys	4.34	1.22	64.252	.000	.006
	Girls	4.21	1.09			

Self-Evaluation Skills	Boys	4.43	1.04	52.246	.000	.005
	Girls	4.33	.80			
Thinking & Expression Skills	Boys	4.35	.94	16.659	.000	.002
	Girls	4.29	.76			
Sexual Knowledge & Relationship	Boys	4.41	1.37	9.822	.002	.001
	Girls	4.47	.93			
Leisure Time Management	Boys	4.57	1.05	.519	.471	.000
	Girls	4.58	.82			
Financial Management	Boys	4.20	1.57	.001	.970	.000
	Girls	4.20	1.25			
Personal Goals Setting	Boys	4.31	1.08	74.670	.000	.007
	Girls	4.18	.92			
<i>Career Development</i>	Boys	4.37	1.26	9.464	.002	.001
	Girls	4.33	.91			
Career Planning	Boys	4.44	1.11	11.010	.001	.001
	Girls	4.39	.93			
Gender Issues in Career	Boys	4.50	1.16	29.837	.000	.003
	Girls	4.42	.87			
Training Selection	Boys	4.37	1.09	.835	.361	.000
	Girls	4.39	.86			
Job Hunt Preparation	Boys	4.21	1.27	.055	.814	.000
	Girls	4.21	1.01			
Job Hunting	Boys	4.37	1.15	14.937	.000	.001
	Girls	4.31	.97			
Career Goal Setting	Boys	4.34	1.03	36.125	.000	.004
	Girls	4.23	.85			

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

Scale and Sub-scale		Item means mean	Item variances mean	F-value	P	Eta square
<i>Academic Development</i>	S.4	4.14	1.19	2.957	.086	.000
	S.6	4.18	1.09			
Time Management	S.4	4.04	1.21	42.864	.000	.004
	S.6	3.93	1.17			
Study & Examination Skills	S.4	4.04	1.20	18.675	.000	.002
	S.6	3.98	1.11			
Learning from Friends	S.4	4.03	1.24	68.362	.000	.007
	S.6	4.21	1.07			
Educational Planning	S.4	4.02	1.31	23.817	.000	.002
	S.6	4.13	1.17			
Being a Responsible Learner	S.4	4.58	1.06	25.126	.000	.002
	S.6	4.67	.96			
<i>Personal-Social Development</i>	S.4	4.41	1.05	.008	.929	.000
	S.6	4.42	.94			
Understanding Self	S.4	4.31	1.07	1.955	.162	.000
	S.6	4.29	1.02			
Understanding Others	S.4	4.48	.92	6.417	.011	.001
	S.6	4.44	.87			
Avoiding Drugs, Excessive Drinking and Smoking	S.4	5.33	1.00	129.950	.000	.013
	S.6	5.53	.68			
Marriage & family Responsibilities	S.4	4.55	.96	.339	.560	.000
	S.6	4.56	.89			
Handling Setbacks	S.4	4.34	.92	.466	.495	.000
	S.6	4.36	.82			
Health & Physical Training	S.4	4.27	1.07	19.119	.000	.002
	S.6	4.19	1.00			
Cooperation & Team Spirit	S.4	4.41	.83	.591	.442	.000
	S.6	4.40	.78			
Leadership Skills	S.4	4.13	1.05	5.239	.022	.001
	S.6	4.08	1.03			
Management of Stress & Emotion	S.4	4.27	1.19	.294	.588	.000
	S.6	4.26	1.10			
Self-Evaluation Skills	S.4	4.36	.96	22.528	.000	.002
	S.6	4.43	.83			

Thinking & Expression Skills	S.4	4.32	.87	.787	.375	.000																																																																																																										
	S.6	4.33	.81				Sexual Knowledge & Relationship	S.4	4.44	1.17	.016	.900	.000	S.6	4.44	1.07	Leisure Time Management	S.4	4.57	.95	.033	.857	.000	S.6	4.57	.89	Financial Management	S.4	4.21	1.42	3.322	.068	.000	S.6	4.18	1.38	Personal Goals Setting	S.4	4.25	1.03	2.596	.107	.000	S.6	4.22	.94	<i>Career Development</i>	S.4	4.36	1.04	9.635	.002	.001	S.6	4.32	.96	Career Planning	S.4	4.44	1.03	36.340	.000	.004	S.6	4.35	.98	Gender Issues in Career	S.4	4.48	1.03	28.500	.000	.003	S.6	4.40	.96	Training Selection	S.4	4.37	.99	.163	.687	.000	S.6	4.39	.91	Job Hunt Preparation	S.4	4.20	1.16	1.948	.163	.000	S.6	4.23	1.08	Job Hunting	S.4	4.36	1.08	20.133	.000	.002	S.6	4.29	1.03	Career Goal Setting	S.4	4.30	.97	9.656	.002
Sexual Knowledge & Relationship	S.4	4.44	1.17	.016	.900	.000																																																																																																										
	S.6	4.44	1.07				Leisure Time Management	S.4	4.57	.95	.033	.857	.000	S.6	4.57	.89	Financial Management	S.4	4.21	1.42	3.322	.068	.000	S.6	4.18	1.38	Personal Goals Setting	S.4	4.25	1.03	2.596	.107	.000	S.6	4.22	.94	<i>Career Development</i>	S.4	4.36	1.04	9.635	.002	.001	S.6	4.32	.96	Career Planning	S.4	4.44	1.03	36.340	.000	.004	S.6	4.35	.98	Gender Issues in Career	S.4	4.48	1.03	28.500	.000	.003	S.6	4.40	.96	Training Selection	S.4	4.37	.99	.163	.687	.000	S.6	4.39	.91	Job Hunt Preparation	S.4	4.20	1.16	1.948	.163	.000	S.6	4.23	1.08	Job Hunting	S.4	4.36	1.08	20.133	.000	.002	S.6	4.29	1.03	Career Goal Setting	S.4	4.30	.97	9.656	.002	.001	S.6	4.26	.88						
Leisure Time Management	S.4	4.57	.95	.033	.857	.000																																																																																																										
	S.6	4.57	.89				Financial Management	S.4	4.21	1.42	3.322	.068	.000	S.6	4.18	1.38	Personal Goals Setting	S.4	4.25	1.03	2.596	.107	.000	S.6	4.22	.94	<i>Career Development</i>	S.4	4.36	1.04	9.635	.002	.001	S.6	4.32	.96	Career Planning	S.4	4.44	1.03	36.340	.000	.004	S.6	4.35	.98	Gender Issues in Career	S.4	4.48	1.03	28.500	.000	.003	S.6	4.40	.96	Training Selection	S.4	4.37	.99	.163	.687	.000	S.6	4.39	.91	Job Hunt Preparation	S.4	4.20	1.16	1.948	.163	.000	S.6	4.23	1.08	Job Hunting	S.4	4.36	1.08	20.133	.000	.002	S.6	4.29	1.03	Career Goal Setting	S.4	4.30	.97	9.656	.002	.001	S.6	4.26	.88																
Financial Management	S.4	4.21	1.42	3.322	.068	.000																																																																																																										
	S.6	4.18	1.38				Personal Goals Setting	S.4	4.25	1.03	2.596	.107	.000	S.6	4.22	.94	<i>Career Development</i>	S.4	4.36	1.04	9.635	.002	.001	S.6	4.32	.96	Career Planning	S.4	4.44	1.03	36.340	.000	.004	S.6	4.35	.98	Gender Issues in Career	S.4	4.48	1.03	28.500	.000	.003	S.6	4.40	.96	Training Selection	S.4	4.37	.99	.163	.687	.000	S.6	4.39	.91	Job Hunt Preparation	S.4	4.20	1.16	1.948	.163	.000	S.6	4.23	1.08	Job Hunting	S.4	4.36	1.08	20.133	.000	.002	S.6	4.29	1.03	Career Goal Setting	S.4	4.30	.97	9.656	.002	.001	S.6	4.26	.88																										
Personal Goals Setting	S.4	4.25	1.03	2.596	.107	.000																																																																																																										
	S.6	4.22	.94				<i>Career Development</i>	S.4	4.36	1.04	9.635	.002	.001	S.6	4.32	.96	Career Planning	S.4	4.44	1.03	36.340	.000	.004	S.6	4.35	.98	Gender Issues in Career	S.4	4.48	1.03	28.500	.000	.003	S.6	4.40	.96	Training Selection	S.4	4.37	.99	.163	.687	.000	S.6	4.39	.91	Job Hunt Preparation	S.4	4.20	1.16	1.948	.163	.000	S.6	4.23	1.08	Job Hunting	S.4	4.36	1.08	20.133	.000	.002	S.6	4.29	1.03	Career Goal Setting	S.4	4.30	.97	9.656	.002	.001	S.6	4.26	.88																																				
<i>Career Development</i>	S.4	4.36	1.04	9.635	.002	.001																																																																																																										
	S.6	4.32	.96				Career Planning	S.4	4.44	1.03	36.340	.000	.004	S.6	4.35	.98	Gender Issues in Career	S.4	4.48	1.03	28.500	.000	.003	S.6	4.40	.96	Training Selection	S.4	4.37	.99	.163	.687	.000	S.6	4.39	.91	Job Hunt Preparation	S.4	4.20	1.16	1.948	.163	.000	S.6	4.23	1.08	Job Hunting	S.4	4.36	1.08	20.133	.000	.002	S.6	4.29	1.03	Career Goal Setting	S.4	4.30	.97	9.656	.002	.001	S.6	4.26	.88																																														
Career Planning	S.4	4.44	1.03	36.340	.000	.004																																																																																																										
	S.6	4.35	.98				Gender Issues in Career	S.4	4.48	1.03	28.500	.000	.003	S.6	4.40	.96	Training Selection	S.4	4.37	.99	.163	.687	.000	S.6	4.39	.91	Job Hunt Preparation	S.4	4.20	1.16	1.948	.163	.000	S.6	4.23	1.08	Job Hunting	S.4	4.36	1.08	20.133	.000	.002	S.6	4.29	1.03	Career Goal Setting	S.4	4.30	.97	9.656	.002	.001	S.6	4.26	.88																																																								
Gender Issues in Career	S.4	4.48	1.03	28.500	.000	.003																																																																																																										
	S.6	4.40	.96				Training Selection	S.4	4.37	.99	.163	.687	.000	S.6	4.39	.91	Job Hunt Preparation	S.4	4.20	1.16	1.948	.163	.000	S.6	4.23	1.08	Job Hunting	S.4	4.36	1.08	20.133	.000	.002	S.6	4.29	1.03	Career Goal Setting	S.4	4.30	.97	9.656	.002	.001	S.6	4.26	.88																																																																		
Training Selection	S.4	4.37	.99	.163	.687	.000																																																																																																										
	S.6	4.39	.91				Job Hunt Preparation	S.4	4.20	1.16	1.948	.163	.000	S.6	4.23	1.08	Job Hunting	S.4	4.36	1.08	20.133	.000	.002	S.6	4.29	1.03	Career Goal Setting	S.4	4.30	.97	9.656	.002	.001	S.6	4.26	.88																																																																												
Job Hunt Preparation	S.4	4.20	1.16	1.948	.163	.000																																																																																																										
	S.6	4.23	1.08				Job Hunting	S.4	4.36	1.08	20.133	.000	.002	S.6	4.29	1.03	Career Goal Setting	S.4	4.30	.97	9.656	.002	.001	S.6	4.26	.88																																																																																						
Job Hunting	S.4	4.36	1.08	20.133	.000	.002																																																																																																										
	S.6	4.29	1.03				Career Goal Setting	S.4	4.30	.97	9.656	.002	.001	S.6	4.26	.88																																																																																																
Career Goal Setting	S.4	4.30	.97	9.656	.002	.001																																																																																																										
	S.6	4.26	.88																																																																																																													

Table 8

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

Variable	Academic Self-efficacy		Personal-social Self-efficacy		Career Self-Efficacy	
	Beta	Change R2	Beta	Change R2	Beta	Change R2
Step 1		.001*		.001**		.002**
Gender	-.015		-.059**		-.046**	
Grade	.023**		.016		-.018*	
Step 2		.011**		.009**		.010**
Father's education	-.004		-.010		.020	
Mother's education	.024*		.020		.006	
Step 3		.135**		.116**		.090**
Parent Support	.262**		.209**		.185**	
Parent Control	-.037**		-.020*		-.018	
Step 4		.024**		.015**		.016**
Time spent in home work	.011		-.012		-.009	
Time spent in revision	.123**		.084**		.090**	
Time spent in extra-curricular activities	.000		.018*		.028**	
Time spent in voluntary service	.016		.018*		.018*	
Step 5		.127**		.197**		.146**
Connectedness to peers	.219**		.343**		.281**	
Connectedness to teachers	.218**		.192**		.181**	
F value	F (12, 10109) = 358.657***		F (12, 10109) = 358.657***		F (12, 9996) = 298.907***	
Total R Square	29.9%		33.9%		26.4%	

Note. $N=10224$ * $p<.05$, ** $p<.01$, *** $p<.001$, two-tailed.

Appendix IV

The Life Skills Development Inventories (Secondary School Form)
(Yuen et al., 2007)

The Personal-Social Development Self-Efficacy Inventory

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 Not Confident, 2 = Not Confident, 3 = Hardly Confident,
4 = Fairly Confident, 5 = Confident, 6 = Extremely Confident**

I am confident that I can

- | | | | | | | |
|--|---|---|---|---|---|---|
| 1. uphold my own ideals. | 1 | 2 | 3 | 4 | 5 | 6 |
| 2. master the way to get along well with people. | 1 | 2 | 3 | 4 | 5 | 6 |
| 3. resist the temptation of using illegal drugs. | 1 | 2 | 3 | 4 | 5 | 6 |
| 4. consider different factors that can affect marriage when I get married. | 1 | 2 | 3 | 4 | 5 | 6 |
| 5. act according to circumstances in times of setbacks. | 1 | 2 | 3 | 4 | 5 | 6 |

I am confident that I can

- | | | | | | | |
|---|---|---|---|---|---|---|
| 6. master the ways to stay healthy. | 1 | 2 | 3 | 4 | 5 | 6 |
| 7. attentively listen to others' opinion when participating in activities. | 1 | 2 | 3 | 4 | 5 | 6 |
| 8. actively involve classmates in discussions when participating in school or classroom activities. | 1 | 2 | 3 | 4 | 5 | 6 |
| 9. handle the stress from studying. | 1 | 2 | 3 | 4 | 5 | 6 |
| 10. evaluate myself frequently and examine the reasons for success and failure. | 1 | 2 | 3 | 4 | 5 | 6 |

I am confident that I can

- | | | | | | | |
|---|---|---|---|---|---|---|
| 11. express my feeling and opinion in appropriate ways. | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|

12. develop normal friendships with the opposite sex.	1	2	3	4	5	6
13. develop interests in many areas.	1	2	3	4	5	6
14. keep expenditure below income and not be too wasteful.	1	2	3	4	5	6
15. set up different goals of my life.	1	2	3	4	5	6

I am confident that I can

16. face criticisms with an open attitude.	1	2	3	4	5	6
17. handle disputes among friends.	1	2	3	4	5	6
18. resist the temptation of smoking or excessive drinking.	1	2	3	4	5	6
19. think over what constitutes a happy marriage life when I choose my partner.	1	2	3	4	5	6
20. master problem-solving skills in face of problems.	1	2	3	4	5	6

I am confident that I can

21. master the ways to stay psychologically healthy.	1	2	3	4	5	6
22. cooperate with others to reach the team's goal when participating in activities.	1	2	3	4	5	6
23. organize and plan activities.	1	2	3	4	5	6
24. master the ways to make myself happy.	1	2	3	4	5	6
25. admit my mistakes to myself.	1	2	3	4	5	6

I am confident that I can

26. use various appropriate means to express my opinion.	1	2	3	4	5	6
27. maintain normal friendship with the opposite sex.	1	2	3	4	5	6
28. develop some interests so that my leisure time will be richer and happier.	1	2	3	4	5	6
29. avoid borrowing money from others unless absolutely necessary.	1	2	3	4	5	6
30. plan how best to attain the different goals in life.	1	2	3	4	5	6

I am confident that I can

31. accept and like myself.	1	2	3	4	5	6
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- | | | | | | | |
|---|---|---|---|---|---|---|
| 32. form friendships with others. | 1 | 2 | 3 | 4 | 5 | 6 |
| 33. appreciate how smoking, drug abuse and excessive drinking would affect my friends, family and myself. | 1 | 2 | 3 | 4 | 5 | 6 |
| 34. think over the relations between children and marriage when I prepare myself to be a parent. | 1 | 2 | 3 | 4 | 5 | 6 |
| 35. learn from mistakes when I make them. | 1 | 2 | 3 | 4 | 5 | 6 |

I am confident that I can

- | | | | | | | |
|---|---|---|---|---|---|---|
| 36. take care of my health when I am sick. | 1 | 2 | 3 | 4 | 5 | 6 |
| 37. when leading an activity, encourage group members with no sense of responsibility to be more responsible to themselves and others.. | 1 | 2 | 3 | 4 | 5 | 6 |
| 38. appropriately allocate work to group members when leading an activity. | 1 | 2 | 3 | 4 | 5 | 6 |
| 39. control my emotions. | 1 | 2 | 3 | 4 | 5 | 6 |
| 40. benefit from the process of self-evaluation. | 1 | 2 | 3 | 4 | 5 | 6 |

I am confident that I can

- | | | | | | | |
|---|---|---|---|---|---|---|
| 41. exchange ideas with my classmates when I participate in school or classroom activities. | 1 | 2 | 3 | 4 | 5 | 6 |
| 42. develop a romantic relationship with the opposite sex. | 1 | 2 | 3 | 4 | 5 | 6 |
| 43. choose some recreational activities that suit my interests. | 1 | 2 | 3 | 4 | 5 | 6 |
| 44. keep an account book for myself. | 1 | 2 | 3 | 4 | 5 | 6 |
| 45. find several possible solutions for one problem. | 1 | 2 | 3 | 4 | 5 | 6 |

I am confident that I can

- | | | | | | | |
|--|---|---|---|---|---|---|
| 46. make use of my strengths and rectify my weaknesses. | 1 | 2 | 3 | 4 | 5 | 6 |
| 47. stand in others' shoes and consider their feelings. | 1 | 2 | 3 | 4 | 5 | 6 |
| 48. prevent myself from acquiring habits of excessive drinking, smoking or drug abuse. | 1 | 2 | 3 | 4 | 5 | 6 |
| 49. face the responsibility and difficulty of being a parent. | 1 | 2 | 3 | 4 | 5 | 6 |
| 50. encourage myself in face of setbacks. | 1 | 2 | 3 | 4 | 5 | 6 |

I am confident that I can

51. develop a balanced diet.	1	2	3	4	5	6
52. handle disputes in the process of cooperation when participating in activities.	1	2	3	4	5	6
53. call on other classmates to join activities.	1	2	3	4	5	6
54. express my feelings in correct and appropriate ways when facing pressure.	1	2	3	4	5	6
55. have the courage and stamina to evaluate myself.	1	2	3	4	5	6
I am confident that I can						
56. adopt multiple perspectives when analysing a problem or issue .	1	2	3	4	5	6
57. maintain a romantic relationship with the opposite sex.	1	2	3	4	5	6
58. make good use of leisure time and take part in extra-curricular activities that I like.	1	2	3	4	5	6
59. prepare a financial budget.	1	2	3	4	5	6
60. work independently, first analyse the ways of handling each incident and then make the best decision.	1	2	3	4	5	6

Subscales:

Understanding Self=US(item 1,16,31,46); Understanding Others=UO(items 2,17,32, 47); Avoiding Drugs, Drinking & Smoking =ADS(items 4, 19, 34, 49); Handling Setbacks=HS(items 5, 20, 35, 50); Health & Physical Training= HPT(items 6,21, 36,51); Cooperation & Team Spirit=CTS(items 7,22, 37, 52); Leadership Skills=LS(items 8, 23, 38,53); Management of Stress & Emotion=MSE(items 9, 24, 39, 54); Self-Evaluation Skills=SE(items 10, 25, 40, 55); Thinking & Expression Skills=TE(items 11, 26, 41, 56); Sexual Knowledge & Relationship=SKR(items 12, 27, 42, 57); Leisure Time Management=LTM(items 13, 28, 43, 58); Financial Management=FT(items 14, 29, 44, 59); Personal Goals Setting=PG(items 15, 30, 45, 60)

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The Career Development Self-Efficacy Inventory

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 Not Confident, 2 = Not Confident, 3 = Hardly Confident, 4 = Fairly Confident, 5 = Confident, 6 = Extremely Confident

I am confident that I can

- | | | | | | | |
|--|---|---|---|---|---|---|
| 1. understand the relationship between my interests and choosing a career. | 1 | 2 | 3 | 4 | 5 | 6 |
| 2. understand the relationship between my gender and choosing a career. | 1 | 2 | 3 | 4 | 5 | 6 |
| 3. understand a vocational training program before I enroll in it. | 1 | 2 | 3 | 4 | 5 | 6 |
| 4. master general interview techniques (e.g. appearance, ways of speaking, etc.) | 1 | 2 | 3 | 4 | 5 | 6 |
| 5. maintain the stamina to look for different job opportunities even when there are difficulties in job hunting. | 1 | 2 | 3 | 4 | 5 | 6 |

I am confident that I can

- | | | | | | | |
|--|---|---|---|---|---|---|
| 6. assess and modify my career goals according to changes in external situation. | 1 | 2 | 3 | 4 | 5 | 6 |
| 7. explore different careers within areas of my interest. | 1 | 2 | 3 | 4 | 5 | 6 |
| 8. get along well with the opposite sex at work. | 1 | 2 | 3 | 4 | 5 | 6 |
| 9. collect information such as admission criteria and course selection procedure of vocational training schools. | 1 | 2 | 3 | 4 | 5 | 6 |
| 10. prepare effectively for job recruitment written examinations.. | 1 | 2 | 3 | 4 | 5 | 6 |

I am confident that I can

- | | | | | | | |
|--|---|---|---|---|---|---|
| 11. look for suitable jobs according to my interest and ability. | 1 | 2 | 3 | 4 | 5 | 6 |
| 12. solve the problems I encounter in the process of achieving my career goals. | 1 | 2 | 3 | 4 | 5 | 6 |
| 13. recognise my abilities so as to help myself choose a career. | 1 | 2 | 3 | 4 | 5 | 6 |
| 14. make use of the good points of being a male/female at work. | 1 | 2 | 3 | 4 | 5 | 6 |
| 15. think over the relationship between my choice of courses and career prospects. | 1 | 2 | 3 | 4 | 5 | 6 |

I am confident that I can

- | | | | | | | |
|----------------------------------|---|---|---|---|---|---|
| 16. produce a resume for myself. | 1 | 2 | 3 | 4 | 5 | 6 |
|----------------------------------|---|---|---|---|---|---|

- | | | | | | | |
|---|---|---|---|---|---|---|
| 17. get help from some institutions and connections to help me find a job. | 1 | 2 | 3 | 4 | 5 | 6 |
| 18. adopt an effective strategy to achieve my career goals. | 1 | 2 | 3 | 4 | 5 | 6 |
| 19. choose tertiary courses wisely to prepare myself for my future career. | 1 | 2 | 3 | 4 | 5 | 6 |
| 20. handle others' objections, criticism and opposing views when I choose a career which is mostly performed by the opposite sex. | 1 | 2 | 3 | 4 | 5 | 6 |

I am confident that I can

- | | | | | | | |
|--|---|---|---|---|---|---|
| 21. select and enroll in some suitable courses to prepare myself for different economic situations and labor demand. | 1 | 2 | 3 | 4 | 5 | 6 |
| 22. produce a job application letter for myself. | 1 | 2 | 3 | 4 | 5 | 6 |
| 23. find a suitable job successfully. | 1 | 2 | 3 | 4 | 5 | 6 |
| 24. constantly improve my study and career plan to work toward my career goals. | 1 | 2 | 3 | 4 | 5 | 6 |
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Subscales:

Career Planning =CP (items 1, 7, 13, 19); Gender Issues in Career = GI (items 2, 8, 14, 20); Training Selection =TS (items 3, 9, 15, 21); Job Hunt Preparation = JP (items 4, 10, 16, 22); Job Hunting =JH (items 5, 11, 17, 23); Career Goal Setting =CG (items 6, 12, 18, 24).

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The Academic Development Self-Efficacy Inventory

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4 = Fairly Confident, 5 = Confident, 6 = Extremely Confident**

I am confident that I can

- | | | | | | | |
|---|---|---|---|---|---|---|
| 1. organize my learning plan well and make good use of available time | 1 | 2 | 3 | 4 | 5 | 6 |
| 2. master the answering techniques in exams and tests. | 1 | 2 | 3 | 4 | 5 | 6 |
| 3. understand the difficulties encountered in tertiary institutions by listening to friends studying there. | 1 | 2 | 3 | 4 | 5 | 6 |
| 4. look for information on, and be well prepared for, further studies. | 1 | 2 | 3 | 4 | 5 | 6 |
| 5. obey the regulations of school and classroom. | 1 | 2 | 3 | 4 | 5 | 6 |

I am confident that I can

- | | | | | | | |
|---|---|---|---|---|---|---|
| 6. plan before I do something. | 1 | 2 | 3 | 4 | 5 | 6 |
| 7. improve my techniques in writing, reading, listening, and speaking. | 1 | 2 | 3 | 4 | 5 | 6 |
| 8. ask my friends for ways to solve problems in choosing a tertiary institution. | 1 | 2 | 3 | 4 | 5 | 6 |
| 9. collect each tertiary institution's information and study the content of the courses they offer. | 1 | 2 | 3 | 4 | 5 | 6 |
| 10. respect others in school. | 1 | 2 | 3 | 4 | 5 | 6 |

I am confident that I can

- | | | | | | | |
|--|---|---|---|---|---|---|
| 11. complete required learning tasks within the specified time. | 1 | 2 | 3 | 4 | 5 | 6 |
| 12. acquire good learning habits. | 1 | 2 | 3 | 4 | 5 | 6 |
| 13. seek information on universities or other tertiary institutions from my friends when I further my studies. | 1 | 2 | 3 | 4 | 5 | 6 |
| 14. choose a tertiary institution that suits me. | 1 | 2 | 3 | 4 | 5 | 6 |
| 15. exercise the rights and responsibilities of a student. | 1 | 2 | 3 | 4 | 5 | 6 |
-

I am confident that I can

16. design a learning timetable for myself and act accordingly.	1	2	3	4	5	6
17. be well prepared for exams/tests.	1	2	3	4	5	6
18. seek advice from friends when I further my studies.	1	2	3	4	5	6
19. obtain information about scholarships and financial assistance.	1	2	3	4	5	6
20. accept responsibility for my learning..	1	2	3	4	5	6

Subscales:

Time Management =TM (items 1, 6, 11, 16); Study & Examination Skills = SS (items 2, 7, 12, 17);
 Learning from Friends =LF (items 3, 8, 13, 18); Educational Planning = EP (items 4, 9, 14, 19); Being
 a Responsible Learner =RL (items 5, 10, 15, 20).

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