

333 LEARNING COMPANION LEADERSHIP PROGRAM

HONG KONG

Evaluation Report

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Executive Summary

With a widening income gap between the rich and the poor in Hong Kong, the 333 Learning Companion Leadership program aims to provide resources for children of underprivileged families to stay focused and motivated in their self-development and obtain the necessary tools for success in their school and future, and therefore to realize their full potentials.

With the aim to evaluate the effectiveness of the 333 program, questionnaire survey, individual and group interviews were conducted from 2018-2022 in four centers. Results showed that the 333 program has played a significant role when family and day school’s support towards the child is inadequate or ineffective. Summaries of the major results and recommendations are listed as follows:

Major Research Findings

Based on the outcomes of the quantitative and qualitative research, an integrated framework is established (Figure 1). This framework is explained in detail in the following sections.

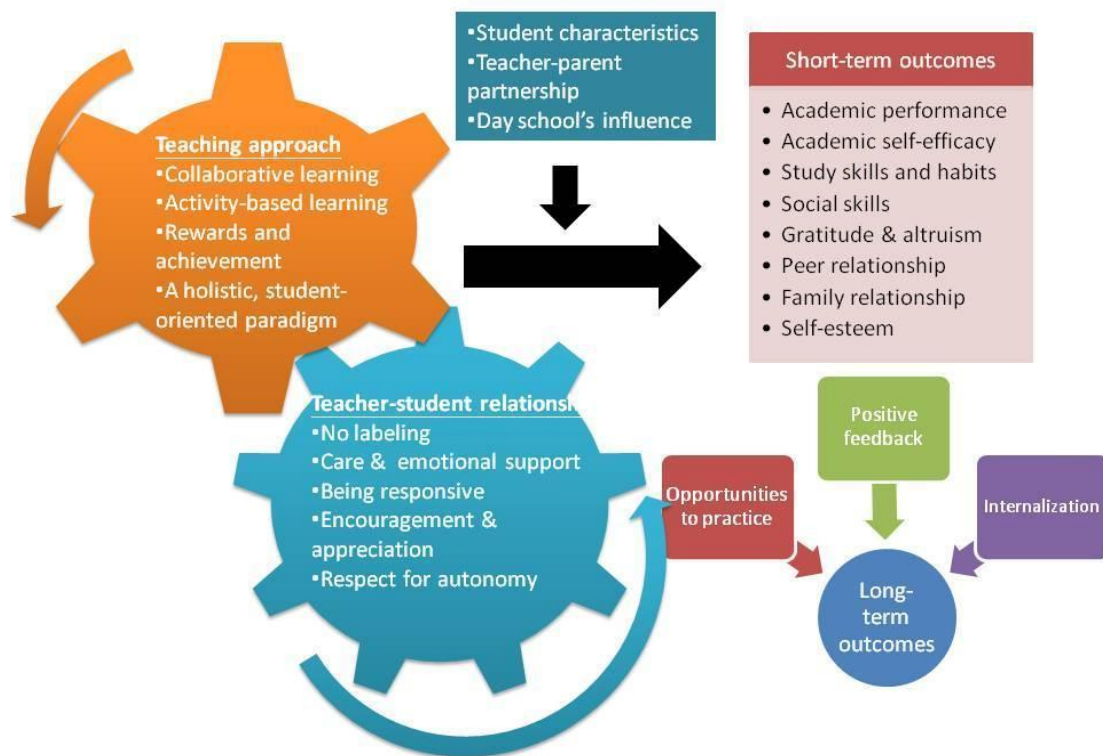


Figure 1 *The Integrated Framework for the 333 Program*

1) Student Achievements

Students' improvements can be categorized into four domains: 1) academic competences: academic performance, STEM Interest and knowledge, and self-efficacy; 2) learning skills and habits: self-directed learning; 3) social-emotional competences: self-esteem, emotion regulation (optimism, anxiety, depression, and stress management), social skills, empathy, gratitude, and altruism; and 4) relational aspects: relationships with peers, teachers, and family members.

Moreover, both quantitative and qualitative results from the graduates' studies confirmed the sustained effectiveness of the program. They reported continuous positive developments in 1) social skills; 2) social relationships; and 3) altruism. Moreover, long-term improvements were manifested in other outcomes: 1) socio-emotional competences (self-esteem & self-appreciation, gratitude); 2) academic related competences (self-directed learning, STEM interest and knowledge, and study habits), and 3) relational aspects (relationship).

Finally, volunteers benefit from the volunteering experience in multiple aspects, which includes: 1) enhanced communication and teaching skills; 2) feeling of satisfaction and achievement, 3) career aspiration to be a teacher and 4) consolidation of volunteers' own learning. Meanwhile, they contribute to the Program participant's improvements through assisting the Program instructors and playing the roles of "big brother" or "big sister".

2) 1st Facilitating Mechanism: Good Practices in Teaching

One key factor for program success lies in good teaching practices. Regarding teaching approaches, four critical elements are found: 1) Cooperative learning; 2) Rewards and achievement; 3) Activity-based learning; and 4) A holistic and student-oriented paradigm. Regarding building teacher-student relationships, five good practices are identified: 1) No labeling; 2) Care & emotional support; 3) Being responsive; 4) Encouragement & appreciation; 5) Respect for autonomy.

3) 2nd Facilitating Mechanism: Establishing Parent-Instructor Partnership

Another key factor for program success is the establishment and maintenance of parent-instructor partnership. The partnership can occur in different forms and at different levels which includes, but not limited to, 1) routine and effective communication; 2) extended and

prolonged interaction, 3) mutual trust, and 4) shared goals and strategies between the instructors and parents in this Program. The partnership has long-lasting impacts, and it is important to facilitate adjustment after the families leave the Program 1.5 year later.

4) Influencing Factors for Long Term Effects

Some factors determine whether the students can apply what they have learned from the program in new settings and thus continue to grow in the long term. On the one hand, academic competencies and good study habits enable them to address changing demands of academic tasks while a sense of self-efficacy motivates the participants to hold on to the good habits and persevere despite difficulties. On the other hand, it is vital that the living contexts (peer, school, and family) provide opportunities for the graduates to practice the socio-emotional skills learned from the program. If the practices receive positive feedback from the environment, the graduates will gradually internalize these social-emotional skills and continue to practice them in daily activities.

5) Other Factors and Potential Barriers Hindering Success

In the meantime, several factors and potential barriers were identified. On the one hand, individual and contextual factors that may influence (promote or hamper) the program effectiveness: 1) Students with Special Education Needs (SEN); 2) Students' age and developmental stage; 3) School and family contexts; 4) Instructors' professional capacity, dedication, and workload.

On the other hand, barriers to family involvement may also affect the program outcomes: 1) structural barriers (i.e., socioeconomic status, parental education, and number of adults in the home, and economic, emotional, and time constraints) and 2) psychological barriers (i.e., parents' low sense of self-efficacy, taking a passive role by handing out the responsibility of education to schools, perceived schools' lack of responsiveness to parental needs or desires, negative attitudes toward education, and low expectations for their children's performance).

Last but not least, the pandemic affected student learning and well-being unprecedentedly. It was perhaps one of the most challenging for educators and students in history. The impact of the pandemic on student learning was significant. It widened preexisting opportunity and

achievement gaps, hitting historically disadvantaged students hardest. And the crisis had an impact on not just academics but also the broader health and well-being of students.

6) Alignment with the PERMA Model

The Program outcomes were further conceptualized in alignment with the PERMA model in the field of positive psychology which consists of five elements (i.e., positive emotions, engagement, relationships, meaning, and accomplishments) (Figure 2).

Based on the PERMA model, it is suggested that positive education programs can be added to increase self-esteem, enhance happiness and wellbeing, prevent mental health problems of the students, as well as to prepare the students for future challenges and adversities. For example, workshops can be organized to facilitate students to better understand and help to explore the character strengths of the students, and learn ways to enhance the students' positive emotions, positive relationships, positive engagement, sense of accomplishment and meaning of study/life, hence contributing to the intrinsic learning motivation, and building up self-esteem of the students. The intensity and level of difficulties of the programs can be adjusted for different levels.

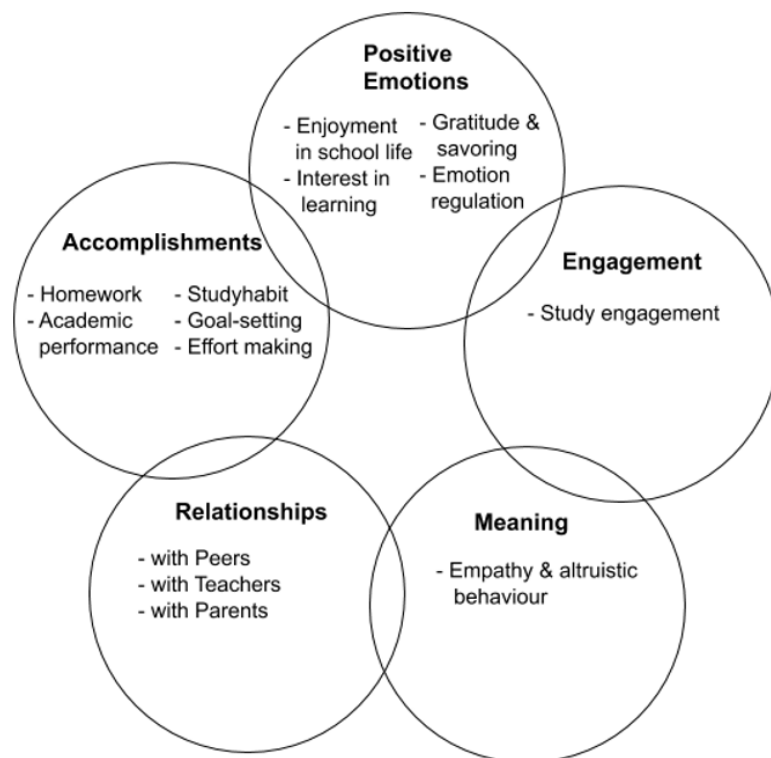


Figure 2 Positive Education Framework (PERMA)

Recommendations

1. Recommendations for Program Design

1) Align Good Teaching Practices

As mentioned earlier, four critical elements of teaching approaches and five good practices of building & maintaining teacher-student relationships are identified. These good practices should be well promoted and aligned across centers and for new teacher training in the future.

2) Consider a Flexible Arrangement Regarding the Program Duration

Regarding the program duration, it is suggested to have a flexible arrangement regarding the program duration. The 1.5 years of duration can be considered to be extended to 2 years.

Specifically, due to the different characteristics of the students, the program may consider opening for applications by the graduates who need assistance again, according to the students' characteristics and specific needs. It is suggested that students in need (e.g., without parental support, with financial burdens, or not manifested significant improvements) should be allowed to stay beyond the standard program duration. Also, the intensity and level of difficulties of the programs can be adjusted for different levels. In addition, the program may take into account the possible low energy level and concentration level of students, and consider a shorter class duration, a less intensive lesson plan, or a flexible arrangement that students can choose to attend one or all of the modules.

3) Arrange Additional Activities if Possible

Several desirable classes and activities are listed for consideration: 1) Physical exercises (e.g., basketball and jumping rope); 2) General Science class; 3) Hiking/ Outings/ Trips; 4) Cooking class; 5) Music instrument class/ Singing class/ Dance class; 6) Water sports; 7) Etiquette class; and 8) Visiting theme parks if possible.

4) Provide more Resources and Trainings for Graduates-to-be

More resources and trainings should be provided to the graduates-to-be to prepare them for the potential challenges of leaving the program. For instance, training on stress management can be arranged for students to prepare for graduation.

5) Promote Positive Education Programs

Based on the PERMA model, it is suggested that positive education programs can be added to increase self-esteem, to enhance happiness and wellbeing, to prevent mental health problems of the students, and to prepare the students for future challenges and adversities. Furthermore, more informal learning activities can be provided to enhance teachers and parents' wellbeing.

6) Consider Proper Workload and Working Hours for the Instructors

We suggest drawing attention to the increasing workload of the program instructors. So far, no definite evidence suggests that the instructors are overloaded. Yet it should be noted that the number of students is increasing, and the instructor-student ratio is decreasing, which means that each instructor needs to handle more students than before.

7) Prepare Necessary Knowledge to Support Students in Needs

Additional workshops and seminars can be organized to enhance the instructors' professional attitudes, knowledge, and skills, and equip them with updated and effective support strategies to handle the students' emotions and behaviors. The professional training could target the types of SEN most frequently encountered by the instructors.

8) Provide Training for Volunteering

We suggest offering some training workshops for the volunteers, teaching them some skills to quickly team up with other people. It is also suggested that the volunteers be given priority to tutor the same group of students throughout the program.

9) Optimize the Site Facilities

It would be a plus to improve the general conditions (e.g., hygiene) and increase capacity (e.g., number of the classroom) of learning centers.

2. Recommendations for Parent Education

1) Establish Parenting groups (Online and Offline)

Parenting groups can play a significant role in child development. It can be a WhatsApp

group or a real group that parents meet regularly. In such groups, parents can talk to and discuss with each other; they can share their feelings and experiences, as well as can support or be supported by other parents.

2) Create a Parent Resource Center if Possible

One suggestion for consideration is to create a parent resource center. One of the primary functions of the parent resource center is to create a safe and convenient place where parents can find parenting resources (e.g., books or videos). In addition, the parent resource center coordinator can conduct groups or workshops for parents to develop their parenting skills.

3) Promote Positive Parenting Programs

Positive parenting programs could be provided to parents through schools and/or NGOs. These programs aim to increase parents' awareness of the importance of well-being, introduce positive parenting concepts and practices, and promote cooperation between school and family.

3. Recommendations for Day schools and Communities

It is ideal that parents, schools, 333 learning sites, and the communities could work closely together to set up programs that ensure proper child development. It would also be very helpful if a partnership could be established between the program's instructors and the day schoolteachers. Moreover, community education such as public parenting seminars could also be organized regularly. Community caring schemes, such as organizing volunteer groups, visiting families living in poverty and having high vulnerability to help those families in need could be launched.

4. Recommendations for Policy Holders

1) Digital Learning Support

Due to the COVID-19 pandemic, many schools and learning centers have implemented online-teaching mode. Even with phone assistance, some families may not be sufficient for this approach, not to mention using iPad or computer. Public-private funding should be allocated to ensure that equal digital schooling opportunities are provided to all students,

especially for families in need.

2) For Various Vulnerable Groups

Social Welfare Department (SWD) could encourage non-government organizations (NGOs) to reform the neighborhood level community development project (NLCDP) service, enhancing child learning supports within the community, especially in public estates, under privileged families, and various vulnerable groups.

Chapter 1. Introduction

The widening disparity of the rich and the poor and the increasing problem of intergenerational poverty have posed challenges to the stability of Hong Kong. Many of the families in Hong Kong are facing structural changes that may lead a negative impact of deprivation on the development of the children, not only their quality of life is affected but also their emotional stability, learning ability, and character formation process are compromised. In response to these social problems, the charitable project “333 Learning Companion Leadership Program” (The Program thereafter) aims to provide resources for children of underprivileged families to stay focused and motivated in their self-development and obtain the necessary tools for success in their school and future.

Centered around the principles of love and care, the Program fulfills its objectives by providing academic assistance in the children’s regular schoolwork as well as guidance and learning through value-added and interest sessions and professional support provided by Heep Hong Society. The main objectives of the Program are: 1) to further improve the academic performance of underprivileged children (UC thereafter) in Hong Kong; 2) to help UC promote positive emotional and psychological development through a cost-effective, holistic, and replicable approach; 3) To reshape UC’s attitudes by instilling a sense of responsibility and self-belief; 4) To help UC become self-motivated learners through an award scheme and value-added sessions such as the upbringing program; 5) to help UC develop self-confidence, self-esteem and a willingness to help others through initiative; and 6) to inspire them into young leaders of the future.

The Program was launched in 2010, and the program now covers 140 primary and secondary schools. There are five training centers (i.e., North, Kwun Tong, Sham Shui Po, Tin Shui Wai, and Tun Mun district learning center) serving more than 8,800 students. Through an interactive teaching method and proactive supervision, the program ensures that students are engaged and maintain focus throughout the course. The program contains three independent modules, the second and third of which are optional upon the completion of the first module. That is, participants of the advanced modules are the ones who have completed the basic modules. Specifically, the three modules are the intensive, the extension, and the Friends of 333 Module. Each module lasts for 6 months, with 1.5 hours of academic assistance in daily schoolwork, followed by 1 hour of value-added sessions.

With the aim to evaluate the effectiveness of the 333 program, questionnaire survey, individual and group interviews were conducted from 2018-2022 in four centers. In the following sections, we will present the quantitative and qualitative results respectively. Conclusion and recommendations for future practice and research are made at the end of the report.

Chapter 2. Methodology

2.1. Research Design Overview

2.1.1. Mixed-Methods Approach Was Adopted in the Evaluation of 333 Program.

- (a) Quantitative method. Standardized questionnaires were used to assess academic and psychosocial outcomes before and after participation in the program.
- (b) Qualitative method. Semi-structured interviews were administered to gather information from students, parents, and teachers on the perception of impact of 333 program and to collect their feedback on the 333 programs.

2.1.2. Outcome Indicators

Effectiveness of the 333 program was measured by outcome indicators on learning outcomes (academic performance and self-directed learning), quality of interpersonal relationships (peer relationships and teacher-student relationships), psychological constructs (optimism, depression, anxiety), as well as STEM interest and knowledge.

2.1.3. Two Dimensions Were Measured in the Evaluation Using Different Study Tools:

- a) Formative evaluation, the focus of which is on acquiring new knowledge, attitudes, and skills as a result of training. This was investigated by the semi-structured interviews, as well as the questionnaires. Such an evaluation may be conducted before, during and after training.
- b) Summative evaluation, which assesses the participants' performance after training. We have used the questionnaire to examine participants' performance in academics, family functioning and psychosocial aspects.

2.2. Questionnaire Survey on Students

The students were invited to complete a self-administered questionnaire on peer and teacher relationship, emotion regulation, perceived academic performance, and STEM and self-directed learning aspects before and after participating in the program. The questionnaire for P1-2 is given in Appendix 1 and the questionnaire for P3-6 is given in Appendix 2.

Table 2.1 *Student Questionnaire Scale*

	Scales	Items	Range	P1-2	P3-6
Part 1	Peer Relationship	6	1-5	√	√
Part 2	Teacher-Student Relationship	7	1-5	√	√
Part 3	Self-Directed Learning	5	1-5		√
Part 4	Optimism	6	1-5		√
Part 5	Perceived Academic Performance	4	1-5		√
Part 6	Depression and Anxiety	14	1-4		√
Part 7	Stress Management	4	1-5		√
Part 8	STEM Interest and Knowledge	2	1-5	√	√
Part 9	Phone Assistance	3	1-5	√	√

2.3. Questionnaire Survey on Parents

The parents were invited to complete a self-administered questionnaire on the family functioning, collaboration with the instructors of 333 and the perceived performance of each child before and after participating in the program. The questionnaire is given in Appendix 3.

Table 2.2 *Parent Questionnaire Scale*

	Scales	Items	Range
Part 1	Family Functioning	5	1-5
Part 2	Parent Praise	9	1-5

Part 3	Perceived Academic Performance	4	1-5
Part 4	Child's Learning Motivation and Attitude	4	1-6
Part 5	Parent-Teacher Involvement	18	1-6
Part 6	Child's Social Competence	12	1-5
Part 7	Phone Assistance	3	1-5

2.4. Questionnaire Survey on Instructors

The instructors were invited to complete a self-administered questionnaire on the perceived performance of each student and collaboration with the parents before and after participating in the program. The questionnaire is given in Appendix 4.

Table 2.3 *Instructor Questionnaire Scale*

	Scales	Items	Range
Part 1	Parent-Teacher Involvement	10	1-6
Part 2	Child's Social Competence	18	1-5
Part 3	Child's Academic Skills	19	1-5
Part 4	Phone Assistance	3	1-5

2.5. Survey Design

All the students and parents who participated in the program in North District Learning Centre, Kwun Tong District Learning Centre, Sham Shui Po District Learning Centre, and Tin Shui Wai District Learning Centre were invited to complete the questionnaire at 7 time points (*Time 1: June 2018; Time 2: November 2018; Time 3: May 2019; Time 4: November 2019; Time 5: January 2021; Time 6: June 2021; Time 7: January 2022*).

Interviews were conducted in May-June 2019 and June-July 2021. Details of the data collection are listed in the following timeline.

Table 2.4 *Survey Design Timeline*

	Time 1	Time 2	Time 3	Time 4	Time 5	Time 6	Time 7
	2017-18 Sem B	2018-19 Sem A	2018-19 Sem B	2019-20 Sem A	2020-21 Sem A	2020-21 Sem B	2021-22 Sem A
Primary 1-2 Students	√	√	√	√	√	√	√
Primary 3-6 Students	√	√	√	√	√	√	√
Parents	√			√		√	
Instructors	√			√		√	

2.6. Data Analyses

2.6.1. *Repeated-Measures ANOVAs (comparing two time points for Time 1-2, 2-3, 3-4, and 5-6):*

Grade-specific (Primary 1 & 2, Primary 3 & 4 and Primary 5 & 6 respectively) repeated-measures ANOVAs were conducted to test the pre-post data of 333 program participants from each program class level (Level 1-2 and Level 2-3 respectively) at different time points (e.g., Time 1 and 2 in half-year interval) in comparisons with control groups. We aimed to investigate the effectiveness of the program at different class levels.

2.6.2. *One-Way ANOVAs (using different levels in specific time point as independent groups):*

Grade-specific (Primary 1 & 2, Primary 3 to 6 respectively) comparisons were made using one-way ANOVAs on 333 program class level 1 data at Time 1 (as group 1), 333 program class level 2 data at Time 2 (as group 2), 333 program class level 3 data at Time 3

(as group 3) and 333 program graduates' data at Time 5 (as group 4). We aimed to examine the changes in general along promotion to different class levels, and to test the sustainability of the program effects upon graduation.

2.6.3. Repeated-Measures ANOVAs (comparing three time points for Time 1-2-3):

Grade-specific (Primary 1 & 2, Primary 3 & 4 and Primary 5 & 6 respectively) repeated-measures ANOVAs for three time points were performed to test the data matched by students' names across Time 1, Time 2 and Time 3 consecutively, as well as Time 2, Time 3 and Time 4 consecutively, in comparisons with control group. It is aimed to reveal the changes in outcome indicators among the same group of students who have undergone the program from class level 1 to program class level 3.

2.6.4. Comparison among data from students, teachers, and parents:

Data from students, teachers, and parents at the same time point (Time 1, Time 4 and Time 6 respectively) for the same student's outcome indicators were matched. T-tests were conducted to test the rating consistencies on similar variables by different parties at the same time point.

2.6.5. SPSS 26 was used for all analyses.

2.7. Interviews

2.7.1. Student

Student respondents were asked about the impact of 333 program, their views on the survey results, and the impact of COVID-19 on learning in the semi-structured focus group interviews.

2.7.2. Parent

Parents respondents were interviewed about the impact of 333 program, their views on the survey results, their collaboration with 333 instructors and difficulties faced by the children in growing up during the individual interviews.

2.7.3. Volunteer

In the individual interview, secondary student volunteers were asked about their volunteering experience, their observation of students' changes and their views on the survey results.

2.7.4. Instructors

Instructors were interviewed on the motivation to join the program, impact of the program on the students, collaboration with parents, and changes of the program in the past year.

2.8. Thematic Analysis

All the interviews were transcribed into text. Themes were extracted in addressing the research questions manually until data saturation. Themes were further analyzed and integrated with theoretical models.

2.9. Limitations

2.9.1. Matching of Students in the Pre-Post Design

Substantial data could not be matched across different academic terms. The dropout rates may have affected the evaluation results.

2.9.2. The Length of the Questionnaires

Since target respondents were primary students, it was not desirable to have a long questionnaire design, affecting the quality of response from students. Thus, the number of items used in the survey and aspects to be assessed were kept as short and concise as possible in the survey. This has inevitably limited the scope of the evaluation.

2.9.3. COVID-19 pandemic

COVID-19 may have impacted the effectiveness of the program in uncertain ways. We have only measured the level of collaboration between instructors and parents in the period in order to substantiate the influence. The collection of data from students of the control group was also discontinued between T5-T7 due to restrictions during the pandemic, The program

may have been affected in other ways which were not measured by the questionnaires and examined by the interviews.

Chapter 3. Quantitative Results

3.1. Results of Repeated-Measures ANOVAs (comparing two time points for Time 1-2, 2-3, 3-4, and 5-6-7)

First and foremost, repeated-measures ANOVAs were conducted in two phases respectively (T1-T4 and T5-T7) to test the pre-post data of 333 program participants from each program class level (Level 1-2 and Level 2-3 respectively) at different time points (e.g., Time 1-2, Time 2-3, Time 3-4) in comparisons with control groups. Grade-specific analyses (Primary 1 & 2, Primary 3 & 4, and Primary 5 & 6 respectively) were also performed to separate the differences between grades. We aimed to investigate the effectiveness of the program at different class levels.

The overall results were presented in tables and the significant results were presented in the figures below. The parts highlighted in yellow showed positive outcomes while the parts highlighted in green showed unexpected outcomes.

Table 3.1 *Results of Differences in Variables with Control (Level 1-2 in T1-4)*

Grade	Phase	Dimensions	Experimental			Control			Sig
			L1	L2	N	L1	L2	N	
P1-2	T1-4	Peer Relationship	4.02	3.92	151	3.42	3.18	50	N
P1-2	T1-4	Teacher Relationship	4.45	4.48	151	3.82	3.84	50	N
P3-4	T1-4	Peer Relationship	3.74	3.6	204	3.27	3.26	168	N
P3-4	T1-4	Teacher Relationship	4.42	4.43	204	3.95	4.08	168	N
P3-4	T1-4	Self-Directed Learning	3.99	3.84	204	3.41	3.56	168	Y
P3-4	T1-4	Optimism	3.95	3.81	204	3.5	3.44	168	N
P3-4	T1-4	Anxiety	2.57	2.4	204	2.36	3.12	168	Y
P3-4	T1-4	Depression	2.05	2	204	2.00	2.06	168	N
P3-4	T1-4	Stress Management	3.96	3.95	204	3.54	3.52	168	N
P3-4	T1-4	Chinese	3.44	3.34	204	2.49	2.71	168	N
P3-4	T1-4	English	2.60	2.71	204	2.27	2.36	168	N
P3-4	T1-4	Mathematics	3.40	3.22	204	3.04	3.09	168	N
P3-4	T1-4	General Studies	3.83	3.68	204	2.80	3.04	168	Y
P3-4	T1-4	Stem Interest	4.10	4.07	204	4.00	3.8	168	N
P3-4	T1-4	Stem Knowledge	3.99	4.01	204	3.97	3.79	168	N
P5-6	T1-4	Peer Relationship	3.52	3.73	95	3.42	3.46	94	Y
P5-6	T1-4	Teacher Relationship	4.35	4.21	95	4.16	4.21	94	N
P5-6	T1-4	Self-Directed Learning	3.81	3.8	95	3.48	3.58	94	N
P5-6	T1-4	Optimism	3.57	3.71	95	3.5	3.55	94	N
P5-6	T1-4	Anxiety	2.37	2.32	95	2.37	2.29	94	N
P5-6	T1-4	Depression	2.13	2.07	95	1.91	1.9	94	N
P5-6	T1-4	Stress Management	3.78	3.89	95	3.56	3.68	94	N
P5-6	T1-4	Chinese	3.31	3.35	95	2.66	2.67	94	N
P5-6	T1-4	English	2.55	2.65	95	2.23	2.6	94	N
P5-6	T1-4	Mathematics	3.55	3.27	95	2.57	2.82	94	Y
P5-6	T1-4	General Studies	3.59	3.49	95	3.03	3.21	94	N
P5-6	T1-4	STEM Interest	3.85	3.94	95	3.98	3.79	94	Y
P5-6	T1-4	STEM Knowledge	3.92	3.82	95	3.95	3.59	94	Y

Note: The significance level is $p \leq .05$.

Level 1-2 T1-4 self-directed learning, anxiety, and General Studies significantly decreased in P3-4 students compared to the control group. Level 1-2 T1-4 peer relationship, Mathematics, and STEM interest significantly increased, whereas STEM knowledge significantly decreased in P5-6 students compared to the control group.

In general, level 1-2 T1-4 P3-4 students reported more significant decrease than increase, whereas P5-6 students reported more positive growth in different aspects.

Figure 3.1.1 *Self-Directed Learning (Level 1-2, T1-4, P3-4)*

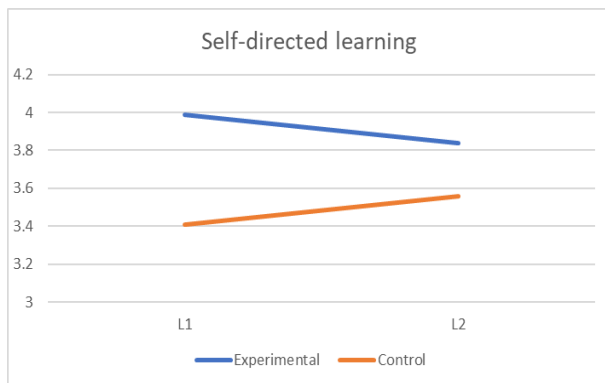


Figure 3.1.2 *Anxiety (Level 1-2, T1-4, P3-4)*

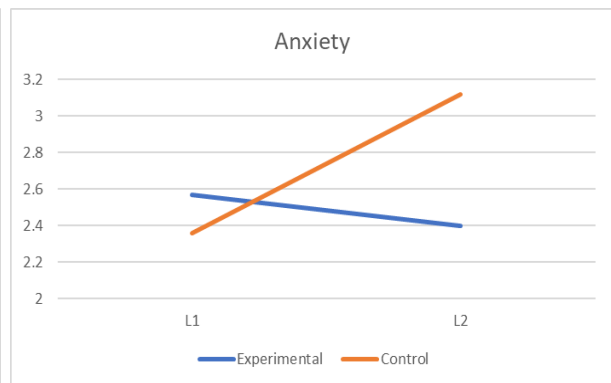


Figure 3.1.3 *General Studies (Level 1-2, T1-4, P3-4)*

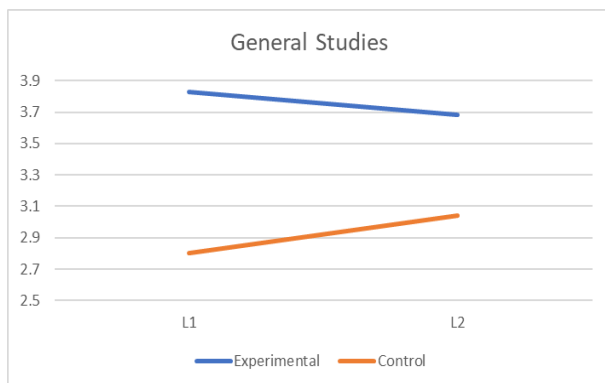


Figure 3.1.4 *Peer Relationship (Level 1-2, T1-4, P5-6)*

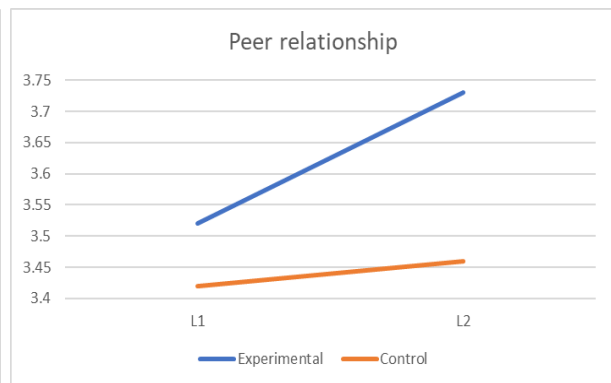


Figure 3.1.5 Mathematics (Level 1-2, T1-4, P5-6)

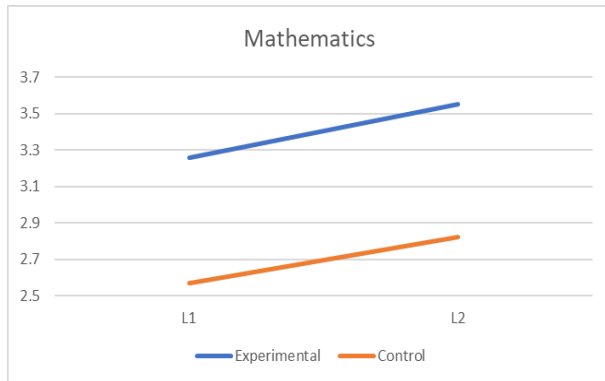


Figure 3.1.6 STEM Interest (Level 1-2, T1-4, P5-6)

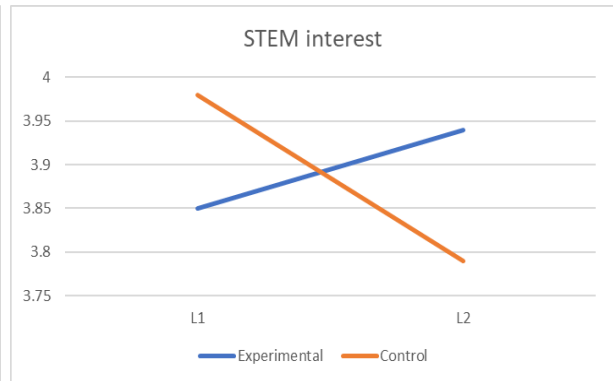


Figure 3.1.7 STEM Knowledge (Level 1-2, T1-4, P5-6)

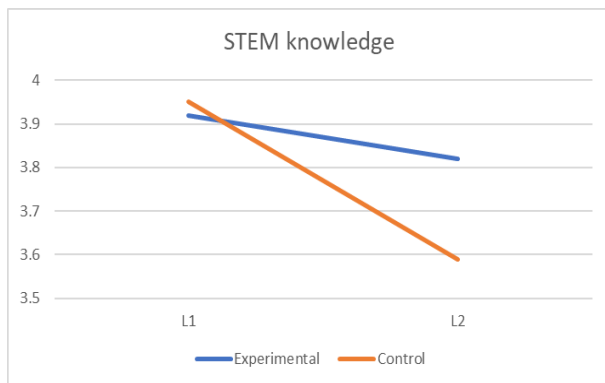


Table 3.2 *Results of Differences in Variables with Control (Level 2-3 in T1-4)*

Grade	Phase	Dimensions	Experimental			Control			Sig
			L2	L3	N	L2	L3	N	
P1-2	T1-T4	Peer Relationship	3.91	3.85	116	3.18	3.42	50	N
P1-2	T1-T4	Teacher Relationship	4.46	4.39	116	3.82	3.84	50	N
P3-4	T1-T4	Peer Relationship	3.74	3.56	116	3.23	3.26	50	N
P3-4	T1-T4	Teacher Relationship	4.37	4.32	116	3.88	4.09	50	N
P3-4	T1-T4	Self-Directed Learning	3.89	3.75	116	3.36	3.42	50	N
P3-4	T1-T4	Optimism	3.91	3.61	116	3.45	3.46	50	Y
P3-4	T1-T4	Anxiety	2.51	2.44	116	2.39	3.39	50	Y
P3-4	T1-T4	Depression	2.04	2.05	116	2.04	2.05	50	N
P3-4	T1-T4	Stress Management	3.88	3.85	116	3.47	3.48	50	N
P3-4	T1-T4	Chinese	3.43	3.29	116	2.32	2.65	50	N
P3-4	T1-T4	English	2.85	2.86	116	2.13	2.33	50	N
P3-4	T1-T4	Mathematics	3.49	3.28	116	2.99	2.81	50	N
P3-4	T1-T4	General Studies	3.92	3.72	116	2.7	2.92	50	Y
P3-4	T1-T4	STEM Interest	4.06	4.15	116	3.76	3.9	50	N
P3-4	T1-T4	STEM Knowledge	3.97	4.14	116	3.46	3.66	50	Y
P5-6	T1-T4	Peer Relationship	3.61	3.65	68	3.34	3.4	69	N
P5-6	T1-T4	Teacher Relationship	4.15	4.29	68	4.17	4.26	69	N
P5-6	T1-T4	Self-Directed Learning	3.64	3.61	68	3.35	3.48	69	N
P5-6	T1-T4	Optimism	3.56	3.59	68	3.51	3.43	69	N
P5-6	T1-T4	Anxiety	2.52	2.39	68	2.42	2.29	69	Y
P5-6	T1-T4	Depression	2.11	2.03	68	1.95	1.93	69	N
P5-6	T1-T4	Stress Management	3.68	3.81	68	3.54	3.69	69	N
P5-6	T1-T4	Chinese	3.09	3.12	68	2.64	2.67	69	N
P5-6	T1-T4	English	2.43	2.63	68	2.33	2.45	69	Y
P5-6	T1-T4	Mathematics	3.1	3.38	68	2.41	2.71	69	Y
P5-6	T1-T4	General Studies	3.43	3.57	68	2.88	3.12	69	Y
P5-6	T1-T4	STEM Interest	3.69	3.9	68	3.91	3.57	69	Y
P5-6	T1-T4	STEM Knowledge	3.74	3.77	68	3.87	3.49	69	Y

Note: The significance level is $p \leq .05$.

Level 2-3 T1-4 optimism and STEM knowledge significantly increased, whereas optimism, anxiety and General Studies significantly decreased in P3-4 students compared to the control group. Level 2-3 T1-4 anxiety, English, Mathematics, General Studies, STEM interest, and STEM knowledge significantly increased in P5-6 students compared to the control group.

In general, level 2-3 T1-4 P3-4 students reported mostly significant improvement in emotion regulation and STEM knowledge, whereas P5-6 students reported significant increase in a number of aspects including all academic subjects.

Figure 3.1.8 *Optimism (Level 2-3, T1-4, P3-4)*



Figure 3.1.9 *Anxiety (Level 2-3, T1-4, P3-4)*

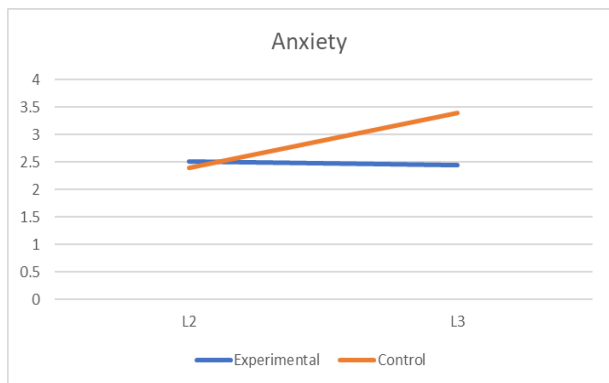


Figure 3.1.10 *General Studies (Level 2-3, T1-4, P3-4)*

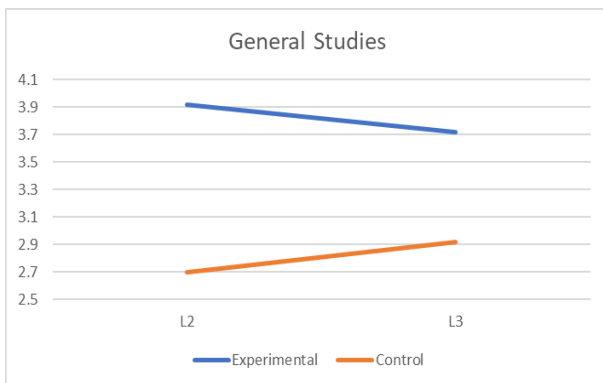


Figure 3.1.11 *STEM Knowledge (Level 2-3, T1-4, P3-4)*

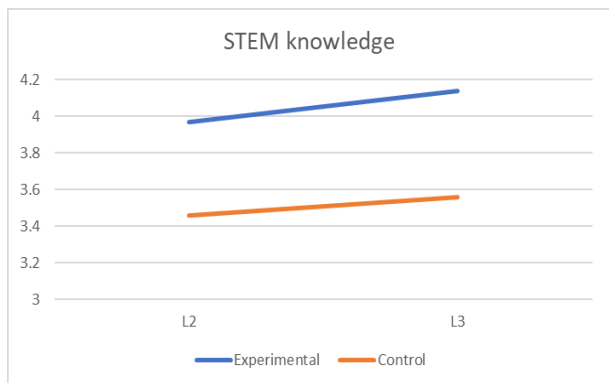


Figure 3.1.12 *Anxiety (Level 2-3, T1-4, P5-6)*

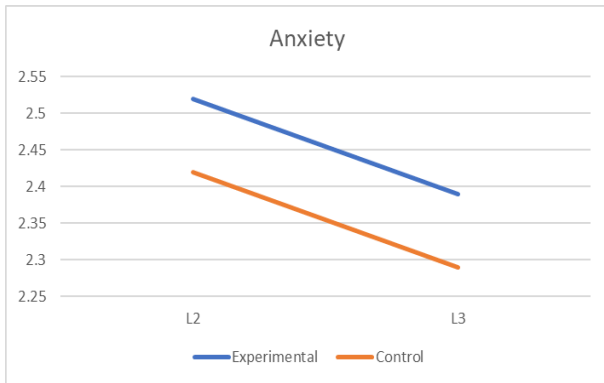


Figure 3.1.13 *English (Level 2-3, T1-4, P5-6)*

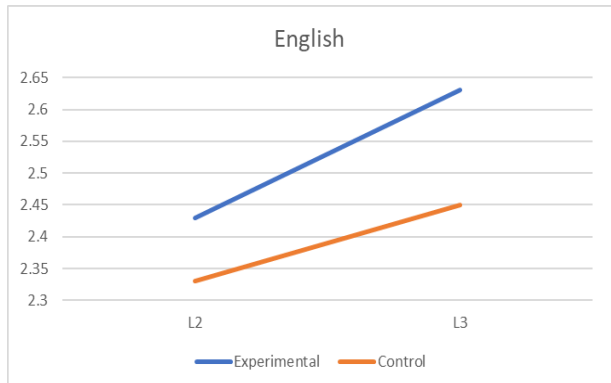


Figure 3.1.14 *Mathematics (Level 2-3, T1-4, P5-6)*

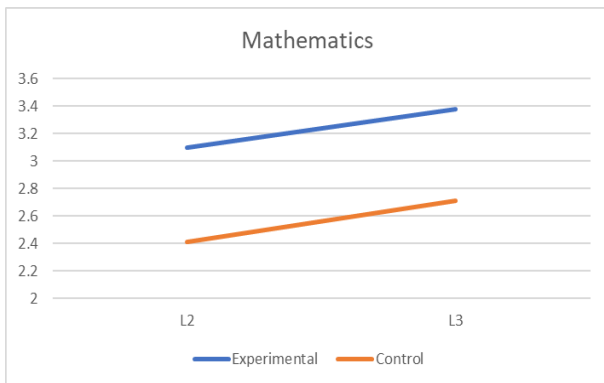


Figure 3.1.15 *General Studies (Level 2-3, T1-4, P5-6)*

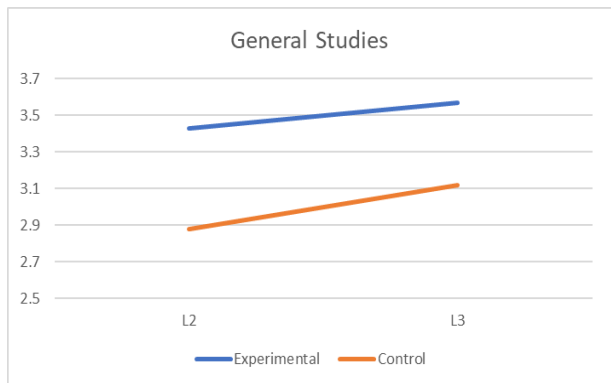


Figure 3.1.16 *STEM Interest (Level 2-3, T1-4, P5-6)*

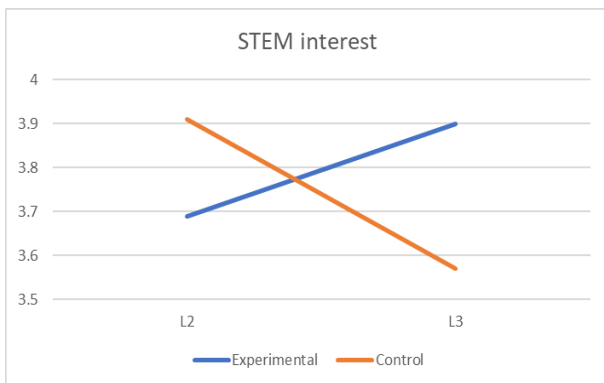


Figure 3.1.17 *STEM Knowledge (Level 2-3, T1-4, P5-6)*

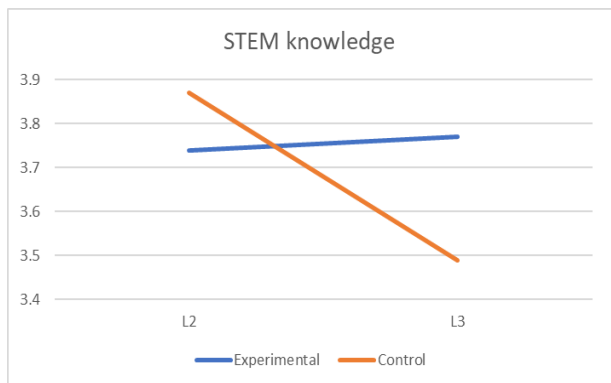


Table 3.3 *Results of Differences in Variables (Level 1-2 in T5-7)*

Grade	Phase	Dimensions	Experimental		N	Sig
			L1	L2		
P1-2	T5-7	Peer Relationship	4.13	4.33	47	N
P1-2	T5-7	Teacher Relationship	4.01	4.04	47	N
P1-2	T5-7	Stem Interest	4.28	4.39	47	N
P1-2	T5-7	Stem Knowledge	4.21	4.31	47	N
P3-4	T5-7	Peer Relationship	3.89	3.82	61	N
P3-4	T5-7	Teacher Relationship	4.6	4.41	61	N
P3-4	T5-7	Self-Directed Learning	3.96	3.97	61	N
P3-4	T5-7	Optimism	3.96	3.97	61	N
P3-4	T5-7	Anxiety	2.48	2.21	61	Y
P3-4	T5-7	Depression	2.07	1.92	61	N
P3-4	T5-7	Stress Management	3.95	4.01	61	N
P3-4	T5-7	Chinese	3.02	3.64	61	Y
P3-4	T5-7	English	2.51	2.62	61	N
P3-4	T5-7	Mathematics	3.23	3.77	61	Y
P3-4	T5-7	General Studies	3.25	3.52	61	Y
P3-4	T5-7	STEM Interest	4.41	4.24	61	Y
P3-4	T5-7	STEM Knowledge	4.55	4.26	61	Y
P5-6	T5-7	Peer Relationship	3.63	3.71	34	N
P5-6	T5-7	Teacher Relationship	4.45	4.47	34	N
P5-6	T5-7	Self-Directed Learning	3.72	3.95	34	Y
P5-6	T5-7	Optimism	3.78	3.81	34	N
P5-6	T5-7	Anxiety	2.13	2.26	34	N
P5-6	T5-7	Depression	2.02	1.95	34	N
P5-6	T5-7	Stress Management	3.72	3.76	34	N
P5-6	T5-7	Chinese	2.79	3.29	34	Y
P5-6	T5-7	English	1.86	2.22	34	Y
P5-6	T5-7	Mathematics	3.12	3.26	34	Y
P5-6	T5-7	General Studies	3.18	3.38	34	Y
P5-6	T5-7	STEM Interest	4.15	4.11	34	N
P5-6	T5-7	STEM Knowledge	4.03	4.1	34	N

Note: The significance level is $p \leq .05$.

Level 1-2 T5-7 Chinese, Mathematics, and General Studies significantly increased, whereas anxiety, STEM interest, and STEM knowledge significantly decreased in P3-4 students. Level 1-2 T5-7 self-directed learning, Chinese, English, Mathematics, and General Studies significantly increased in P5-6 students.

In general, level 1-2 T5-7 P3-4 students reported significant improvements in anxiety and most academic subjects, however also reported significant decrease in TBC including STEM interest and knowledge. On the other hand, p.5-6 students reported a significant increase in optimism and all academic subjects.

Figure 3.1.18 *Anxiety (Level 1-2, T5-7, P3-4)* **Figure 3.1.19** *Chinese (Level 1-2, T5-7, P3-4)*

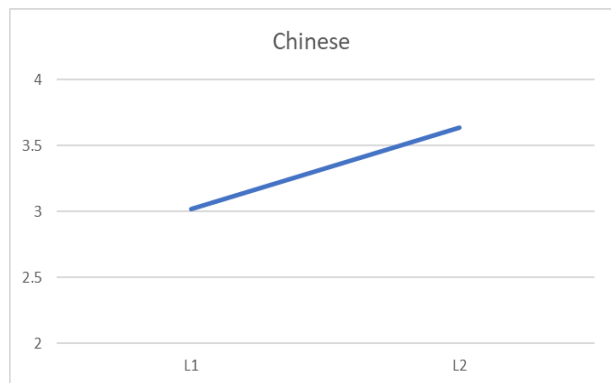
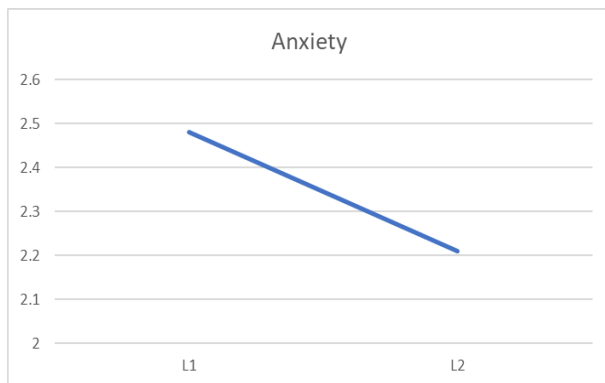


Figure 3.1.20 *Mathematics (Level 1-2, T5-7, P3-4)* **Figure 3.1.21** *General Studies (Level 1-2, T5-7, P3-4)*

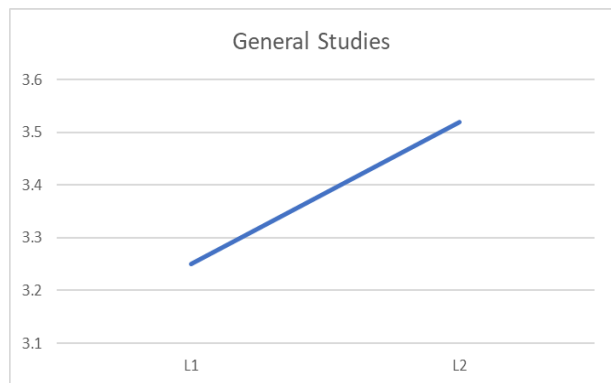
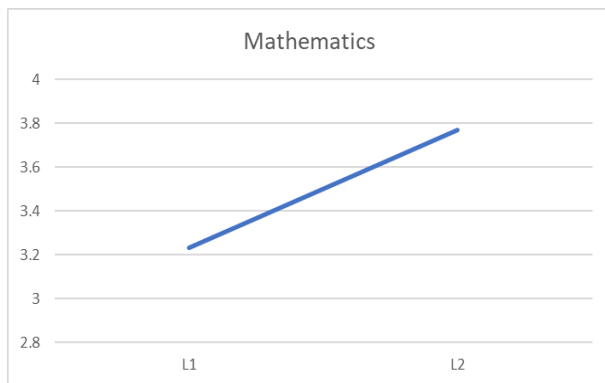


Figure 3.1.22 *STEM Interest (Level 1-2, T5-7, P3-4)*

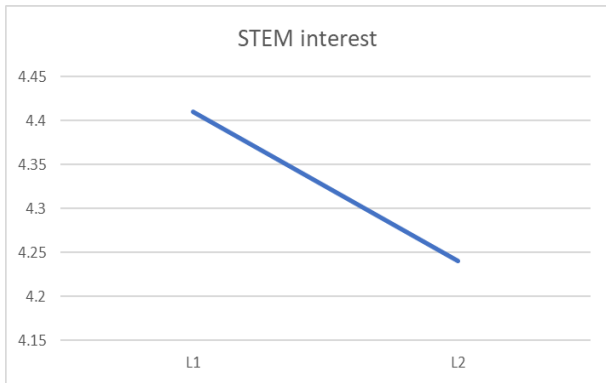


Figure 3.1.23 *STEM Knowledge (Level 1-2, T5-7, P3-4)*

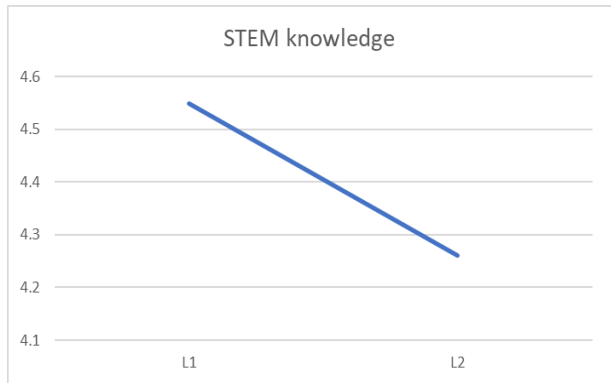


Figure 3.1.24 *Self-Directed Learning (Level 1-2, T5-7, P5-6)*

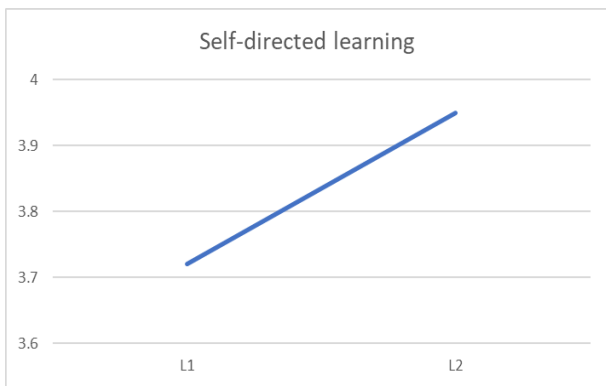


Figure 3.1.25 *Chinese (Level 1-2, T5-7, P5-6)*

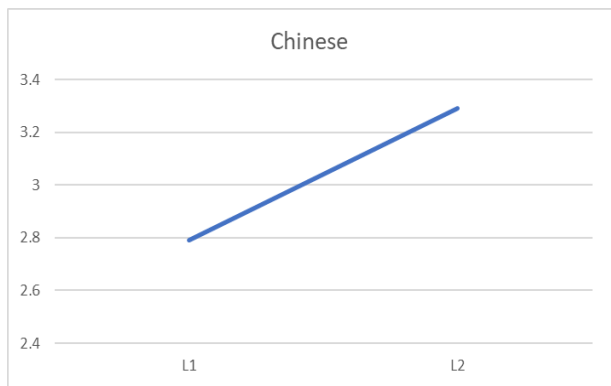


Figure 3.1.26 *English (Level 1-2, T5-7, P5-6)*

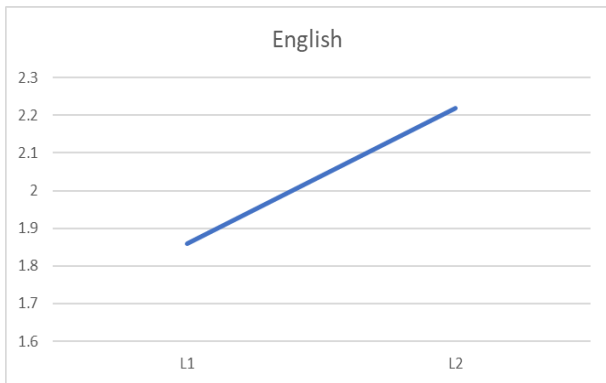


Figure 3.1.27 *Mathematics (Level 1-2, T5-7, P5-6)*

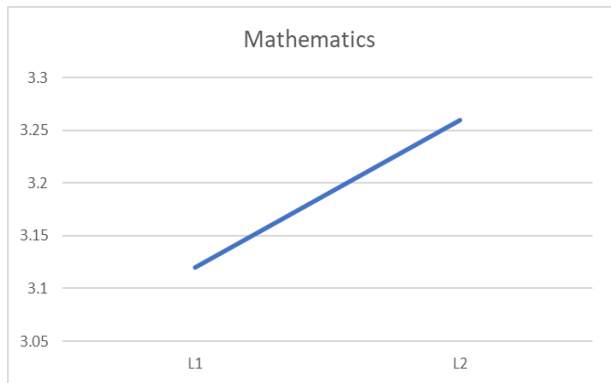


Figure 3.1.28 *General Studies (Level 1-2, T5-7, P5-6)*

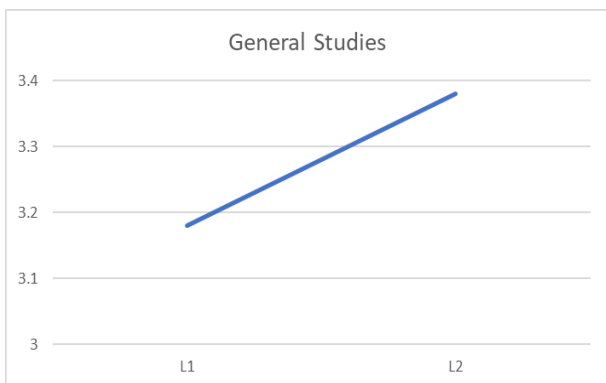


Table 3.4 *Results of Differences in Variables (Level 2-3 in T5-7)*

Grade	Phase	Dimensions	Experimental		N	Sig
			L2	L3		
P1-2	T5-7	Peer Relationship	4.08	4.14	54	N
P1-2	T5-7	Teacher Relationship	4.48	4.5	54	N
P3-4	T5-7	Peer Relationship	3.86	3.89	86	N
P3-4	T5-7	Teacher Relationship	4.56	4.49	86	N
P3-4	T5-7	Self-Directed Learning	4	4.01	86	N
P3-4	T5-7	Optimism	4.01	3.96	86	N
P3-4	T5-7	Anxiety	2.23	2.25	86	N
P3-4	T5-7	Depression	1.89	1.93	86	N
P3-4	T5-7	Stress Management	3.94	3.98	86	N
P3-4	T5-7	Chinese	3.08	3.33	86	Y
P3-4	T5-7	English	2.59	2.58	86	N
P3-4	T5-7	Mathematics	3.43	3.4	86	N
P3-4	T5-7	General Studies	3.4	3.59	86	Y
P3-4	T5-7	STEM Interest	4.51	4.14	86	Y
P3-4	T5-7	STEM Knowledge	4.4	4.17	86	Y
P5-6	T5-7	Peer Relationship	3.81	3.86	27	N
P5-6	T5-7	Teacher Relationship	4.47	4.4	27	N
P5-6	T5-7	Self-Directed Learning	3.99	3.78	27	N
P5-6	T5-7	Optimism	3.79	3.85	27	N
P5-6	T5-7	Anxiety	2.13	1.97	27	N
P5-6	T5-7	Depression	1.92	1.98	27	N
P5-6	T5-7	Stress Management	4.2	3.83	27	N
P5-6	T5-7	Chinese	3.41	3.26	27	N
P5-6	T5-7	English	2.59	2.33	27	N
P5-6	T5-7	Mathematics	3.63	3.48	27	N
P5-6	T5-7	General Studies	3.52	3.22	27	N
P5-6	T5-7	STEM Interest	4.26	3.78	27	Y
P5-6	T5-7	STEM Knowledge	4.44	3.89	27	Y

Note: The significance level is $p \leq .05$.

Level 2-3 T5-7 Chinese and General Studies significantly increased, whereas STEM interest and STEM knowledge significantly decreased in P3-4 students. Level 2-3 T5-7 STEM interest and STEM knowledge significantly decreased in P5-6 students.

In general, level 2-3 T5-7 P3-4 students reported significant increase in some academic subjects. Both P3-4 and P5-6 students reported significant decrease in STEM interest and knowledge.

Figure 3.1.29 Chinese (Level 2-3, T5-7, P3-4)

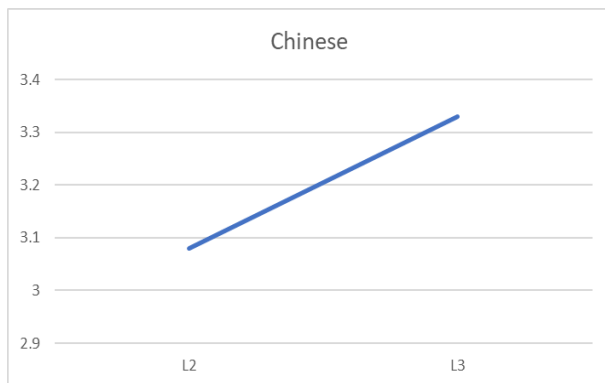


Figure 3.1.30 General Studies (Level 2-3, T5-7, P3-4)

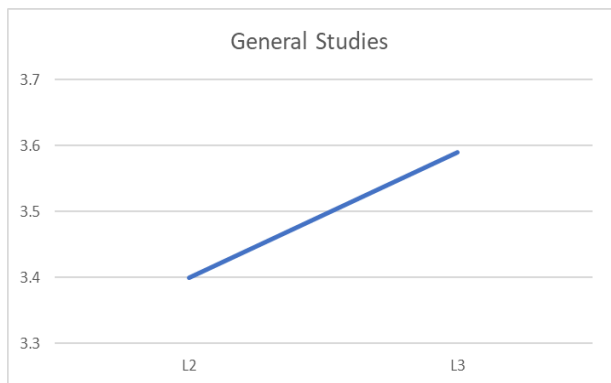


Figure 3.1.31 STEM Interest (Level 2-3, T5-7, P3-4)

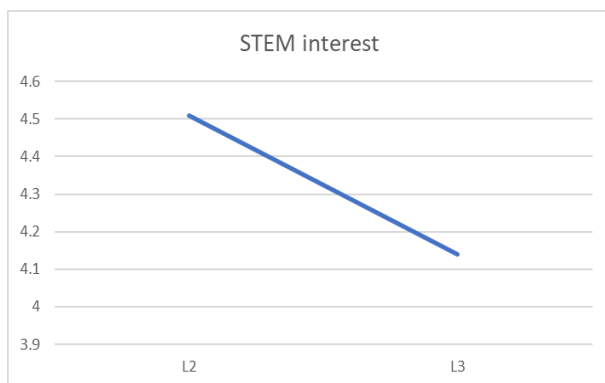


Figure 3.1.32 STEM Knowledge (Level 2-3, T5-7, P3-4)

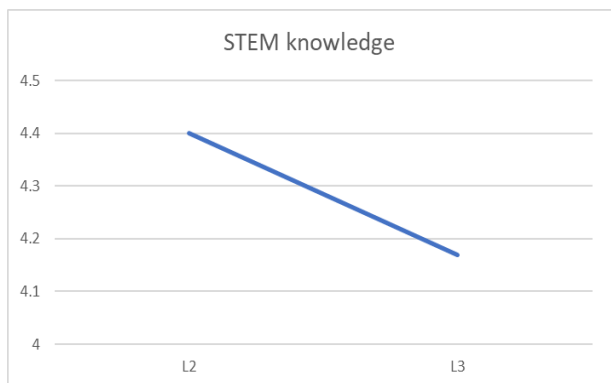


Figure 3.1.33 STEM Interest (Level 2-3, T5-7, P5-6)

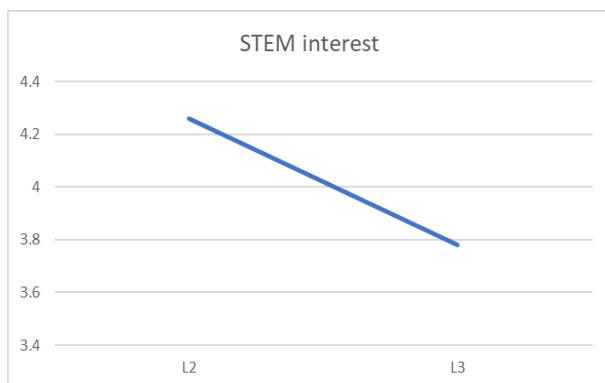
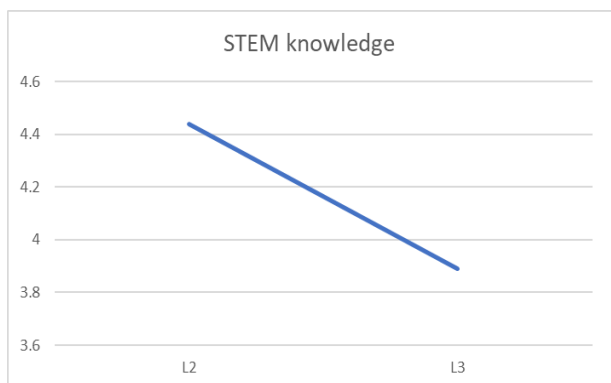


Figure 3.1.34 STEM Knowledge (Level 2-3, T5-7, P5-6)



To understand the unexpected results in several aspects, detailed bar charts were constructed and studied. No significant improvement was found in the teacher-student relationship. Nevertheless, throughout all time points T1-7, over 90% of the participants reported their relationships with teachers neutral or positive, whereas over 70% of the participants reported their relationships with teachers positive.

Figure 3.1.35 *Teacher Relationship (Level 1-2, T1-5, P1-2)*

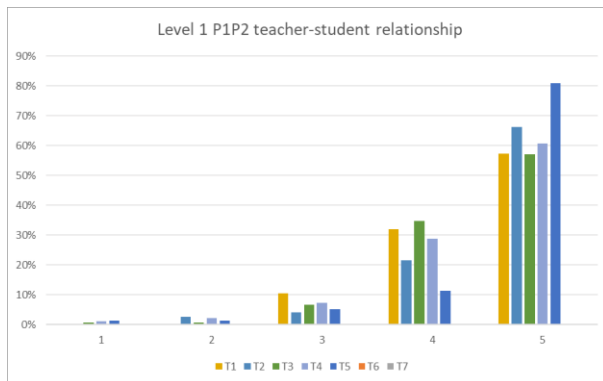


Figure 3.1.36 *Teacher Relationship (Level 1-2, T1-5, P3-4)*

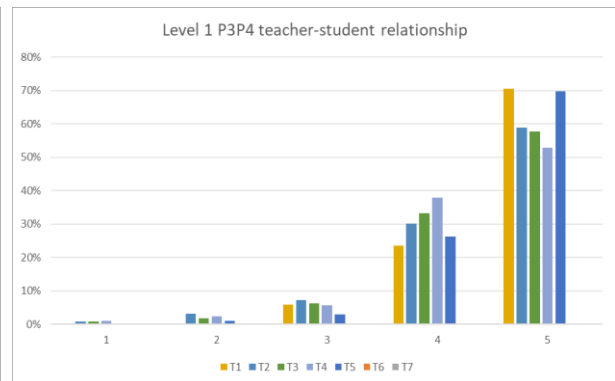


Figure 3.1.37 *Teacher Relationship (Level 2-3, T1-6, P3-4)*

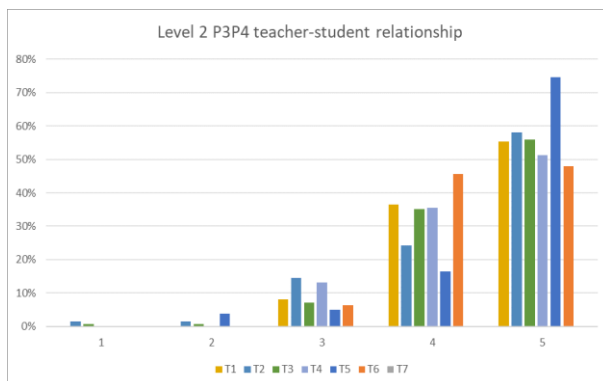
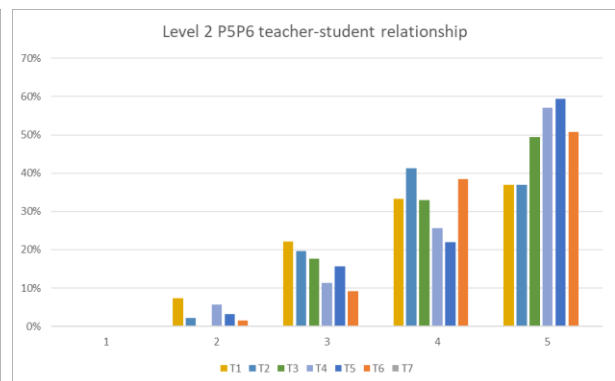


Figure 3.1.38 *Teacher Relationship (Level 2-3, T1-6, P5-6)*



Among all participants, self-directed learning was found to be significantly increased in Level 1-2 T5-7 P5-6 students, and significantly decreased in Level 1-2 T1-4 P3-4 students. Nevertheless, throughout all time points T1-7, over 85% of the participants reported a neutral or positive attitude towards self-directed learning, whereas over 55% of the participants reported a positive attitude towards self-directed learning.

Figure 3.1.39 *Self-Directed Learning (Level 1-2, T1-5, P3-4)*

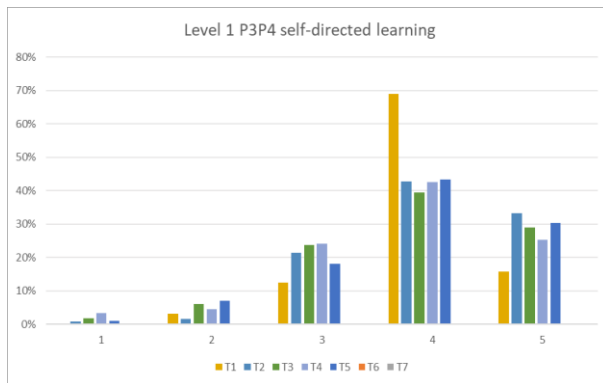


Figure 3.1.40 *Self-Directed Learning (Level 2-3, T1-6, P3-4)*

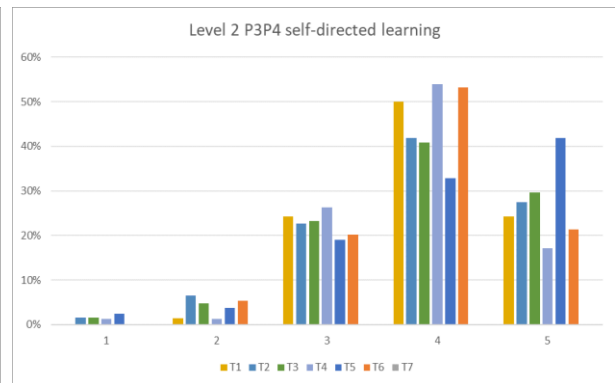


Figure 3.1.41 *Self-Directed Learning (Level 1-2, T1-5, P5-6)*

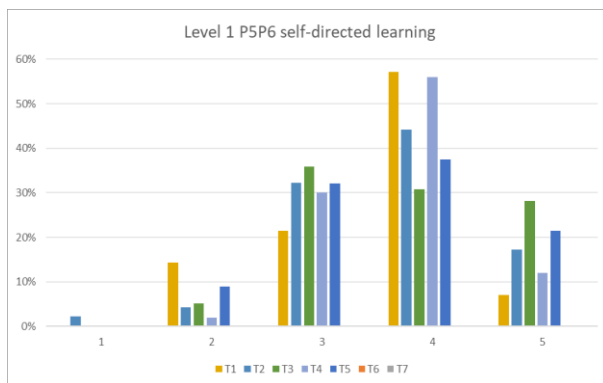
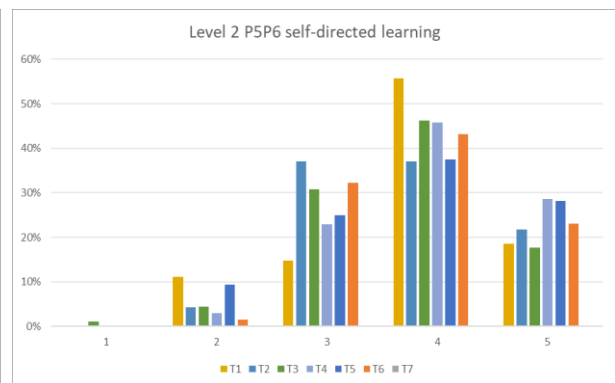


Figure 3.1.42 *Self-Directed Learning (Level 2-3, T1-6, P5-6)*



No significant improvement was found in stress management. Nevertheless, throughout all time points T1-7, over 80% of the participants reported experiencing neutral and positive stress management.

Figure 3.1.43 *Stress Management (Level 1-2, T1-5, P3-4)*

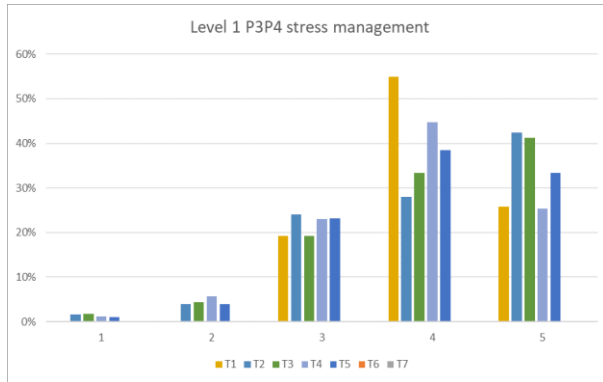


Figure 3.1.44 *Stress Management (Level 2-3, T1-6, P3-4)*

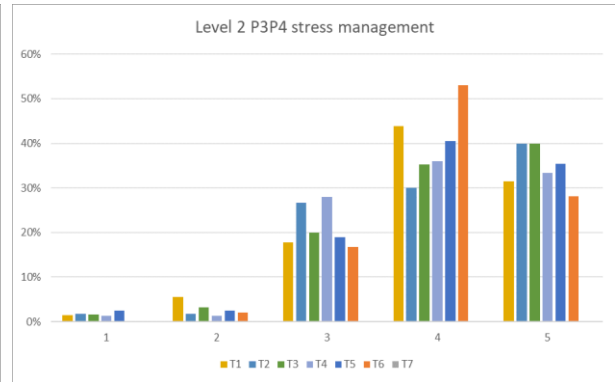


Figure 3.1.45 *Stress Management (Level 1-2, T1-5, P5-6)*

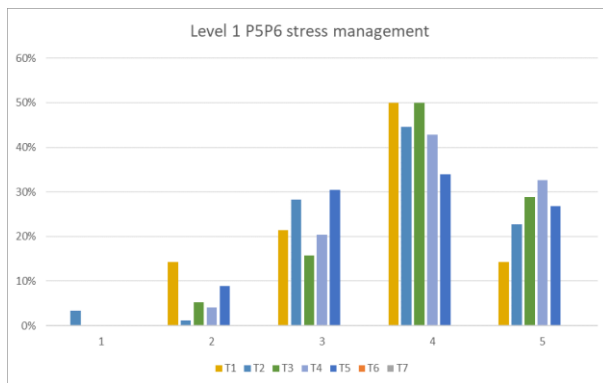
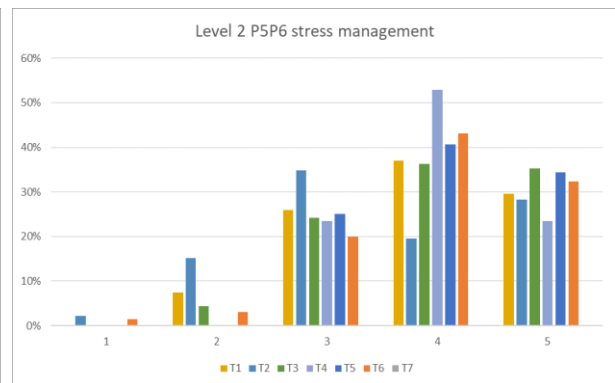


Figure 3.1.46 *Stress Management (Level 2-3, T1-6, P5-6)*



Level 1-2 T5-7 P3-4 students, Level 1 T5-7 P5-6 students, and Level 2-3 T5-7 P3-4 students were found to be significantly more confident in the Chinese subject. Level 1-2 T1-4 P5-6 students, Level 2-3 T1-4 P5-6 students, Level 1 T5-7 P3-4 students, and Level 1-2 T5-7 P5-6 students were found to be significantly more confident in the mathematics subject. Level 2-3 T1-4 P3-4 students, Level 1 T5-7 P3-4 students, Level 1-2 T5-7 P5-6 students, and Level 2-3 T5-7 P3-4 students were found to be significantly more confident in the General Studies subject, whereas Level 1-2 T1-4 P3-4 students, and Level 2-3 T1-4 P3-4 students were found to be significantly less confident in the General Studies subject. Throughout most time points T1-7, over 60% of the participants reported feeling neutral or confident towards the subjects Chinese, Mathematics, and General Studies.

Figure 3.1.47 Chinese (Level 1-2, T1-5, P3-4)

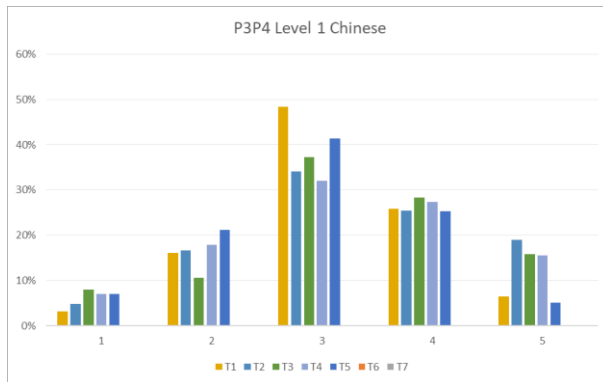


Figure 3.1.48 Chinese (Level 2-3, T1-6, P3-4)

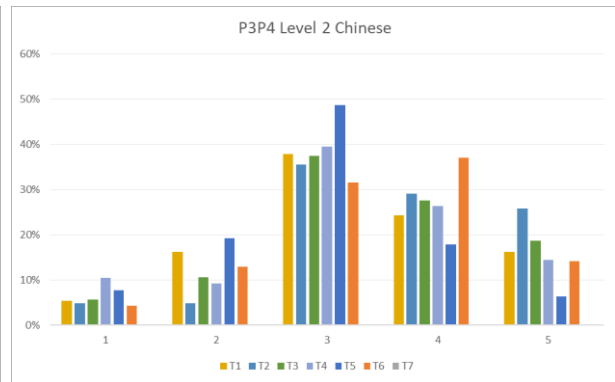


Figure 3.1.49 Mathematics (Level 2-3, T1-6, P3-4)

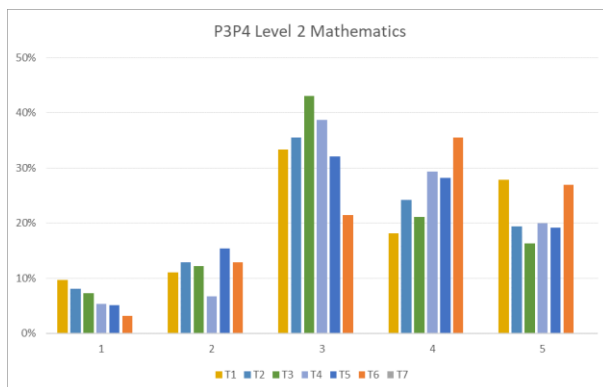


Figure 3.1.50 Mathematics (Level 2-3, T1-6, P5-6)

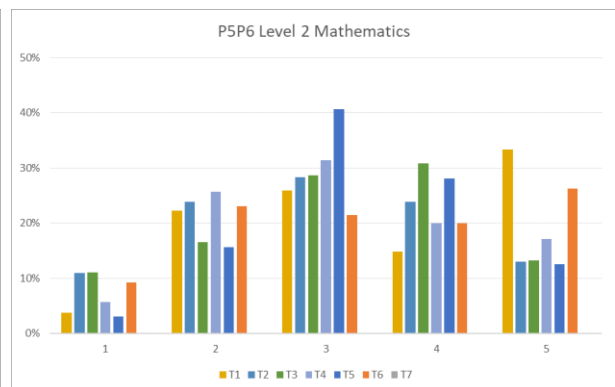


Figure 3.1.51 *General Studies (Level 1-2, T1-5, P3-4)*

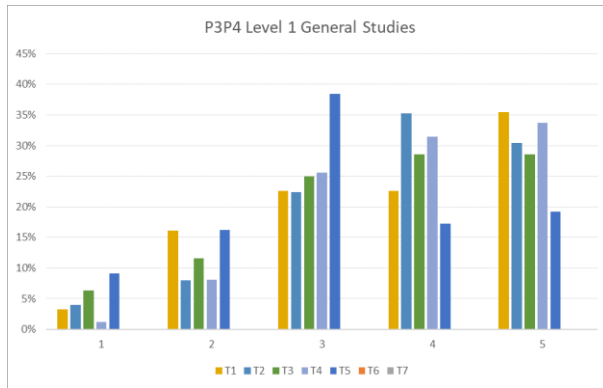
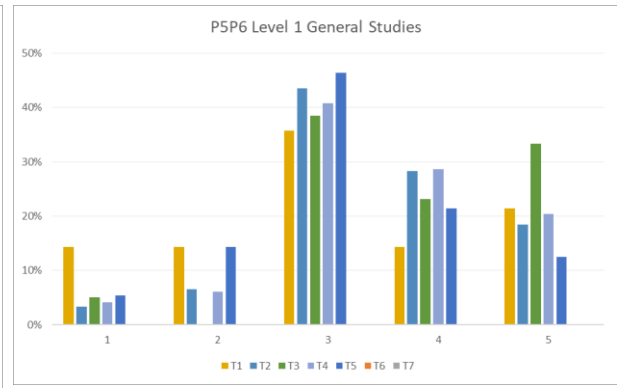


Figure 3.1.52 *General Studies (Level 1-2, T1-5, P5-6)*



Level 2-3 T1-4 P5-6 students, and Level 1-2 T5-7 P5-6 students, were found to be significantly more confident in the English subject. Throughout most time points T1-7, over 35% of the participants reported feeling neutral or confident towards the subject English.

Figure 3.1.53 *English (Level 1-2, T1-5, P3-4)*

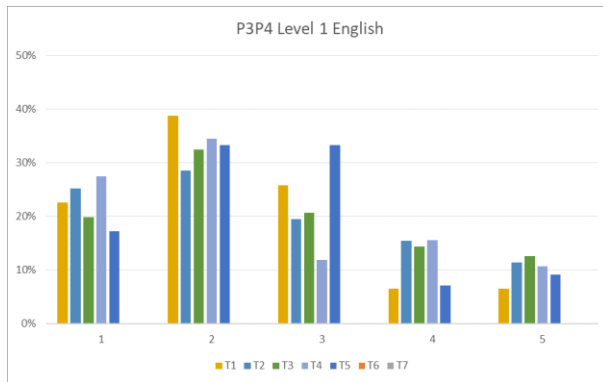


Figure 3.1.54 *English (Level 2-3, T1-6, P3-4)*

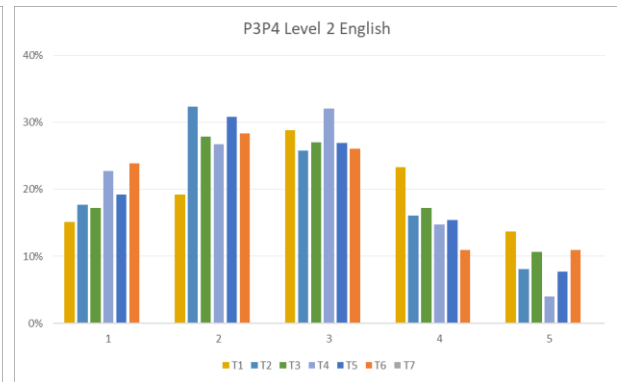


Figure 3.1.55 *English (Level 1-2, T1-5, P5-6)*

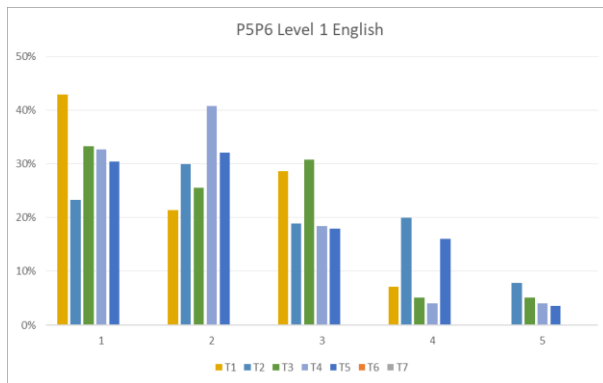
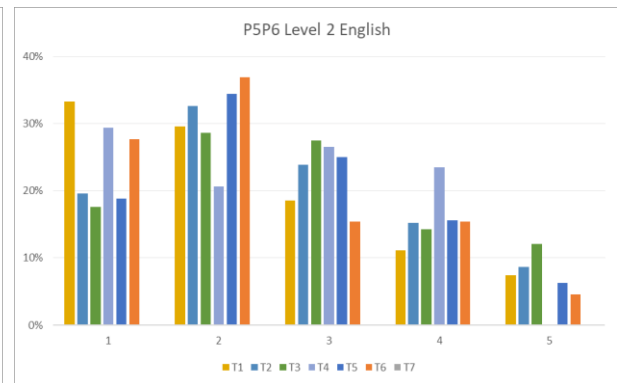


Figure 3.1.56 *English (Level 2-3, T1-6, P5-6)*



Among all participants, Level 1-2 T1-4 P5-6 students, and Level 2-3 T1-4 P5-6 students, were found to have significant increase in STEM interest. Level 1-2 T5-7 P3-4 students, Level 2-3 T5-7 P3-4 students, Level 2-3 T5-7 P5-6 students, were found to have significant decrease in STEM interest. Nevertheless, throughout all time points T1-7, over 75% of the participants reported to be neutral or positively interested towards STEM, whereas over 55% of the participants reported to be positively interested towards STEM.

Figure 3.1.57 *STEM Interest (Level 1-2, T1-5, P1-2)*

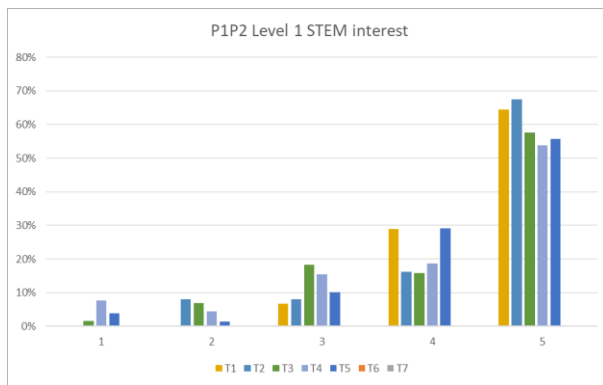


Figure 3.1.58 *STEM Interest (Level 2-3, T1-6, P1-2)*

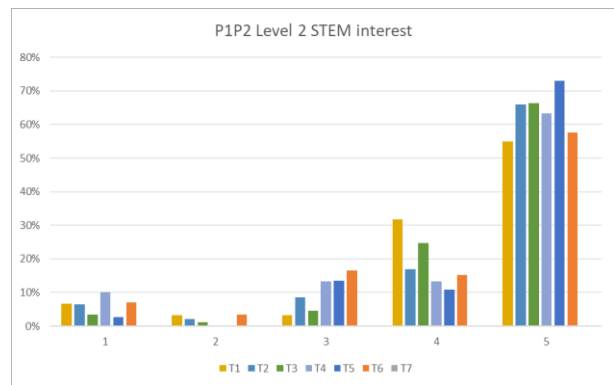


Figure 3.1.59 *STEM Interest (Level 2-3, T1-6, P3-4)*

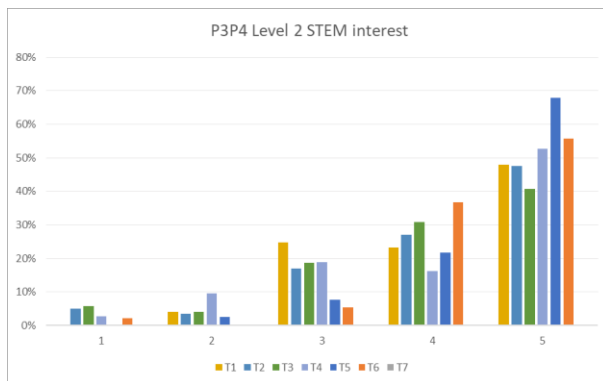
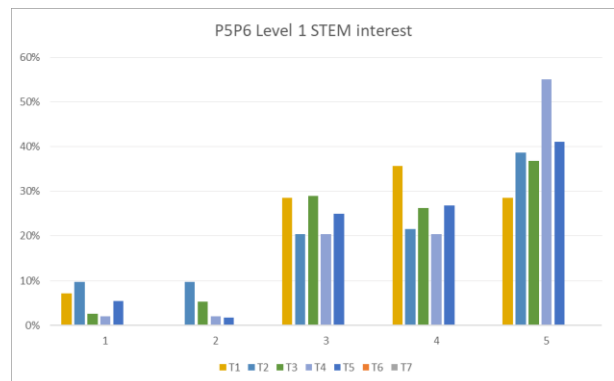


Figure 3.1.60 *STEM Interest (Level 1-2, T1-5, P5-6)*



Results from the repeated-measures ANOVAs indicated significant increase in peer relationship, and most students reported positively in teacher-student relationship. In emotion regulation aspect, significant decrease in anxiety among half of the groups, where significant increase is found in optimism. Although no significant result was observed, depression is reported negatively and stress management positively in general. Students are found to be more confident in Chinese, Mathematics, and General Studies compared to English in general, where significant increase in all subjects are found among levels and groups. Mixed results

were observed in STEM interest, STEM knowledge, and self-directed learning. Nevertheless, a majority of the participants reported neutral or positive towards these aspects throughout all time points, presenting a positive trend.

3.2. One-Way ANOVAs (using different levels in specific time point as independent groups)

On the other hand, one-way ANOVAs were conducted to test the grade-specific (Primary 1 & 2, Primary 3 to 6 respectively) data of 333 program participants by matching each program class level at different time points (e.g., Level 1 Time 1, Level 2 Time 2, Level 3 Time 3, and graduates' data at Time 5). We aimed to investigate the general pattern of changes along promotion to different class levels, and to examine the sustainability of the program effects upon graduation.

The overall results were presented in tables and the significant results were presented in the figures below. Results from students in the control group were also included in the figures for comparison. The parts highlighted in yellow showed positive outcomes while the parts highlighted in green showed unexpected outcomes.

Table 3.5 Results of Differences in Variables along Class Level Promotion (T1-4)

Grade	Dimensions	L1	L2	L3	Grad	N	Sig
P1-2	Peer Relationship	4.02	3.89	3.85	3.98	404	N
P1-2	Teacher Relationship	4.49	4.38	4.34	4.54	404	N
P1-2	STEM Interest	4.44	4.35	3.89	4.09	396	Y
P1-2	STEM Knowledge	4.37	4.25	3.79	4.32	395	Y
P3-6	Peer Relationship	3.63	3.61	3.57	3.91	942	Y
P3-6	Teacher Relationship	4.36	4.31	4.32	4.49	943	N
P3-6	Self-Directed Learning	3.90	3.83	3.70	3.93	941	Y
P3-6	Optimism	3.75	3.80	3.61	3.96	939	Y
P3-6	Anxiety	2.54	2.43	2.34	1.93	938	Y
P3-6	Depression	2.08	2.07	2.04	1.87	940	Y
P3-6	Stress Management	3.84	3.91	3.83	3.85	934	N
P3-6	Chinese	3.32	3.44	3.37	3.14	936	Y
P3-6	English	2.53	2.71	2.66	2.45	931	N
P3-6	Mathematics	3.49	3.23	3.26	3.32	933	Y
P3-6	General Studies	3.66	3.66	3.66	3.36	936	Y
P3-6	STEM Interest	4.01	3.91	4.00	4.00	932	N
P3-6	STEM Knowledge	3.94	3.83	4.00	3.94	929	N

Note: The significance level is $p \leq .05$.

Table 3.6 *Results of Differences in Variables along Class Level Promotion (T5-7)*

Grade	Dimensions	L1	L2	L3	N	Sig
P1-2	Peer Relationship	4.27	3.97	4.03	239	N
P1-2	Teacher Relationship	4.65	4.40	4.51	237	N
P1-2	STEM Interest	4.31	4.13	4.03	237	N
P1-2	STEM Knowledge	4.32	4.22	3.95	237	N
P3-6	Peer Relationship	3.75	3.85	3.90	548	Y
P3-6	Teacher Relationship	4.50	4.39	4.51	545	N
P3-6	Self-Directed Learning	3.86	3.90	3.84	545	N
P3-6	Optimism	3.86	3.88	3.84	545	N
P3-6	Anxiety	2.21	2.49	1.97	545	Y
P3-6	Depression	1.98	2.09	1.88	545	Y
P3-6	Stress Management	3.82	3.90	3.92	547	N
P3-6	Chinese	2.92	3.43	3.05	542	Y
P3-6	English	2.48	2.48	2.44	543	N
P3-6	Mathematics	3.12	3.54	3.25	544	Y
P3-6	General Studies	3.21	3.52	3.22	545	Y
P3-6	STEM Interest	4.15	4.13	4.01	545	N
P3-6	STEM Knowledge	4.06	4.10	3.96	544	N

Note: The significance level is $p \leq .05$.

3.2.1. Peer Relationship and Teacher-Student Relationship

T1-4 P3-6 students, and T5-7 P3-6 students, were found to have significant differences in peer relationship at different time points. It is observed that the main pattern in change of peer relationship is mostly positive, and the growth sustained upon graduation.

Figure 3.2.1 Peer Relationship (T1-4, P1-2)

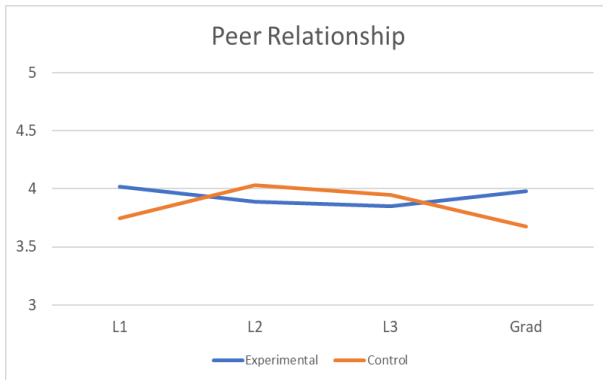


Figure 3.2.2 Peer Relationship (T5-7, P1-2)



Figure 3.2.3 Peer Relationship (T1-4, P3-6)

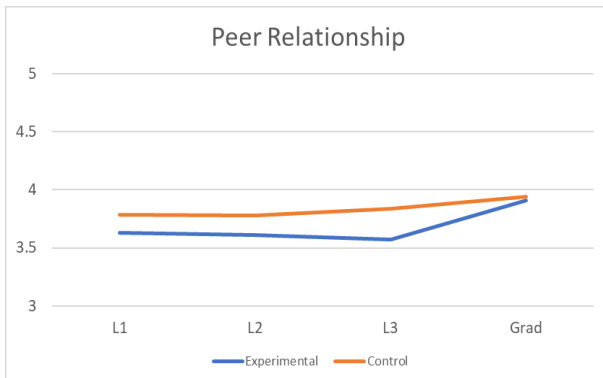
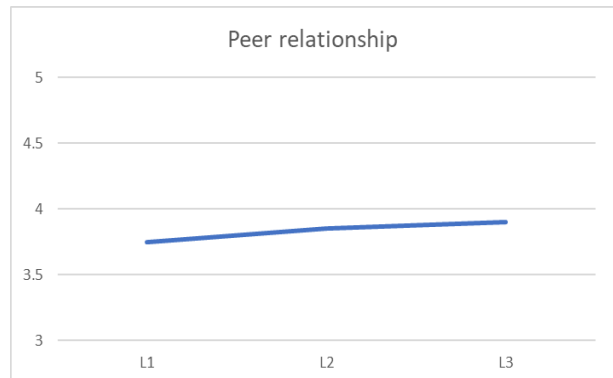


Figure 3.2.4 Peer Relationship (T5-7, P3-6)



No significant difference was found in teacher-student relationships at different time points. Nevertheless, although a temporary decrease in teacher-student relationship was observed along the promotion of class levels, all groups were found to have a positive increase in teacher-student relationship after graduation.

Figure 3.2.5 *Teacher Relationship (T1-4, P1-2)*

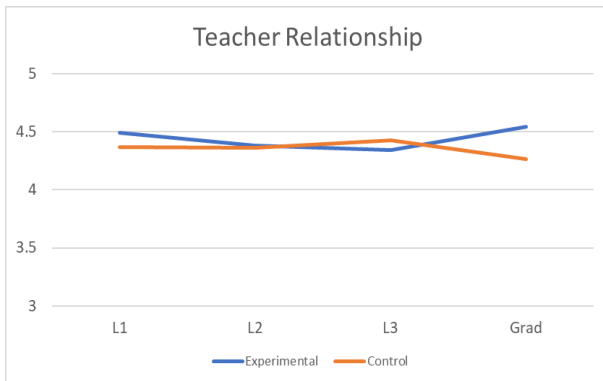


Figure 3.2.6 *Teacher Relationship (T5-7, P1-2)*

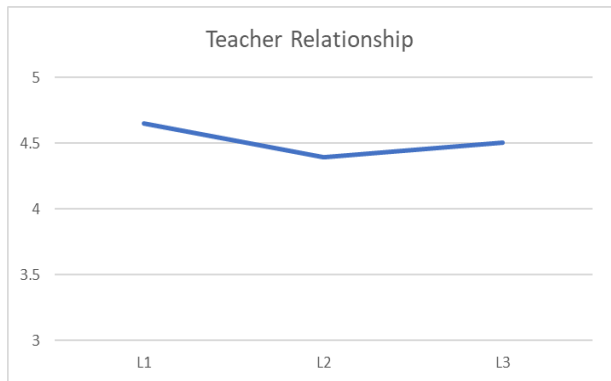


Figure 3.2.7 *Teacher Relationship (T1-4, P3-6)*

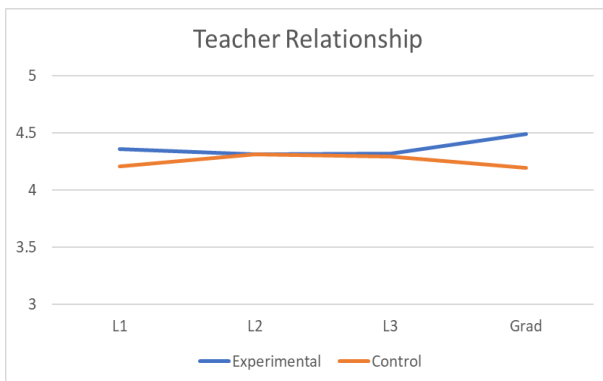
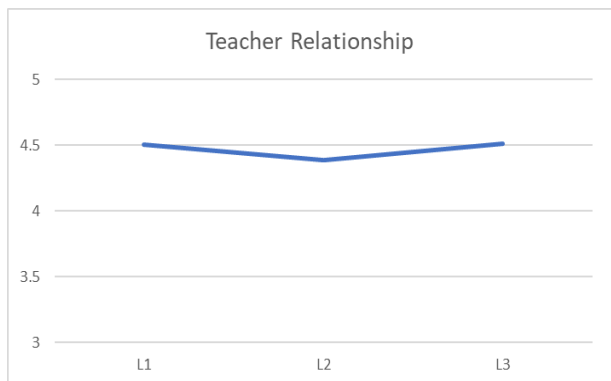


Figure 3.2.8 *Teacher Relationship (T5-7, P3-6)*



3.2.2. Emotion Regulation

T1-4 P3-6 students were found to have significant differences in optimism at different time points. It is observed that the main pattern in change of optimism is mostly steady throughout the class level promotion, and there is a growth upon graduation.

Figure 3.2.9 *Optimism (T1-4, P3-6)*

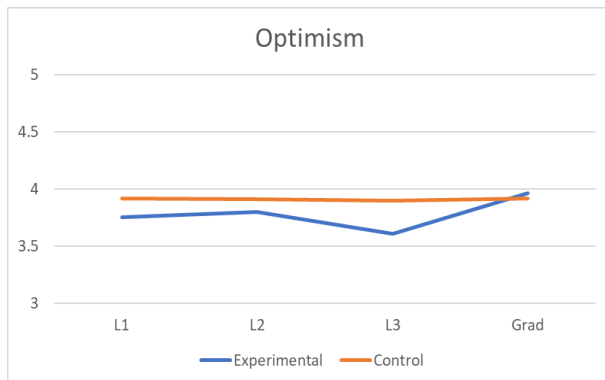


Figure 3.2.10 *Optimism (T5-7, P3-6)*



T1-4 P3-6 students, and T5-7 P3-6 students, were found to have significant differences in anxiety at different time points. It is observed that anxiety level has decreased in overall, and the decreased level of anxiety was consistent after graduation.

Figure 3.2.11 *Anxiety (T1-4, P3-6)*

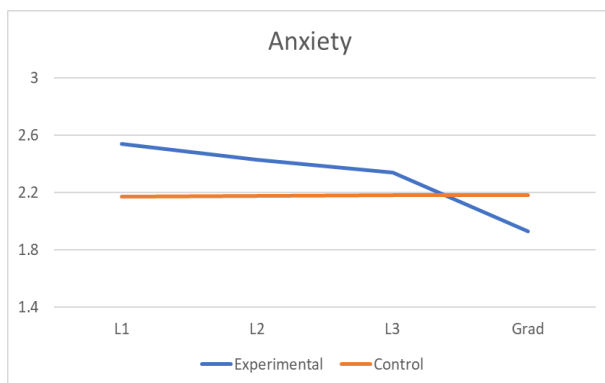
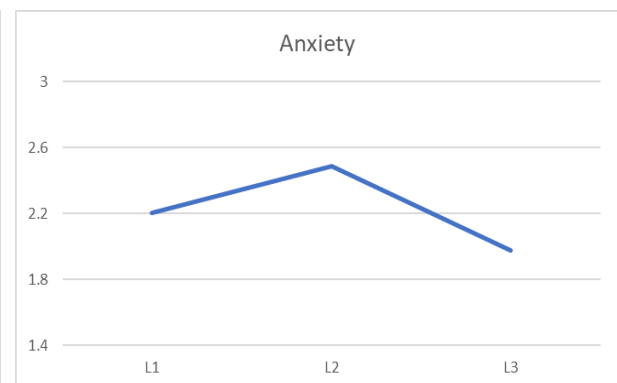


Figure 3.2.12 *Anxiety (T5-7, P3-6)*



T1-4 P3-6 students, and T5-7 P3-6 students, were found to have significant differences in depression at different time points. It is observed that depression level generally decreased gradually throughout the class level promotion, and the decreased level of depression was mainly consistent after graduation.

Figure 3.2.13 Depression (T1-4, P3-6)

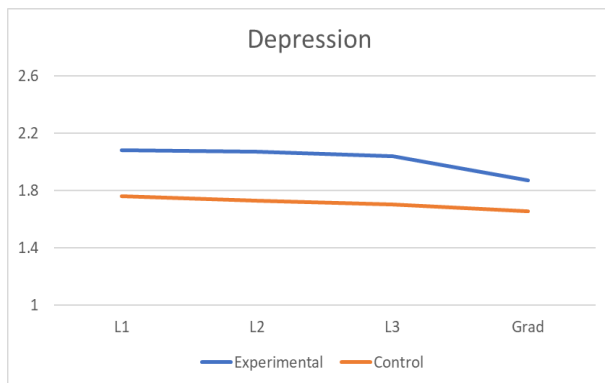
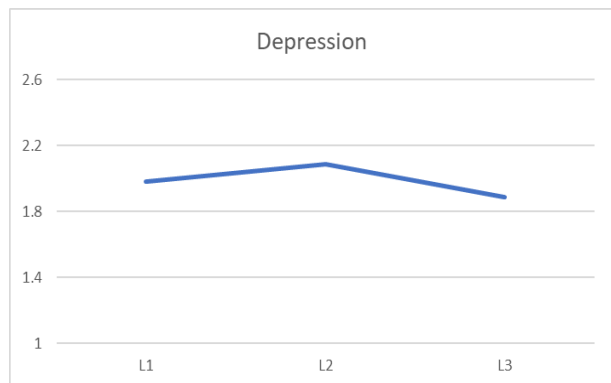


Figure 3.2.14 Depression (T5-7, P3-6)



No significant difference was found in stress management at different time points. Nevertheless, it is observed that the main pattern in change of stress management is steady throughout the class level promotion.

Figure 3.2.15 Stress Management (T1-4, P3-6)

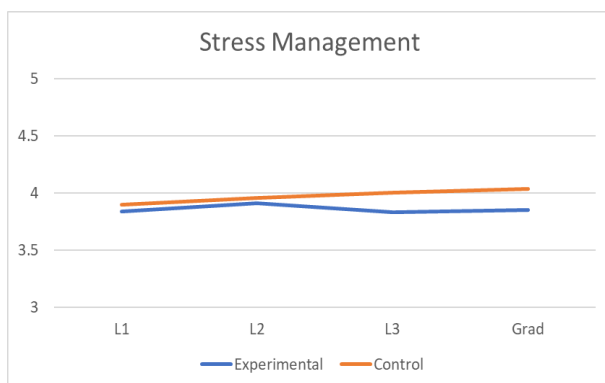
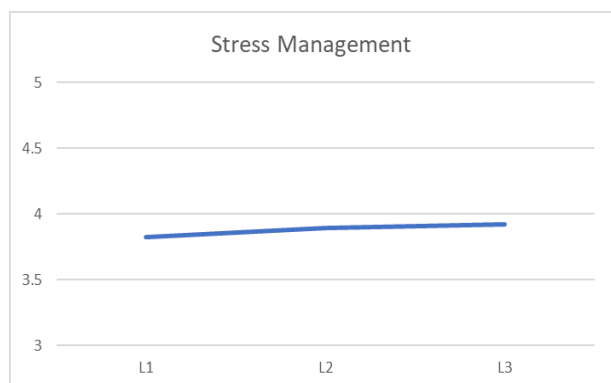


Figure 3.2.16 Stress Management (T5-7, P3-6)



3.2.3. Academic

T1-4 P3-6 students, and T5-7 P3-6 students, were found to have significant differences in Chinese at different time points. It is observed that students' confidence in Chinese increased from class level 1 to class level 2, but then decrease from class level 2 to class level 3. The confidence in Chinese tend to decrease upon graduation.

Figure 3.2.17 Chinese (T1-4, P3-6)

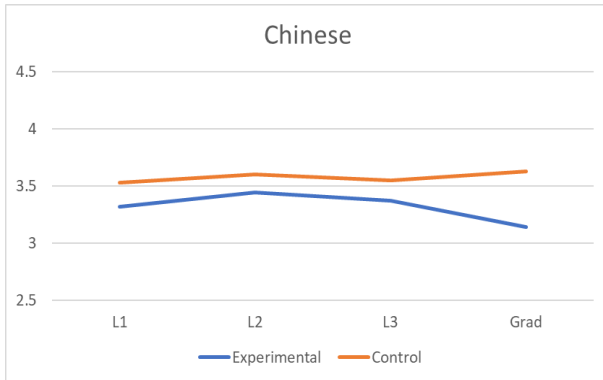
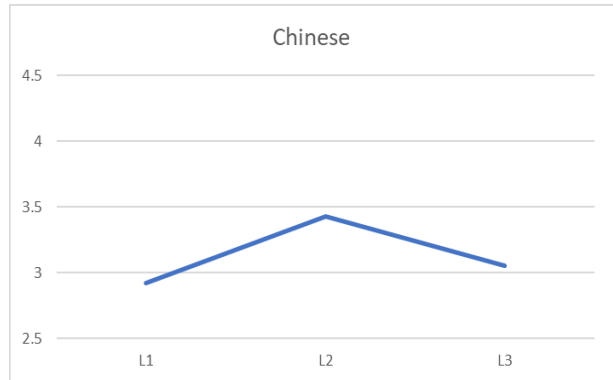


Figure 3.2.18 Chinese (T5-7, P3-6)



No significant difference was found in English at different time points. It is observed that students' confidence in English mainly remained steady throughout the class level promotion, however the level of confidence decreased upon graduation.

Figure 3.2.19 English (T1-4, P3-6)

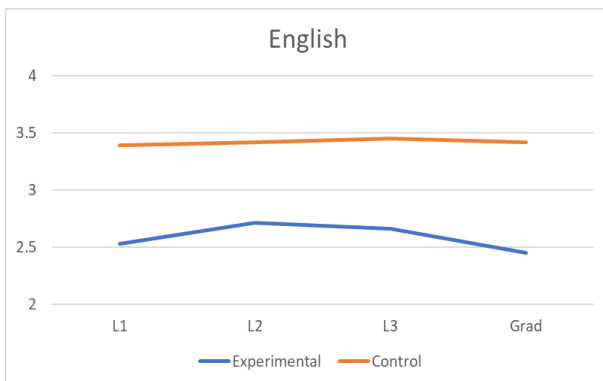
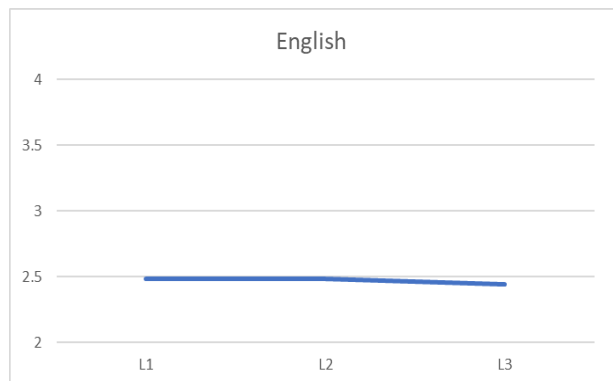


Figure 3.2.20 English (T5-7, P3-6)



T1-4 P3-6 students, and T5-7 P3-6 students, were found to have significant differences in Mathematics at different time points. It is observed that although the main pattern of students' confidence in Mathematics varies among groups, a small decrease was found overall.

Figure 3.2.21 Mathematics (T1-4, P3-6)

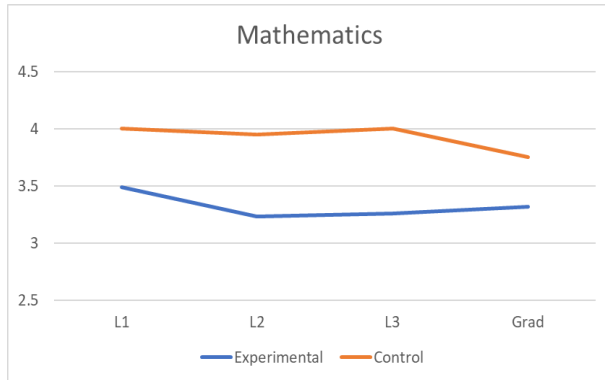
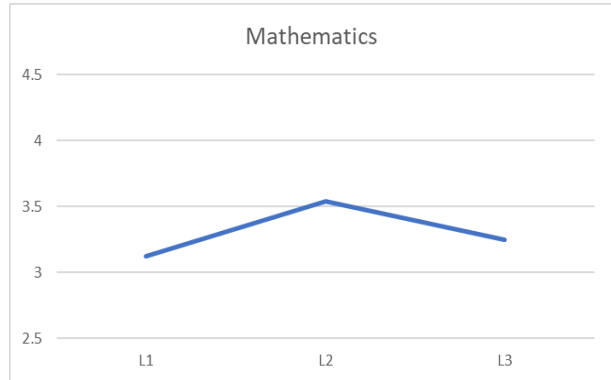


Figure 3.2.22 Mathematics (T5-7, P3-6)



T1-4 P3-6 students, and T5-7 P3-6 students, were found to have significant differences in General Studies at different time points. No significant decrease was observed in students' confidence in General Studies from class level 1 to class level 3. Only limited positive effect was found upon graduation.

Figure 3.2.23 General Studies (T1-4, P3-6)

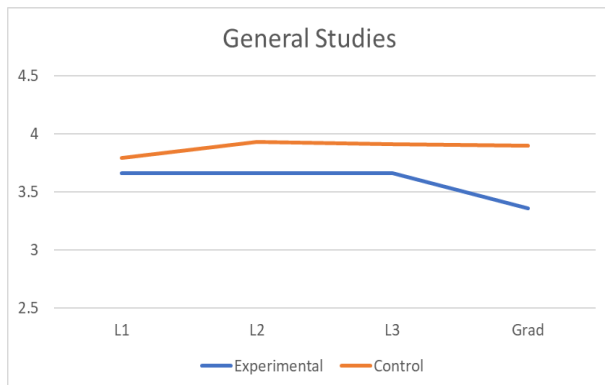
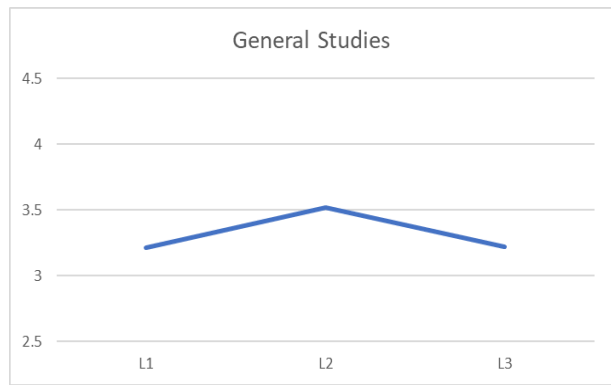


Figure 3.2.24 General Studies (T5-7, P3-6)



3.2.4 STEM interest, STEM knowledge, and self-directed learning

T1-4 P1-2 were found to have significant differences in STEM interest at different time points. It is observed that STEM interest decreased throughout the class level promotion, however increased upon graduation, resulting in relatively slight change overall.

Figure 3.2.25 *STEM Interest (T1-4, P1-2)*

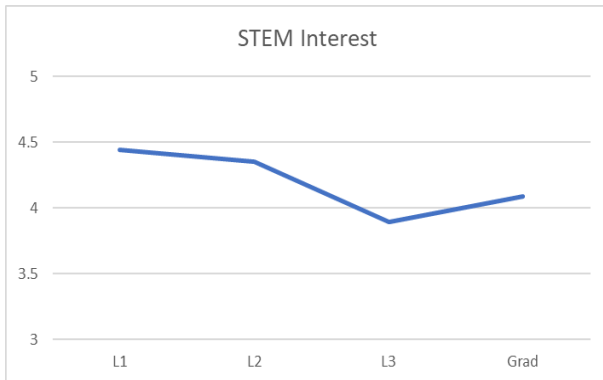


Figure 3.2.26 *STEM Interest (T5-7, P1-2)*

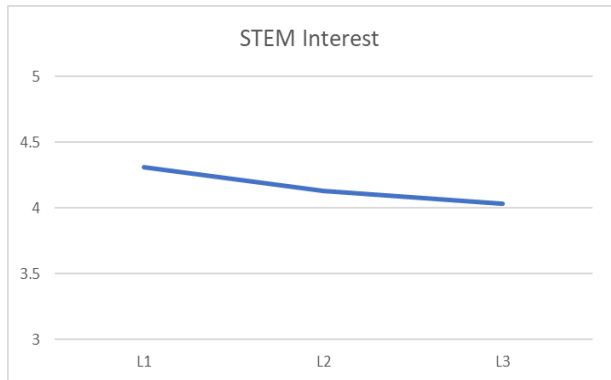


Figure 3.2.27 *STEM Interest (T1-4, P3-6)*

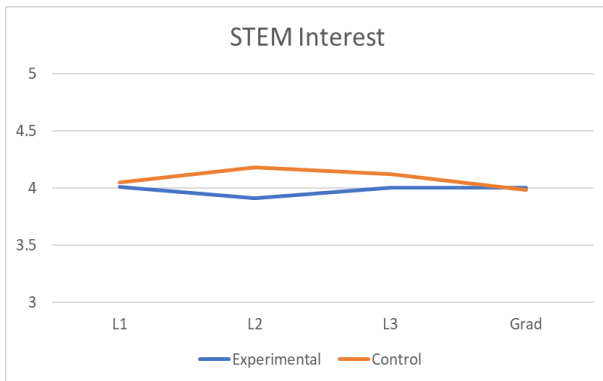
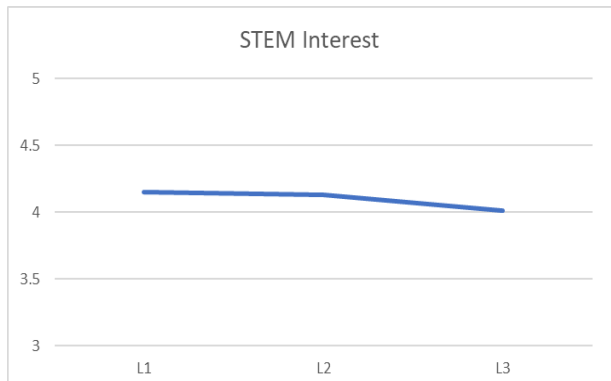


Figure 3.2.28 *STEM Interest (T5-7, P3-6)*



T1-4 P1-2 were found to have significant differences in STEM knowledge at different time points. Students reported that their perception of STEM knowledge decreased during the study period, however it increased upon graduation.

Figure 3.2.29 *STEM Knowledge (T1-4, P1-2)*

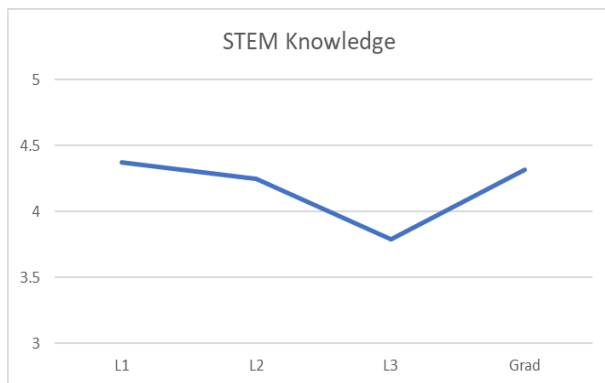


Figure 3.2.30 *STEM Knowledge (T5-7, P1-2)*

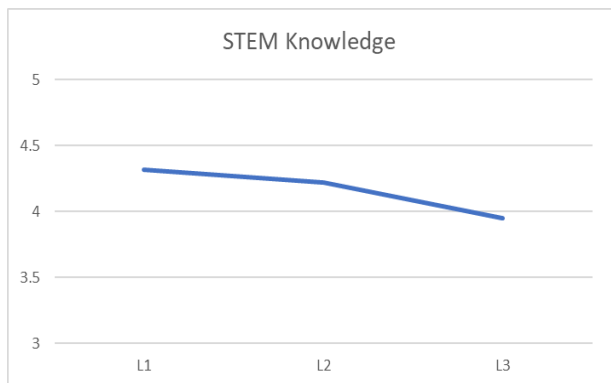


Figure 3.2.31 *STEM Knowledge (T1-4, P3-6)*

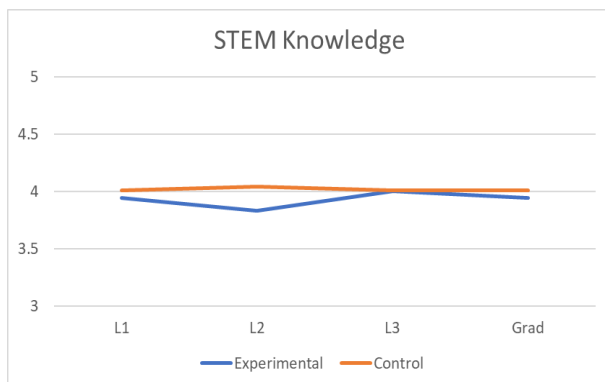
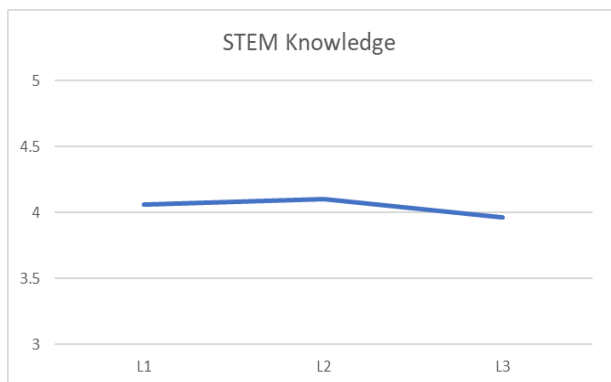
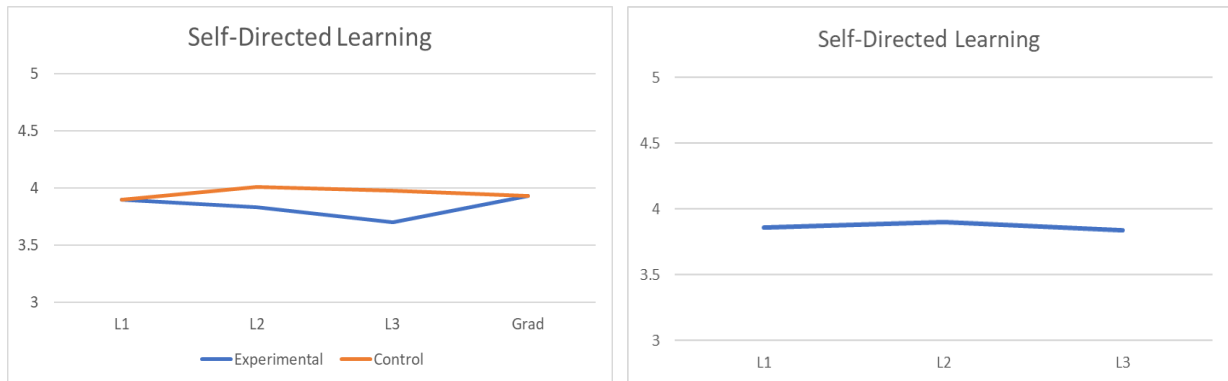


Figure 3.2.32 *STEM Knowledge (T5-7, P3-6)*



T1-4 P3-6 students were found to have significant differences in self-directed learning at different time points. It is observed that self-directed learning remained steady or slight decreased throughout the class level promotion, however increased upon graduation, resulting in overall increase.

Figure 3.2.33 *Self-Directed Learning (T1-4, P3-6)*, **Figure 3.2.34** *Self-Directed Learning (T5-7, P3-6)*



Results from the one-way ANOVAs showed a prolonged positive effect upon graduation from the 333 program in relationship aspects, including peer relationship and teacher-student relationship. A general trend of improvement is observed in emotion regulation aspects, including optimism, anxiety, depression, and stress management. Although improvements were found in academic subjects during participation in the program, it was found that students generally report lower confidence in subjects like Chinese, English, and General Studies after graduation from the 333 program. Prolonged positive effect was observed upon graduation in STEM interest, STEM knowledge, and self-directed learning.

3.3. Repeated-Measures ANOVAs (comparing three time points for Time 1-2-3)

Furthermore, repeated-measures ANOVAs were conducted to test the grade-specific (Primary 1 & 2, Primary 3 & 4 and Primary 5 & 6 respectively) data of 333 program participants by matching students' names across Time 1, Time 2 and Time 3 consecutively, in comparison with the control group. We aimed to investigate the changes in outcome indicators among the same group of students who have participated in the program from class level 1 to level 3.

P1-2 students (N = 60) were found to have significant differences in STEM interest and STEM knowledge. P3-4 students (N = 80) were found to have significant differences in self-directed learning, optimism, anxiety, and STEM interest. P5-6 students (N=29) were found to have significant differences in teacher-student relationship.

The overall results were presented in tables and the significant results were presented in the figures below. Results from students in the control group were also included in the figures for comparison. The parts highlighted in yellow showed positive outcomes while the parts highlighted in green showed unexpected outcomes.

Table 3.7 *Results of Differences in Variables along Class Level Promotion*

Grade	Dimensions	L1	L2	L3	N	Sig
P1-2	Peer Relationship	4.11	4.05	3.93	60	N
P1-2	Teacher Relationship	4.57	4.51	4.51	60	N
P1-2	STEM Interest	4.50	4.30	4.00	60	Y
P1-2	STEM Knowledge	4.52	4.23	3.88	60	Y
P3-4	Peer Relationship	3.83	3.79	3.75	109	N
P3-4	Teacher Relationship	4.62	4.55	4.47	109	N
P3-4	Self-Directed Learning	4.04	4.00	3.77	109	Y
P3-4	Optimism	4.00	3.94	3.74	109	Y
P3-4	Anxiety	2.39	2.46	2.16	109	Y
P3-4	Depression	1.93	2.00	1.94	109	N
P3-4	Stress Management	3.93	4.07	3.88	109	N
P3-4	Chinese	3.38	3.61	3.29	109	N
P3-4	English	2.45	2.74	2.41	109	N
P3-4	Mathematics	3.48	3.60	3.21	109	N
P3-4	General Studies	3.65	3.64	3.46	109	N
P3-4	STEM Interest	4.46	4.35	4.14	109	Y
P3-4	STEM Knowledge	4.36	4.21	4.19	109	N
P5-6	Peer Relationship	3.65	3.75	3.68	109	N
P5-6	Teacher Relationship	4.51	4.08	4.18	109	Y
P5-6	Self-Directed Learning	3.82	3.46	3.54	109	N
P5-6	Optimism	3.48	3.40	3.64	109	N
P5-6	Anxiety	2.39	2.54	2.36	109	N
P5-6	Depression	2.14	2.15	1.97	109	N
P5-6	Stress Management	3.62	3.51	3.71	109	N
P5-6	Chinese	3.10	3.07	3.28	109	N
P5-6	English	2.66	2.45	2.52	109	N
P5-6	Mathematics	3.79	3.38	3.55	109	N
P5-6	General Studies	3.48	3.14	3.41	109	N
P5-6	STEM Interest	3.79	3.90	3.62	109	N
P5-6	STEM Knowledge	3.72	3.79	3.70	109	N

Note: The significance level is $p \leq .05$.

Figure 3.3.1 *STEM Interest (P1-2)*

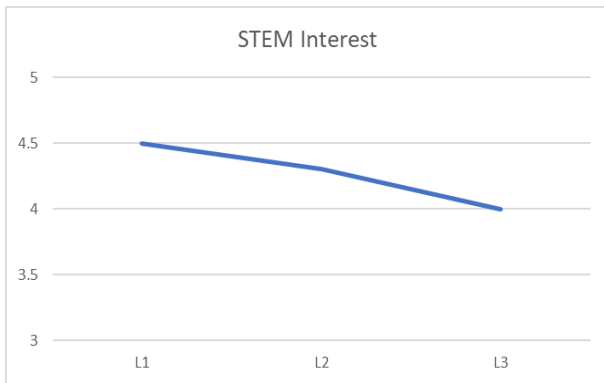


Figure 3.3.2 *STEM Knowledge (P1-2)*

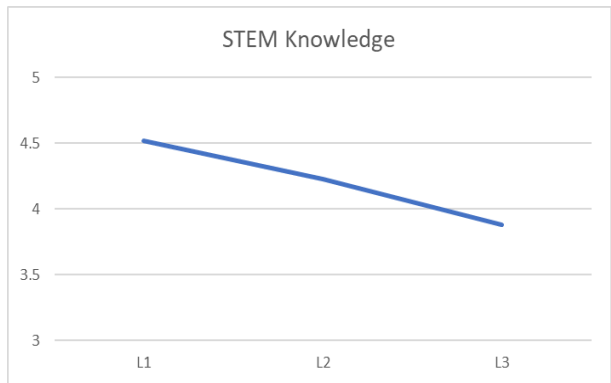


Figure 3.3.3 *Self-Directed Learning (P3-4)*

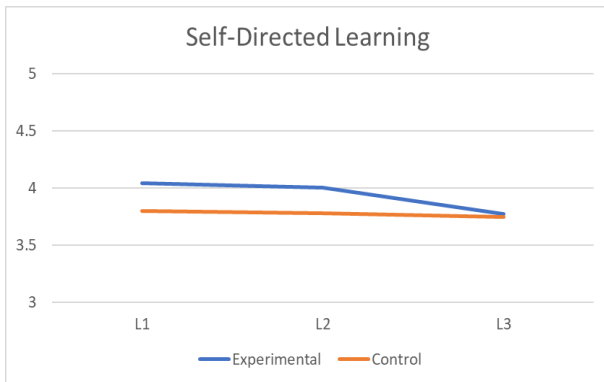


Figure 3.3.4 *Optimism (P3-4)*

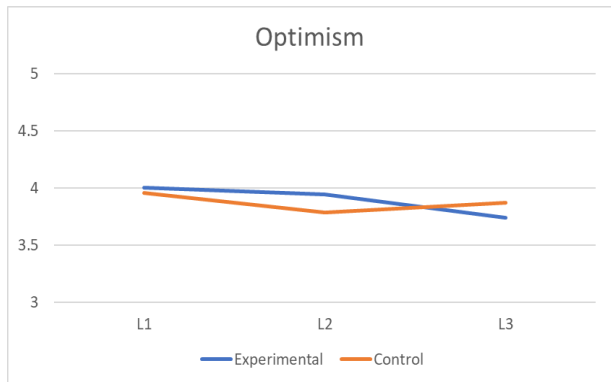


Figure 3.3.5 *Anxiety (P3-4)*

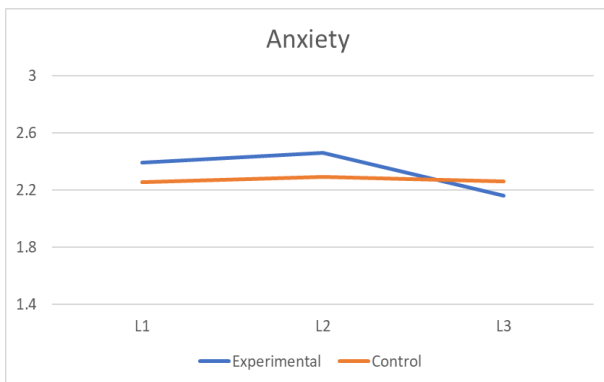


Figure 3.3.6 *STEM Interest (P3-4)*

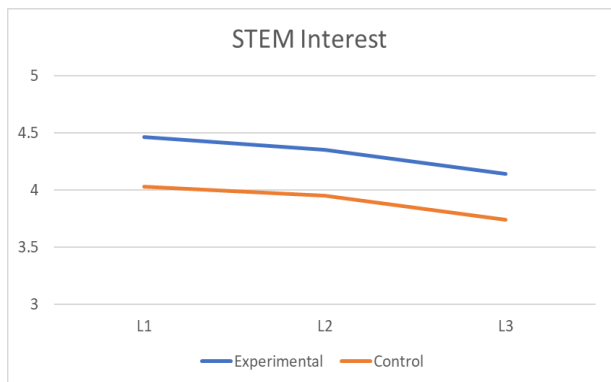
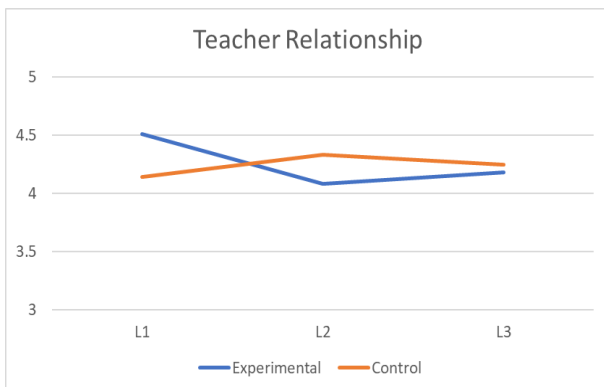


Figure 3.3.7 *Teacher Relationship (P5-6)*



Results from the repeated-measures ANOVAs shows a general trend of decrease in most aspects. Significant difference is observed in teacher-student relationship from relationship aspect. Optimism and anxiety are found to have significant differences, whereas anxiety is observed to present a trend of decrease, showing a positive effect in students' emotion regulation. Significant results were found in academic aspects. STEM interest and STEM knowledge are reported to have significant differences.

3.4. Comparison Data among Students, Teachers, and Parents

In addition, t-tests were conducted to test the rating consistencies on similar variables by different parties at the same time point. We aimed to study the differences between parents, teachers, and students on their differences in outcome ratings.

The overall results were presented in tables as below.

Table 3.8 *Comparison of Differences in Variables Between Parents and Teachers*

Level	Dimensions	Parents	Teachers	N	Sig
1	Parent Involvement	3.61	3.28	152	<.001
2	Parent Involvement	3.59	3.28	184	<.001
3	Parent Involvement	3.55	3.25	108	<.001
1	Social Competence	3.42	3.62	151	<.001
2	Social Competence	3.45	3.63	182	.001
3	Social Competence	3.37	3.65	107	.001

Note: The significance level is $p \leq .05$.

Table 3.9 *Comparison of Differences in Variables Between Parents and Students*

Level	Dimensions	Parents	Students	N	Sig
1	Chinese	2.72	3.20	140	<.001
2	Chinese	2.75	3.22	170	<.001
3	Chinese	2.78	3.45	93	<.001
1	English	2.04	2.18	140	.103
2	English	2.25	2.57	170	<.001
3	English	2.19	2.69	93	<.001
1	Mathematics	2.81	3.40	140	<.001
2	Mathematics	2.89	3.44	170	<.001
3	Mathematics	2.82	3.40	93	<.001
1	General Studies	3.01	3.65	140	<.001
2	General Studies	3.04	3.68	170	<.001
3	General Studies	3.09	3.58	93	<.001

Note: The significance level is $p \leq .05$.

Table 3.10 *Comparison of Differences in Variables Between Parents, Teachers, and Students*

Level	Dimensions	Parents	Teachers	Students	N	Sig
1	Child's Emotion Regulation	3.24	3.62	3.82	145	<.001
2	Child's Emotion Regulation	3.27	3.63	3.86	173	<.001
3	Child's Emotion Regulation	3.25	3.64	3.76	96	<.001
1	Child's Learning Motivation	3.00	3.44	3.82	147	<.001
2	Child's Learning Motivation	3.00	3.39	3.93	177	<.001
3	Child's Learning Motivation	2.95	3.62	3.67	99	<.001

Note: The significance level is $p \leq .05$.

Results from the t-tests shows that parents generally report significantly more parent involvement than teachers, whereas teachers reported significantly higher level of social competence in students when compared to parents. Parents are also found to report significantly lower in all academic subjects, comparing to students' self-report on their confidence. When comparing emotion regulation and learning motivation in students between parents, teachers, and students, it is observed that parents always reported the lowest score among all, with teachers followed, and students reported the highest score in both aspects.

3.5. Results on Phone Assistance During Class Suspension

Students' responses on the phone assistance practice during class suspended due to the pandemic were measured with three items, including 1) the effectiveness on academic assistance, 2) the effectiveness on personal growth (e.g., communication skills and self-confidence), and 3) any difficulties encountered.

The responses were collected at three different time points during pandemic (e.g., Time 5, Time 6, and Time 7), and grade-specific results were presented in the figures as below.

In general, P1-2 students responded more positively towards the effectiveness of academic support from phone assistance compared to P3-4 and P5-6 students. Although a general trend of decrease was observed from Time 5 to Time 6, 70% to 100% of the participants reported neutral or positively in nearly all groups.

Figure 3.5.1 *Phone Assistance (Academic)*
(Level 1-3, T5-7, P1-2)

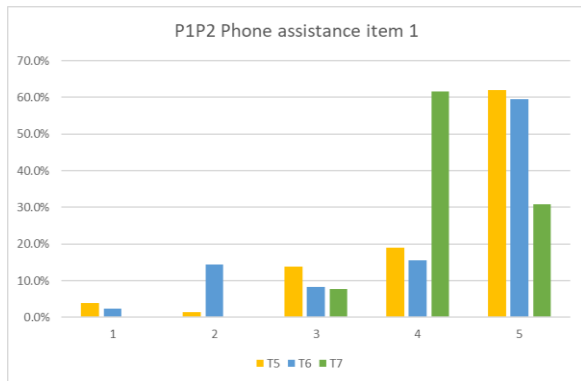


Figure 3.5.2 *Phone Assistance (Academic)*
(Level 2-3, T5-6, P1-2)

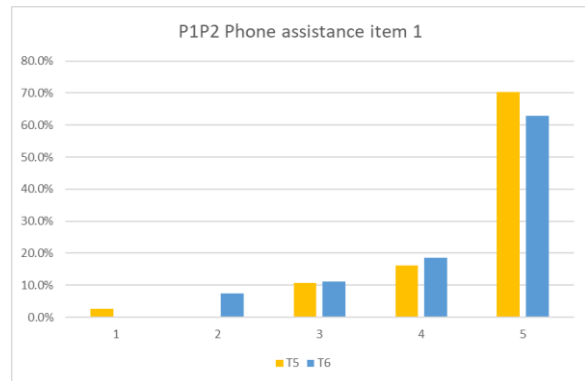


Figure 3.5.3 *Phone Assistance (Academic)*
(Level 1-3, T5-7, P3-4)

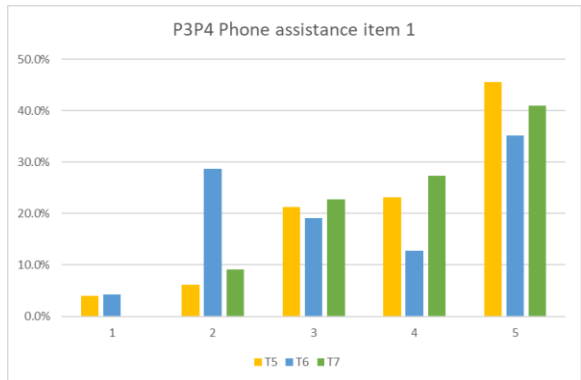


Figure 3.5.4 *Phone Assistance (Academic)*
(Level 2-3, T5-6, P3-4)

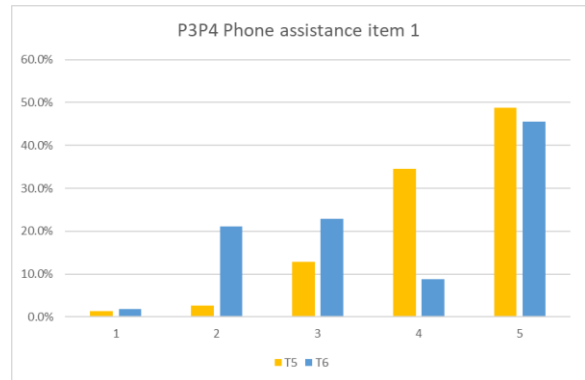


Figure 3.5.5 *Phone Assistance (Academic)*
(Level 1-3, T5-7, P5-6)

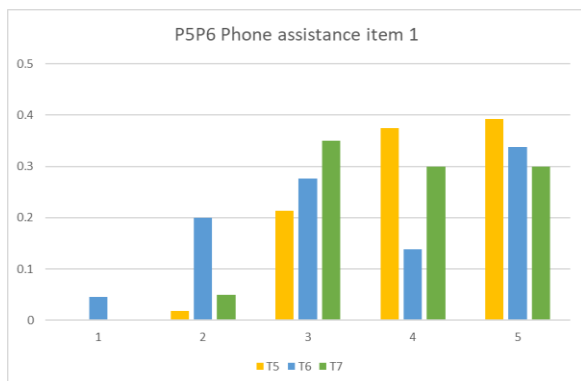
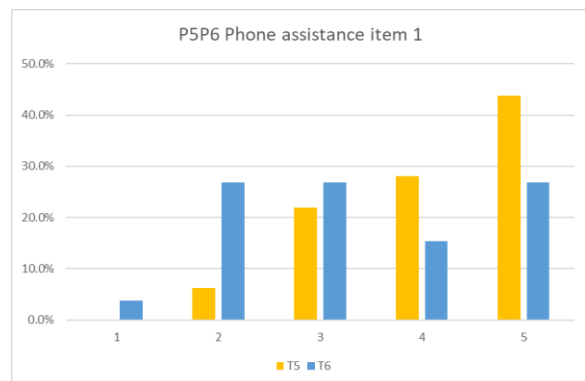


Figure 3.5.6 *Phone Assistance (Academic)*
(Level 2-3, T5-6, P5-6)



In general, P1-2 students responded more positively towards personal growth through phone assistance compared to P3-4 and P5-6 students. 65% to 100% of the participants reported neutral or positively in all groups.

Figure 3.5.7 *Phone Assistance (Personal)*
(Level 1-3, T5-7, P1-2)

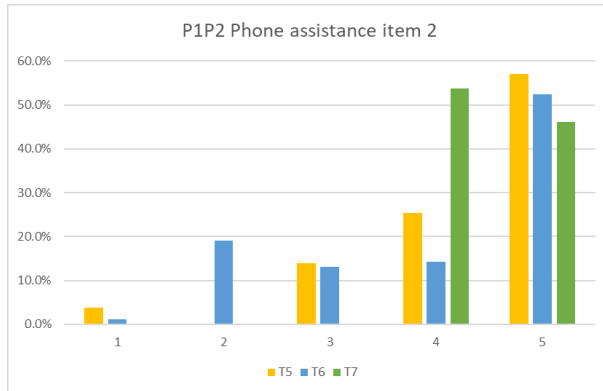


Figure 3.5.8 *Phone Assistance (Personal)*
(Level 2-3, T5-6, P1-2)

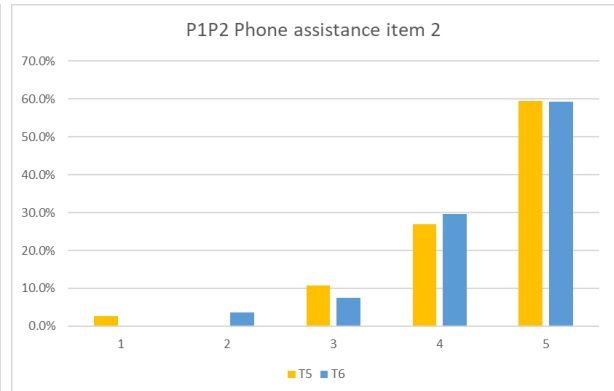


Figure 3.5.9 *Phone Assistance (Personal)*
(Level 1-3, T5-7, P3-4)

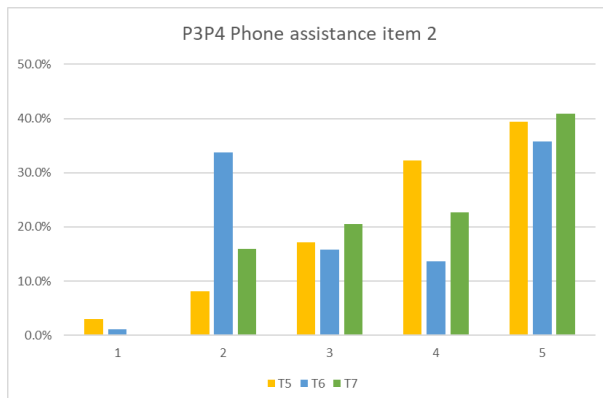


Figure 3.5.10 *Phone Assistance (Personal)*
(Level 2-3, T5-6, P3-4)

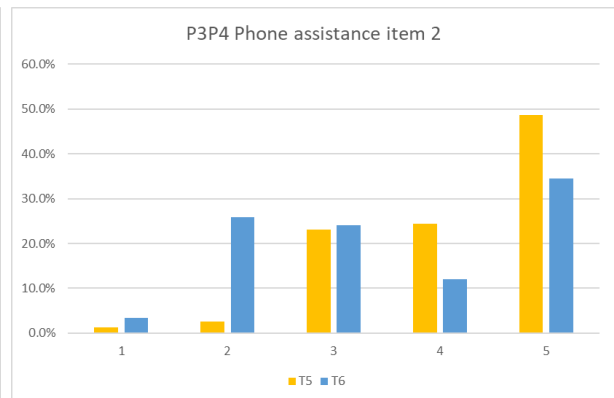


Figure 3.5.11 *Phone Assistance (Personal)*
(Level 1-3, T5-7, P5-6)

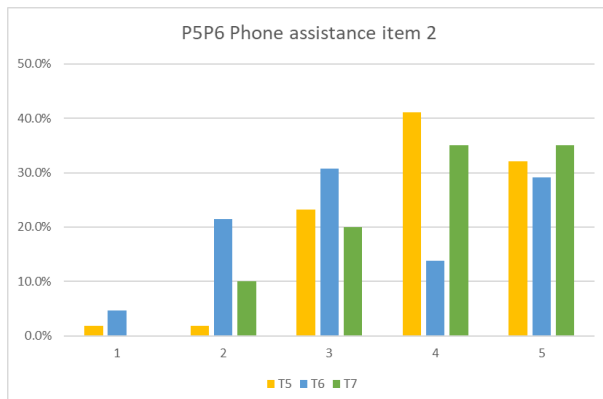
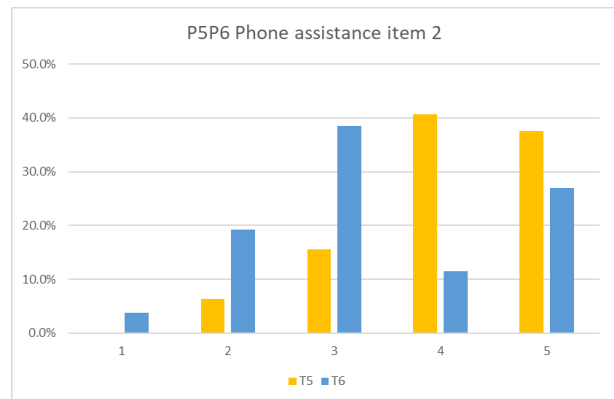


Figure 3.5.12 *Phone Assistance (Personal)*
(Level 2-3, T5-6, P5-6)



In general, P1-2 students responded encountering more difficulties during phone assistance compared to P3-4 and P5-6 students, and a general trend of decrease in encountering difficulties was observed from Time 5 to Time 7.

Figure 3.5.13 *Phone Assistance (Difficulties)*
(Level 1-3, T5-T7, P1-2)

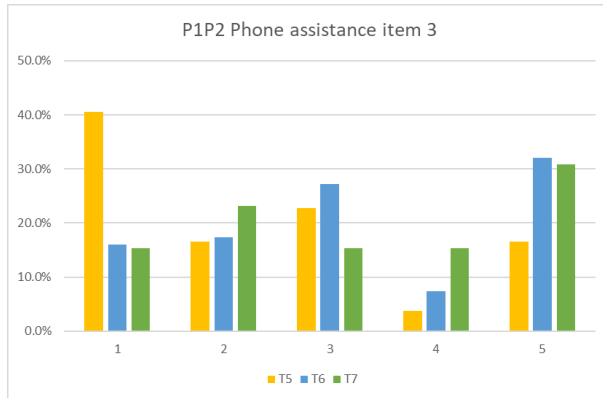


Figure 3.5.14 *Phone Assistance (Difficulties)*
(Level 2-3, T5-T6, P1-2)

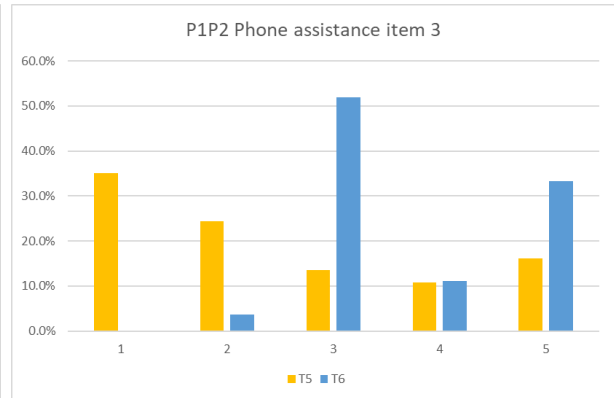


Figure 3.5.15 *Phone Assistance (Difficulties)*
(Level 1-3, T5-T7, P3-4)

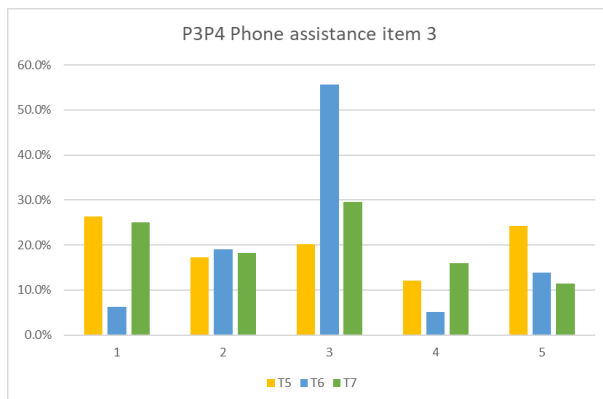


Figure 3.5.16 *Phone Assistance (Difficulties)*
(Level 2-3, T5-T6, P3-4)

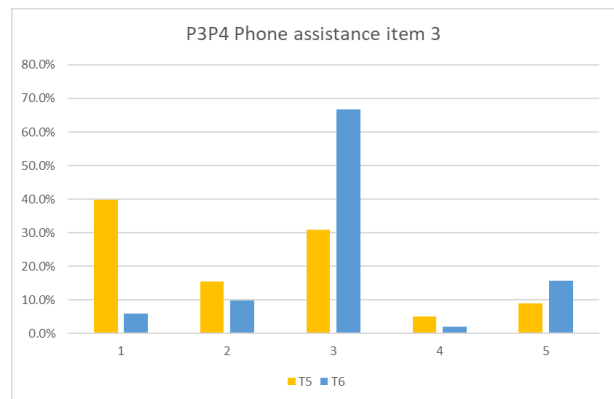


Figure 3.5.17 *Phone Assistance (Difficulties)*
(Level 1-3, T5-T7, P5-6)

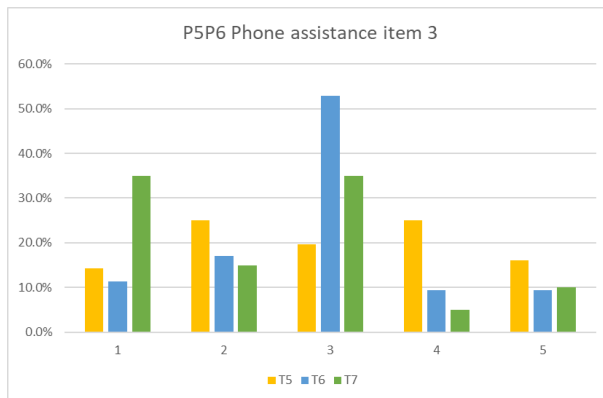
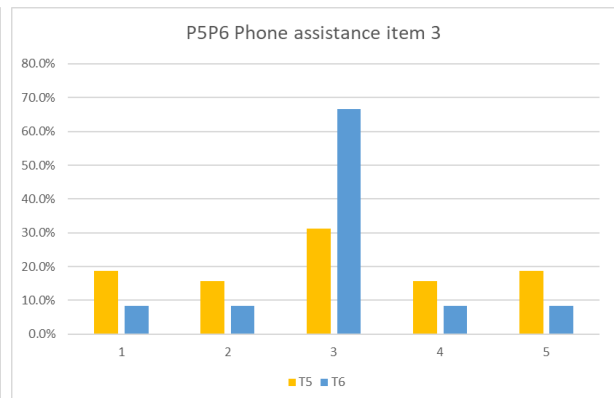


Figure 3.5.18 *Phone Assistance (Difficulties)*
(Level 2-3, T5-T6, P5-6)



Students from different grades reported positively towards their experience in the phone assistance practice during class suspension overall. A majority of the students found phone assistance helpful in supporting their academic learning and personal growth. P1-2 students are more likely to encounter difficulties during phone assistance practice, and the number decreased over time.

3.6. Discussion

Summary of Quantitative Results

Students' improvements can be categorized into five domains: academic competences (Chinese, Mathematics, and General Studies), emotion regulation competences (optimism, anxiety, depression, and stress management), relational aspects (peer and teacher-student relationships), self-directed learning, and STEM Interest and Knowledge.

3.6.1. Academic Competences

- Significant increases in all subjects were found among levels and groups. Students were more confident in Chinese, Mathematics, and General Studies. More specifically, more mixed results were reported in students' confidence in general studies. Students showed the least confidence in English learning when compared to other subjects.
- After graduation from the 333 program, students generally reported lower confidence in subjects like Chinese, English, and General Studies. It is suggested that continuous practice may be effective for improving confidence in long-term academic performance.
- In general, students reported more positively and were more optimistic and confident in their academic performances than parents.

3.6.2. Emotion Regulation Competences

- A general trend of improvement was observed in emotion regulation aspects, including optimism, anxiety, depression, and stress management.
- Significant decreases in anxiety were found in majority groups, showing positive outcomes in students' emotion regulation.
- Significant increases were found in optimism.
- Depression tends to show a decreasing trend and stress management shows an increased tendency in general, although no significant result was observed.
- Students scored highest in emotion regulation among parent, teacher, and student groups.

3.6.3. Relationship Aspect

- Significant increases were identified in peer relationships.
- Peer relationship and teacher-student relationship were reported mostly positive, although significant improvements are less common in teacher-student relationship.
- Prolonged positive effects were found upon graduation from the 333 program in relationship aspects, including peer relationships and teacher-student relationship.

3.6.4. Self-directed Learning

- Mixed results were observed in self-directed learning. Although some significant decreases were observed in self-directed learning, most students reported positive attitude towards self-directed learning throughout all time points, showing an increased tendency.
- Prolonged positive effect was observed upon graduation.
- The student group reported the highest scores in learning motivation among parent, teacher, and student groups, which means that the students are the most optimistic and confident for the learning compared to teachers and parents.

3.6.5. STEM Interest and Knowledge

- Most students reported neutral or positive attitude towards these aspects throughout all time points, presenting a positive trend.
- However, mixed results were observed in STEM interest and knowledge over time. Some students reported decreased scores in STEM interest and knowledge significantly.
- Prolonged positive effects were observed upon graduation.

In the meantime, we also performed group comparisons among various subgroups to identify the potential differences in between, which includes grade and comparisons, as well as student, parent and teacher perspective comparisons.

3.6.6. Grade Comparison

- Positive improvements in emotion regulation aspect were found among all grades.

- No significant results were observed in P1-2 students in all aspects.
- Compared to students from other grades, P3-4 students reported significant improvements in emotion regulation aspects (i.e., optimism and anxiety). However, the academic confidence, STEM, and self-directed learning presented negative trends among P3-4 students. More significant decreased results were found in P3-4 compared to P5-6.
- P5-6 students reported significant increases in all academic aspects. Positive trends in both STEM interest and knowledge, and self-directed learning aspects were also observed.

3.6.7. Phase Comparison

- A positive trend was observed in T1-4 results, in particular emotional regulation and STEM aspects. The trends were positive in terms of academic aspects, although mixed significant results were identified among different grades.
- Significant improvements were found in all academic aspects and self-directed learning during T5-7, whereas more significant decreases in STEM aspects were reported in T5-7 compared to T1-4.

3.6.8. Student, Parent and Teacher Perspective Comparison

- Parents reported significantly higher scores in self-rated parent involvement than teacher rated results, whereas teachers reported significantly higher level of social competence in students when compared to the perceptions of parents.
- Parents scored significantly lower scores in their perception of all academic subjects of their children, compared to students' self-reports on their confidence in learning.
- We compared the scores of the emotion regulation and learning motivation in students reported by parents, teachers, and students. We found that parents always reported the lowest scores among the three groups, with teachers following, whereas students reported the highest scores in both aspects.

Moreover, due to COVID-19 pandemic, the “333 Plan” cannot provide face-to-face courses during the school closure period. Therefore, the program initiated “Telephone voice

transmission learning” program, the tutor taught 15 minutes a day in the form of “calling and asking homework” one-on-one to the students. The main aims are to help students to continue learning and instilling supplementary knowledge, to assist students to continue the learning.

3.6.9. Phone Assistance

- In general, students from different grades reported positively towards the phone assistance practice during class suspension. Most students found phone assistance very helpful in supporting their academic learning and personal growth.
- Some students reported that they encountered difficulties with the phone assistance practice at the beginning. Fortunately, a trend of decrease in difficulties encountered was observed gradually later. We assumed that students may have been familiar with phone assistance, or they found the solutions and support in solving the difficulties encountered over time.

The study designed a combination of quantitative and qualitative studies to gain a more comprehensive understanding of the program and its potential mechanism. The following section will present the findings from qualitative studies.

Chapter 4. Qualitative Results

4.1. Report of Second-Round Qualitative Research on 333 Program (Part I)

4.1.1. Introduction

Following the first round of interviews conducted in June and July 2017, the second-round interviews with current students, graduates, teachers, and parents were conducted from June to October 2018. The follow-up interviews solicit all the concerned parties' subjective experiences of participating in the program and deepen our understanding of the 333 program's outcomes and facilitating mechanisms.

The current report presents the results of the **interviews with current students**. Eight focus groups were held: two groups from the intensive module, three groups from the extension module, and three groups from the Friends of 333 module. Each group consisted of 4-5 students.

In the report of the first-round interviews (1st report), program outcomes are identified in four areas: students' academic performance, students' self-efficacy, peer relationship, and family relationship. The 1st report also revealed four facilitating mechanisms, that is, academic assistance, reward and mastery experience, supportive teacher-student relationship, and teacher-parent partnership.

The current report firstly presents findings that complement the 1st report's findings by additional evidence from the students' perspectives. Then new findings on the program outcomes and facilitating mechanisms are reported.

4.1.2. Findings Solidifying Results of the First Report with Additional Evidence and Complementary Perspectives

1) Improved academic performance, learning attitude and study habit

In the first-round interviews, both parents and students reported improved academic performance as a result of participating in the program. Similarly, the students interviewed this time noted that they have completed homework assignment in time and obtained satisfactory marks in exams since they joined the program.

In 333 Program, we do mock exam papers and Maths exercises for revisions. Before joining the Program, I almost always failed in Maths, but now I scored 98 marks! I have improved a lot in all school subjects. (North District, Student, Extension)

I used to fail in English dictation with only 30 marks. After joining 333 Program, I scored 70 marks and that made me very happy. (North District, Student, Extension)

My homework has improved. I hand in my homework on time and do not get punished by schoolteachers anymore. (Kwun Tong, Student, Extension)

I had never scored full marks in dictation until I joined the Program. (Tin Shui Wai, Student, Intensive)

In addition, the interviewed students self-reported that with the help of the program, they have developed positive habits and attitudes towards schooling. They grow accustomed to previewing and reviewing class materials and become proactive in class participation.

We have to do a lot of copying and note-taking even if we don't understand the materials in day school. In 333 Program, we learn in a more comfortable manner. (North District, Student, Extension)

I found it hard to memorize the stuff I learned in day school before joining the Program. Now, Program teachers regularly help us review materials we learned on a two-week basis. Instead of non-stop copying, in 333 we do mock exam paper and learn different revision methods. (North District, Student, Extension)

In the Program, I become more proactive in answering questions. (Sham Shui Po, Student, Extension)

I preview lessons in advance now so it will be easier for me in the coming lessons. (Tin Shui Wai, Student, Friends of 333)

2) Higher self-efficacy and self-confidence

The finding of increased self-efficacy in the 1st report is replicated by results of interviews this time. Particularly, the program provided more opportunities for the students to

learn English in an easy manner. The students have become more confident in day school English courses, this self-confidence even transfers to daily life English speaking.

After doing revision in the Program, I am more confident in English dictation now. (Tin Shui Wai, Student, Intensive)

I like English class in the Program as I can learn how to communicate with foreigners in English through role play games. (Sham Shui Po, Student, Friends of 333)

I once met a westerner tourist in a convenience store wanting to get ice cream but didn't know how much it was so he asked me and I managed to help him. (Sham Shui Po, Student, Friends of 333)

Besides, the students were entrusted with responsibilities such as doing class chores or tutoring peer students. This not only increases students' sense of belonging to the class and hence enhances class participation, but also boosts their self-efficacy and confidence.

Program teachers like us and will find us for help. They give us little treats of encouragement and always wear a smiling face. (Kwun Tong, Student, Friend of 333)

I have a good reputation because I help teachers with class chores such as cleaning the blackboard. (North District, Student, Intensive)

The Program teachers trust me a lot and often seek my assistance. (North District, Student, Intensive)

I feel I am smarter now because my exam results have improved, and I am capable of tutoring my fellow classmates. (Tin Shui Wai, Student, Intensive)

I am good at Chinese, so I help tutor classmates in the Program. On the other hand, I get help from classmates who are good in English. We complement each other. (Kwun Tong, Student, Friends of 333)

3) Enhanced social skills and peer relationships

Similar to the students interviewed last time, most students in the focus groups agreed that they got to know more friends through the program and have improved their social skills.

For some students, the Litter Teacher approach featuring the program offered them opportunities to learn how to guide the peers in a polite, gentle and encouraging manner.

I am more courageous in making new friends. (Tin Shui Wai, Student, Friends of 333)

I have made more new friends. (Kwun Tong, Student, Extension)

I've improved a lot in my social skills. (Tin Shui Wai, Student, Friends of 333)

One of the Program teachers offered me the opportunity to tutor a classmate who has bad grades. I observe how he behaves in class and take note of his improvement in academic and conduct. (North District, Student, Extension)

An additional finding in the social aspect, not revealed by the 1st report, is that some students have managed to resolve conflicts with and show forgiveness towards their peers. Conflict is inevitable in settings with interpersonal interaction. Developing appropriate conflict management skills not only is beneficial to students as a positive way of resolving disagreements in life, but also enhances their interpersonal relationship and social support. The interviewed students emphasize interpersonal harmony, appreciate the character strengths and uniqueness of others, and make rational and reasonable judgements whether the person is worthy of being forgiven or not.

I can handle naughty classmates according to his or her personality. For example, if the classmate likes food, I'll treat him snacks to make him feel better (before asking him to stop his misbehavior). (Kwun Tong, Student, Friends of 333)

I am the happiest one when I can resolve conflicts between friends. We all get along well. (North District, Student, Intensive)

When I am mad at someone, I drink some water to calm down first. Then, I reflect thoroughly on what has happened. If it's his fault and it's his first time to make mistakes, I decide to forgive him. If he makes the same mistake again, I will remind him in a formal manner. (Kwun Tong, Student, Friends of 333)

4) Improved communication and family relationships

The fourth program outcome identified by the 1st report is improved family relationships. Similarly, students interviewed also acknowledged better family relationships due to improved academic performance, less conflict over homework monitoring, and more parent-child quality communication time.

I have a better relationship with my family members because my homework has been taken care of. My parents don't have to worry now. (Tin Shui Wai, Student, Intensive)

Before joining the Program, my mother would scold me for having poor grades. Since my grades improved, she doesn't scold me so often. (Sham Shui Po, Student, Friends of 333)

In addition, some students noted that moral lessons on filial piety and self-discipline provided by the program contribute to the improvement. The students were reminded to be respectful to parents and be patient in relating to younger siblings.

My relationship with my parents was not so good. After learning about filial piety in moral education class, I understand the importance of paying respect to my parents. We have a closer relationship now. (Kwun Tong, Student, Friends of 333)

My little brother and I used to fight a lot over everything. Since I have learnt about self-regulation and self-discipline, we can play peacefully without getting into a fight. (Kwun Tong, Student, Friends of 333)

5) Enhanced teacher-student relationship from the students' perspective

In addition to complementing previous findings on the program outcomes, we obtained more detailed information on one key facilitating mechanism this time: supportive teacher-student relationship. In the 1st report, evidence on the teacher-student relationship is mainly based on teachers' narratives. This report summarizes the students' subjective experiences in this aspect. Similar to the 1st report, the students noted that verbal encouragement and little treats as token of appreciations given by the teachers are effective means of support and encouragement, which are not always available in day school or at home.

Program teachers give us five or six treats a day. They are gentle and fun. (Kwun Tong, Student, Friends of 333)

We are rewarded with snacks when we answer questions correctly in Chinese class. In Maths class, we are given stamps to redeem gifts when we finish what we are told to do, e.g., recording our homework correctly in the assignment logbook. (Kwun Tong, Student, Extension)

In addition, the students mentioned that teachers' responsiveness and immediacy, such as giving assistance when needed, not only make students feel more recognized, but also create an atmosphere for the development of good teacher-student ties.

Once I raise up my hand, Program teachers would come and teach me right away.

Last but not the least, the students feel that the teachers cared more about how much efforts the students have made than their grades in a single test. As a result, the students feel less stressed while still stay motivated.

Teachers in day school are very strict. They expect everyone to be top of the class. Here, Program teachers would encourage us to work harder even if we did poorly in exams. (Kwun Tong, Student, Friends of 333)

4.1.3. New findings on program outcomes and facilitating mechanisms

Based on students' narratives, two additional program outcomes and one additional mechanism are identified. These new findings will be integrated with the findings of the 1st report and forthcoming analyses of 2nd interview with other concerned parties (graduates, teachers, parents) to provide an updated and comprehensive service model on the program.

1) Improved emotion regulation skills and emotional competence as a program outcome

The students shared that they have learnt emotional regulation skills by participating in the program. The students have developed a repertoire of effective and positive ways of coping with negative emotions such as breathing deeply, taking a break by drinking water, washing face, or having a nap, listening to calm music, painting, talking with people that concern about them, etc. The students also stated that they stopped using ineffective and destructive ways of dealing with negative emotions such as throwing temper tantrums or getting into a physical fight with others.

Program teachers taught us how to deal with stress. For instance, take a deep breath, don't hit others when I want to act out, instead, I can beat up a pillow to release my anger. Also, talking to my parents about my stress and anger helps. (Sham Shui Po, Student, Friends of 333)

I stopped throwing tantrums at my family members when anger fills me. I try to relax, take a sip of water, eat something, or listen to music. Program teachers taught us not to act out to people who have nothing to do with our temper. (Kwun Tong, Student, Friends of 333)

Emotional competence leads to social competence as children with better emotional regulation skills are more likely to communicate, establish bonds, and deal with conflicts in interpersonal relationships. Emotional competence can also predict better classroom behaviors and higher academic performance (Joseph & Newman, 2010), as children with better emotional regulation skills are more able to deal with stresses and disappointments of daily life and pay attention to positive things and learn new things in face of obstacles (Webster-Stratton & Reid, 2004). Hence, enhanced emotional competence is an important program outcome that is not only remedial but also developmental- it not only helps children deal with current problems, but also equips them to prepare for future opportunities and challenges.

2) Enhanced empathy that fuels altruistic behavior as a program outcome

Another newly identified program outcome is enhanced empathy and altruism. Empathy is an affective state that stems from the apprehension of another person's emotional state or condition. The students are exposed to empathy training in added-value classes. One student shared his/her experience of being blindfolded and searching for a kettle. Being impressed by the difficulties as well as the courage of the blind man, the student recognized that these people should be respected. Another student agreed that it is important to pay attention to how others feel.

In moral education class, we learned the experiences of disabled people. I was blindfolded and was instructed to touch a water bottle. I learned that we have to be respectful to these people in need. (North District, Student, Extension)

I learned to share my thoughts and feelings with my family members and be more considerate about others' feelings. (Tin Shui Wai, Student, Friends of 333)

When children are empathetic, they manifest more altruistic behavior (Eisenberg & Miller, 1987). Children who are genuinely concerned about others are more willing to contribute to others' welfare by offering a helpful hand. Altruistic behavior is voluntary behavior intended to benefit another, which is not performed with the expectation of receiving rewards or avoiding punishments. The students shared their experiences of helping people-in-need, both within and outside of the program. Some even planned to do volunteer work in the future.

I am happy to help others. When someone has problems with their homework, I will teach them. (Sham Shui Po, Student, Friends of 333)

I helped an elderly person who fell on the ground. I rushed to help him stand up. (Sham Shui Po, Student, Friends of 333)

I like activities such as visiting elderly homes to show our care to the elderly. (North District, Student, Intensive)

I would like to have an opportunity to do volunteer work and experience different types of jobs, as a firefighter or janitor. (North District, Student, Extension)

Similar to the newly identified program outcome of improved emotional competence, enhanced empathy and altruism benefit children in the long run. Altruistic behavior has been found to be positively related to constructive social skills, social and academic accomplishments, sense of belonging in the school and the community, life meaning, and life satisfaction. Altruistic behavior also contributes to positive emotional state and reduces negative emotions (Froh, Sefick, & Emmons, 2008; Weinstein & Ryan, 2010).

3) Activity-based learning as a facilitating mechanism

A large proportion of the students acknowledged that activity-based classes are their favorites. They learnt through doing experiments or playing games in added-value classes. They mastered English vocabulary through singing, dancing, and playing English word-chain games.

We have much fun in classes of the Program, unlike in day school where the teachers mainly teach the textbook. (Kwun Tong, Student, Friends of 333)

In the Program, we learn by doing experiments and playing games. (Kwun Tong, Student, Friends of 333)

I like English classes in the Program. When we sing and dance, we learn new vocabulary at the same time. (Kwun Tong, Student, Friends of 333)

Activities and games have been evidenced to enhance students' learning motivation. Activities and games stimulate students' interest and curiosity because they place learning in fun contexts. The students are more deeply involved in the learning and have higher motivation to try different solutions, and as a result, they learn more (Vos, Van Der Meijden & Denessen, 2011). The students also experienced more positive emotions in this kind of learning, while positive emotions facilitate better cognitive performance (Fredrickson, 2001). Games are also suitable for the development of inquiry skills; children learn by formulating hypotheses and testing them. Through trial-and-error, children learn from their mistakes and their efforts to find a solution for the problem. In this way, they develop problem solving skills and thinking skills (Gee, 2003).

4.1.4. Feedback from students on program implementation

This section summarizes students' feedback on the program's implementation and logistics. These opinions could be used as a reference for future program design and implementation.

a) Site and manpower

One student mentioned insufficient seats and another student wished that there could be more classrooms to hold different classes. One student complained about the hygiene of the host school. Several students suggested a lower teacher/tutor-student ratio so that they can get assistance whenever they need. Although these opinions are not representative of all the interviewees, these issues warrant attention.

There are not enough seats in the classrooms. Some students have to stand while doing their homework. (Kwun Tong, Student, Extension)

I hope there are more classrooms and facilities for different classes. (Kwun Tong, Student, Friends of 333)

It's messy and dirty here. The washroom stinks. (Sham Shui Po, Student, Friends of 333)

I would like to have more teachers for different classes so we can learn different things. (Kwun Tong, Student, Friends of 333)

Sometimes, I need to wait for a while to get assistance from the teachers since there are too many students. (Sham Shui Po, Student, Friends of 333)

b) Time arrangement

A proportion of the interviewees are concerned about the long class hours. Though they appreciate the homework assistance and added-value classes, they feel tired for spending additional three hours in the center after the day school. The Program might take into account the possible low energy level and concentration level of students, and consider a shorter class duration, a less intensive lesson plan, or a flexible arrangement that students can choose to attend one or all of the modules.

I wish the whole program could be one hour shorter so I can get home earlier. (Tin Shui Wai, Student, Friends of 333)

I am a little bit less happy (after joining the program), because I have less personal time now. (North District, Student, Intensive)

c) Suggestions for desirable classes and activities

As mentioned earlier, school and family failed to meet the 333 participants' needs for fun classes and extra-curricular activities and the participants were grateful for 333's efforts in this aspect. The interviewees expressed their wishes for other desirable classes and activities as listed below.

- Visiting Disneyland
- Hiking/Outings/ Trips
- Water sports

- Physical exercises such as basketball and jumping rope
- Cooking class
- Music instrument class/Singing class/ Dance class
- Etiquette class
- General Science class
- Volunteering and work experience opportunities

4.1.5. A tentatively updated service model and follow-up analysis plan

Integrating findings of the 1st report and that of the current report, a tentatively updated service model is proposed. The model (Figure 1) is explained in detail below.

In the left side of the figure are identified program outcomes. Previously in the 1st report, the identified outcomes are mainly remedial, i.e., the program is evidenced to solve problems and deficiencies of the students. For instance, the students failed to finish homework in time and have low self-esteem prior to joining the program; these problems diminished or were reduced with the program's input and efforts. This round of finding complements previous finding by revealing that the program also achieved developmental outcomes. Developmental outcomes are defined as internal strengths or skills that benefit the students in the long run. For instance, social skills and emotion regulation capabilities are two important dimensions of social-emotional competence. Strengthening children's capability to manage their emotions and behavior, and to make meaningful friendships serve an important protective function for school success (Webster-Stratton & Reid, 2004). In addition, enhanced empathy and altruism also contribute to the students' prosocial behavior, peer acceptance and closeness, and psychological well-being (Layous, Nelson, Oberle, Schonert-Reichl, & Lyubomirsky, 2012). Some outcomes are considered as both remedial and developmental. The students might not have a satisfying relationship with others before participating in the program. Their relationships with parents and peers improve, this helps embrace them with a loving, secure and supportive environment.

To further elucidate the relationship between remedial outcomes and developmental outcomes, a third construct: self-determination, is introduced. Self-determination is defined

as intrinsic motivations dependent on the satisfaction of three fundamental psychological needs: autonomy, competence, and relatedness (Deci and Ryan, 2002). Autonomy is the universal urge to act on one's true self and make decisions for one's own life. Competence stands for the demand to experience mastery and accomplishment. Relatedness is the human need for love and belonging. It is believed that the better those basic needs are satisfied, the more self-regulated the pupils' motivational behavior patterns are (Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004). Self-determination summarizes the common features of the various developmental and remedial outcomes, and the interaction among these two types of outcomes. For example, the improved academic self-efficacy and self-esteem meet the need for autonomy and competence, while emotional and social skills match the need for competence as well as relatedness. Satisfying relationships with peers and family members meet the need for relatedness, which provides a supportive environment for the students to further pursue autonomy and competence. The needs met through those outcomes can facilitate children's self-determination, while self-determination as an intrinsic motivation will energize children to pursue further achievement. Along with this conceptualization, the program can consider setting other objectives that nurture autonomy or self-determination that integrate well with the existing outcomes.

Finally, on the right side of Figure 1, three main facilitating mechanisms are listed: teaching approach, teacher-student relationship, and teacher-parent partnership. The teaching approach manifests itself in activity-based learning, tangible and intangible rewards, and creating mastery experiences. The teacher-student relationship is warm, supportive, and respectful to students' autonomy. The teacher-parent partnership enables teachers to establish good rapport with the parents; together the two parties facilitate each other's understanding of the students and coordinate their efforts in promoting the students' positive development.

We have also browsed interview data with graduates, parents, and teachers, and have the general impression that the proposed model is also in line with these data. Of course, the new data are expected to add additional angles in program outcomes and the facilitating mechanisms. For instance, the interviewed graduates noted that the program contributes to their education aspirations, and they now have a clear goal for future study. This outcome was not identified from interviews with the current students, which is understandable because the current students are too young to formulate their goals in tertiary or post-graduate education. We also believe that the interviews with teachers and parents will yield more

findings on the facilitating mechanisms. Hence, the tentative model is a roadmap for future data analyses but is amendable to further refinement.

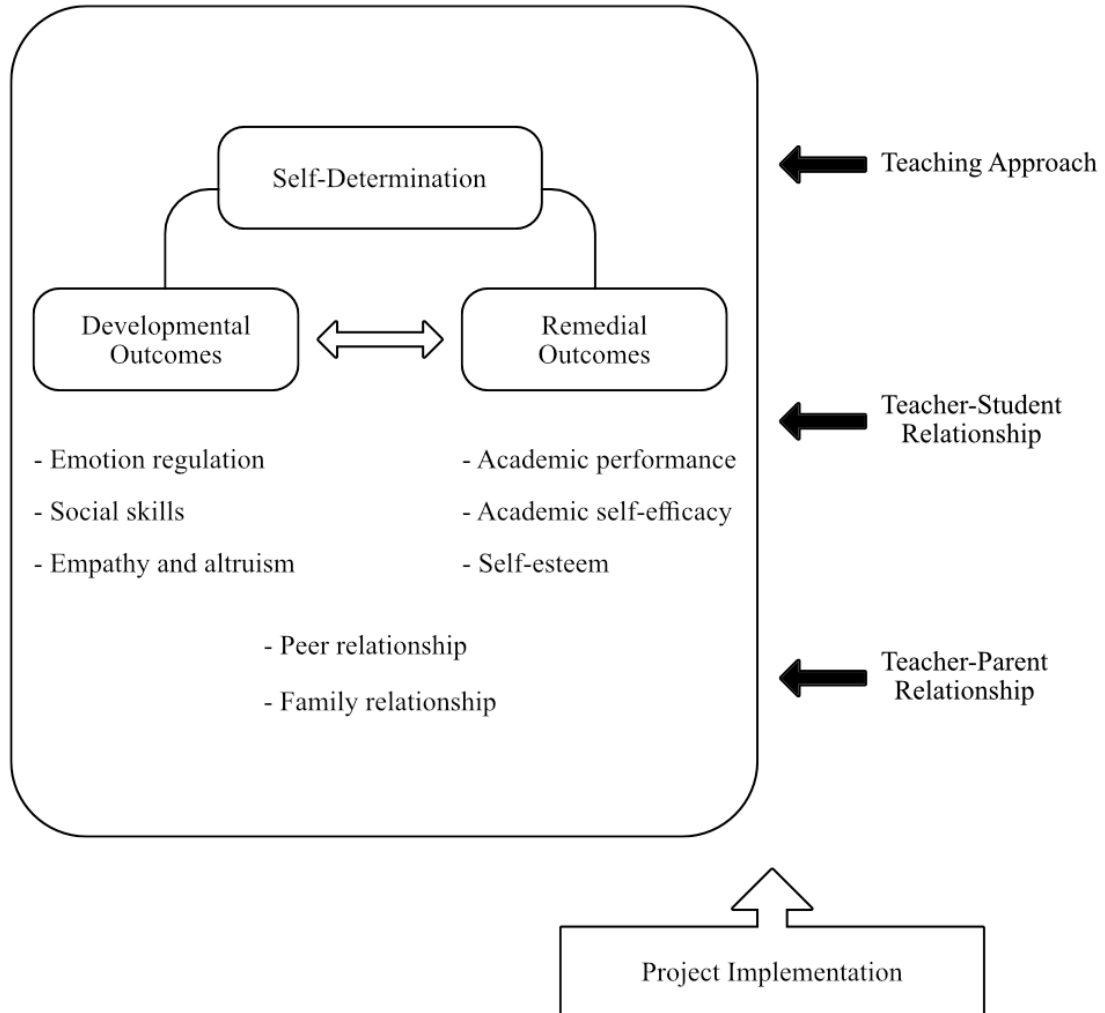


Figure 4.1.1 *Proposed Service Model*

4.2. Report of Second-Round Qualitative Research on 333 Program (Part II, Graduates)

4.2.1. Introduction

This section presents results of the **interviews with graduates** of the program. Twelve focus groups were held involving a total of 49 graduates. There were three groups in each centre, one group with earliest graduates (graduated for five to seven years), one group with latest graduates (graduated for one or two years), and one group with recent graduates (graduated for three or four years). Each group consisted of four graduates (except one group that contained five interviewees).

Based on the interviews, we summarized two main domains in which the program has benefited the graduates not only when they were in the program but also after they have left the program. These two broad domains are academic competencies and socio-emotional competencies, comprised by multiple specific indicators. We also explored facilitating factors, although the data is not sufficient to support a complete understanding of the underlying processes and mechanisms. On the other hand, we also discussed problems and issues faced by the graduates after leaving the program and explored how the program could be adapted to facilitate the graduates' adjustment and equip them with better coping skills to deal with challenges in later developmental periods.

4.2.2. Academic Competencies

1) Study attitudes, skills, and habits

A lot of graduates reported that before joining the program, they disliked schooling. However, experiences in the program changed their perspectives on schooling. During the program, the classes were funny, teachers were friendly, and peer students were friendly and mutually supportive. Further, the positive attitudes towards schooling have been transferred to day school. As a result, they are more engaged at their day schools.

I did not like going to school, which is boring. When my teacher told me to join the Program, I refused at first. I thought it was a waste of time. But after joining the Program, I started to enjoy schooling. I used to have no interest in making friends. But peer students in the program were friendly to me, so I became more proactive to

initiate casual talk with them. I have got along better with people. I am less introverted and do not dislike school. My grades have improved a lot. (Tin Shui Wai, Graduate)

In addition to changes in attitudes towards schooling, graduates also reported changed attitudes towards studying. As commented by one graduate, “I never thought that study was important for me until I entered the program”. Several other graduates made similar statements. Moreover, the program managed to build up the graduates’ sense of responsibility for study.

I failed to hand in my homework all the time before joining the Program. The program makes me realize that I should finish my homework before play time. It is my personal responsibility to manage my own academic performance. (Kwun Tong, Graduate)

Accompanied with these attitudinal changes are increased self-regulated behaviors, e.g., putting homework as their priorities.

I am more disciplined now. Previously I slacked off when doing homework at home. I chilled out for a long time before studying. The Program, however, sets a schedule for my homework. I realized that this was rather good practice. Even after leaving the program, I keep the habit of completing the homework as the first thing. (North District, Graduate)

The increased self-regulation is also reflected in the ability of time management. One graduate recalled how the program’s teacher guided him to schedule time for different tasks. Now, he is capable of following a scheduled timetable for study and revision on his own. Another graduate reflected that one important study habit cultivated by the program and benefit him in the long run is to finish each task on time.

I didn’t care about my own studies before. Teachers of the Program taught me how to do homework and revision. With the assistance of the teachers, I made a timetable to arrange time for revision, breaks and homework. I have got used to this habit, which has improved my academic performance a lot. (Kwun Tong, Graduate)

(The biggest change is my) self-discipline skills. The program set rules such as being punctual and handing in homework on time. (Kwun Tong, Graduate)

Self-regulation involves not only the discipline to finish the due tasks, but also the competence to set long-term goals and organize study tasks effectively to achieve the goals. Similar to the sharing of the current students, the graduates were motivated by the tangible and intangible rewards and successfully achieved their pre-set goals. With the accumulation of such successful experiences, the graduates have developed intrinsic motivation to pursue their goals.

When I was in the program, I worked hard in exchange for rewards. Gradually, I have developed expectations on my grades. Now I have expectations too. I set goals for better performance in exams and try my best to meet these goals. (Sham Shui Po, Graduate)

I used to lack a clear goal. Experiences of the Program led me to think that I am capable of doing well with some guidance. I also realize that learning is not difficult as long as I follow instructions and ask for help when I have problems. I start to have aspiration for my grades. (Kwun Tong, Graduate)

My parents are satisfied with my grades. I have resumed the level I am supposed to be and I passed all of the exams. But I want to achieve more. I want to get higher marks and will work harder. (Sham Shui Po, Graduate)

Another frequently mentioned study skill and habit is revision. As narrated by one graduate, the regular revision under the guidance of the program's teachers led to marked progress in various subjects, which strongly impressed him. He realized the importance of revision and has kept this habit since then.

Encouragement from the Program's teachers motivated me to do revision. Wow, it immediately took effect. I was so happy when my score surged for about 20 or 30 marks. I realized that doing revision can really improve my grades a lot. (Tin Shui Wai, Graduate)

To sum up, when they were in the program, the graduates were taught productive study skills. These study skills have been regularly practiced and developed into effective study habits. In addition, the program has fostered positive attitudes towards schooling and studying in the graduates. These positive study attitudes, skills, and habits continue to assist

the graduates to address the growing demands of the academic tasks after they have left the program.

Despite being in a different environment after entering secondary school, I keep some of the habits I learnt from the program, e.g., to complete my school assignment on time and regularly do revisions. (Kwun Tong, Graduate)

It has become a habit. I will review materials that I am not familiar with first and then review the material that I understand well. (North District, Graduate)

2) Academic performance and educational aspiration

Similar to the reports of the current students, most of the graduates interviewed reported better academic performance as a result of participating in the program. Things are different after they have left the program. Among 24 of the 49 interviewees mentioned their current academic grade, 19 have improved or maintained their academic performance since they have left the program. Owing to the nurtured study habit of constant revision and self-regulation, the graduates adjusted well to the academic challenges during the transition from primary to secondary school.

I used to lack self-discipline and procrastinate on doing homework. The Program changed me. I have developed better study habits which help me sustain my academic performance. I had some difficulties when I had just entered secondary school. I coped by doing revisions regularly and my grade didn't drop too much as a result. (Kwun Tong, Graduate)

In addition, several graduates shared their educational aspirations for further study. Education aspirations refer to an individual's plans and aims inside an educational setting, e.g., to gain a particular degree (Chenoweth & Galliher, 2004). One graduate told us that he will work harder because he aspires to enter university in the future. Another graduate shared his experience of discovering his interest in theatre through participating in the program's activities and plans to pursue further study in performance arts.

There was a while after entering secondary school that I stopped making efforts in study. The classroom was noisy and peer students did not pay attention to the teachers. So I just fooled around with others. Yet later I realized that I had goals. I started to

work hard again. I got 140 out of 200 marks. I hope that my efforts will pay off, that I will succeed in the future university entrance examination. (Tin Shui Wai, Graduate)

I am interested in drama, singing and dancing. When we produced the drama in the Program, I was a backstage staff. From this experience I discovered my interest in theatre. What makes the Program stand out is that it provides various opportunities for us to try different things and choose what we like. I continue to participate in musical productions after leaving the Program... I hope that I can be admitted into the Hong Kong Academy for Performing Arts in the future. (Sham Shui Wai, Graduate)

On the other hand, it should be noted that 5 of them admitted that their academic performance has suffered a setback since they have left the program. The self-cited reasons are the lack of academic guidance and insufficient self-regulation. Meanwhile, 25 interviewees did not mention their current academic grade.

My grades were alright during 333. After leaving 333, my grades dropped because I became lazy again. (Sham Shui Wai, Graduate)

After leaving 333, I had no one to teach me Maths. (North District, Graduate)

After leaving 333, my scores fell for about 10 marks. The classes are getting harder. (North District, Graduate)

As will be discussed in detail in the later section, a lot of graduates experienced adjustment difficulties immediately after leaving the program. While some went through the adaptation period by making use of what they had learnt from the program, others seemed to lack the essential inner resources and reverted to the old behavior pattern.

3) Discussion

Many graduates have developed good study attitudes, skills and habits as a result of participating in the program. All these helped them improve or at least sustain their academic performances even without the direct assistance from the program. Many dimensions of the program have been found relevant. For example, similar to the reports of the current students, the graduates felt that interesting class materials in the program stimulated their study interest. The graduates also emphasized that their interactions with the program's teachers

changed their feelings and attitudes about school. As is shown by the existing studies, students who report caring and supportive interpersonal relationships in school have been found to value their schooling, to have more positive attitudes toward academics, and to be more satisfied with school (Ryan & Patrick, 2001). Moreover, the encouragements received from the program's teacher have long-lasting positive impact. Just as vividly accounted for by one graduate, the teachers' words have been imprinted in his mind.

The teachers are always encouraging, no matter how we did in exams. If we did well, they rewarded us with gifts and praises; if we did poorly, they encouraged us to do better next time. Their advice and encouragements still linger in my head whenever I encounter difficulties. (Tin Shui Wai, Graduate)

Moreover, interview results indicated that the supportive environment promotes students' academic success through fostering students' self-efficacy. Similar to the experiences of the current students, the graduates appreciated various opportunities provided by the program which help them discover their strengths, exercise some autonomy, and develop competencies and skills. For instance, students of different grades are arranged to sit together during the homework assistance session of the program. Senior-level students are encouraged to use their knowledge to help junior-level students, or sometimes vice versa. This mode, called "Little Teacher", is a signature feature of the program, and is found to help these graduates develop the belief that they are capable of helping others as well as achieving their own goals.

I seldom took part in extracurricular activities in day school. In the Program, I joined various activities to explore what I am good at. (Kwun Tong, Graduate)

I was asked to be the master of ceremony at a parents' meeting. After that experience, I realized I am capable of doing that. Now in secondary school, I volunteer for various positions. I am able to deliver speeches on the stage. (Kwun Tong, Graduate)

I became a "Little Teacher" after graduation from the program. Tutoring lower form students improved my patience and developed my teaching skills. Recently I taught programming in a school in Shenzhen. The classes went smoothly. I was thrilled and the teachers praised me by saying that I have the potential to be a teacher. (Tin Shui Wai, Graduate)

Self-efficacy is predictive of academic performance, because high self-efficacy students take greater responsibility for successful task completion, are more self-regulated, and know whom to ask for help (Pintrich, 2004). Fostering self-efficacy is particularly important for children from low-income families, as they may face inadequate educational resources and more family stress. Those who are self-efficacious are more likely to persevere in the face of difficulties and succeed academically despite facing risk factors that make it difficult for them to succeed (Zimmerman & Kitsantas, 2005).

4.2.3. Socio-emotional Competencies

1) Intrapersonal: self-esteem & self-appreciation

Along with the reports of current students, the interviewees manifested higher self-esteem. The program provided various opportunities for them to discover their inner strengths. In addition, the teachers modeled how to love and appreciate oneself or others despite their weakness.

I learn to appreciate myself and others. I see my shortcomings as well as my strengths. The teachers taught me to forgive when others did something wrong. The teachers also let us know that we are good at something as they focus on what we are doing well. (Kwun Tong, Graduate)

The program's supportive and encouraging atmosphere protected some graduates from other life adversities at that time. One interviewee had been depressed and socially avoidant because of family issues. The program thus became his "safe haven", which gave him the security and love that he needed. Feeling safe and being loved, he has become confident and positive now.

I was self-abased when I joined the program. I was too shy to talk with others. I was depressed. The program has given me a lot of positive energy. At that time my life was quite complicated with my family issues; the program was like a safe haven to me. One of the biggest changes brought out by the program is that I am more confident now. I am responsible to give announcement in school assembly. Also, I don't think too negatively now. I try to look at the positive side. Previously my first reaction to a new challenge was "I couldn't do that." Now, I encourage myself to make a try. (Kwun Tong, Graduate)

Self-esteem is a person's subjective evaluation of his or her own worth. It is a state of mind which allows individuals to accept themselves as they are. Adolescents with higher self-esteem are more confident across different aspects. When this mindset is established, it benefits the graduates in the long run.

I am satisfied with myself. I know how to improve. Before joining the Program, there are a lot of things that I don't know how to do. I learnt a lot from the Program. I don't regress after leaving the Program. I have kept these good habits. (North District, Graduate)

2) Interpersonal: Gratitude, altruism, and friendship-making

a) Gratitude & Altruism

As mentioned earlier, the "Little Teacher" mode builds up graduates' self-efficacy. Moreover, the "Little Teacher" mode cultivates altruism in the graduates.

When I finished my homework in 333, I taught the younger students. This makes me more willing to help others. (North District, Graduate)

It's noteworthy that among the 49 interviewed graduates nearly half of them had come back to the program as teaching assistants. The duration and frequency of their services vary, so do their reasons for taking this volunteer job, but the most frequently mentioned reason is that they want to help other students. Being altruistic to others gives them a sense of achievement and true happiness.

I can help others. When lower form students understand the materials after I have taught them, I feel a sense of accomplishment. (North District, Graduate)

I have become friends with the students in 333. We talk and play together. They are happy that someone comes to help them, for instance, when they don't know how to do their homework, since they don't get this kind of support at home. I am helping others and that makes me happy. (Kwun Tong, Graduate)

Another reason for this volunteer work is that they want to give back because they are grateful for the help they have received. Gratitude is a typical emotional response when people receive a personal gift or benefit that was not earned, deserved, or expected, but

instead due to the good intentions of another person. When people feel grateful, they intend to return the favor. In this case, the graduates' urge to reciprocate is manifested as the prosocial desire to *be* a benefactor (Bono, Emmons & McCullough, 2004), i.e., to benefit current students in the program.

One main reason I came back (as a volunteer to teach others) is to give back to the Program. (Kwun Tong, Graduate)

I want to give back to the Program. I joined the Program because my grades were poor, and I didn't know how to do my homework. I am grateful that many teachers and Little Teachers helped me in the Program, so I want to come back to help others, like the old time when I needed the assistance badly. (North District, Graduate)

I have been in the Program for three years and I want to give back to the Program. I was taught by others, now that I have graduated and I have the ability to tutor, I wanted to pay it forward. (Kwun Tong, Graduate)

Gratitude and altruism promote adolescents' development by fostering both a general sense of connectedness to others, the community and society at large as well as a motivation to use one's strengths to broadly contribute to these entities (Froh, Bono, & Emmons, 2010). Hence, it is expected that graduates with higher gratitude and altruism should have higher psychological well-being.

b) Friendship-making

In addition, the graduates gained from the program skills and experiences of friendship-making. They got to know new friends from different schools. Some kept their friendships even after they had left the program. Moreover, they are able to apply the skills they have learnt when they go to new settings.

Students from different day schools were put in the same class. Therefore, we met more friends. This arrangement really broadened my circle of friends. (Are you still in contact with them?) A few of them talked on WeChat (a messaging app). (Tin Shui Wai, Graduate)

I have met a lot of friends during the Program. I apply the social skills I learnt in the Program and make new friends at day school and get along with them well. (Kwun Tong, Graduate)

During the interview, the graduates shared the step-by-step skill in making new friends, e.g., being proactive, finding common topics, showing your concern to others, and helping each other.

Before joining the Program, I didn't know how to communicate with others. I learnt from the program how to express myself and communicate better. Now I find it easier to make friends, for example, I won't shy away but instead start a conversation proactively. (Tin Shui Wai, Graduate)

(My biggest improvement after completing the Program) is the skills to make friends... I will ask their names, get to know them, look for common topics, such as their interests and what they like or dislike. (North District, Graduate)

I was quite introverted before. I've met a lot of friends in the Program, and I was taught how to communicate better and have become more proactive. When the new term starts, I take the initiative to make new friends through looking for similarities with them and offering a helping hand. ((Tin Shui Wai, Graduate)

Peer relationship plays an important role in children's development, and it became more salient for adolescents. Positive peer interaction provides children and adolescents a way to satisfy their needs for company and support. Peers are also important contexts for children and adolescents to learn normal, adaptive modes of social conduct and social cognition (Peer, 2006).

3) Discussion

This section summarizes several social-emotional competences that the graduates have developed through the program. Socio-emotional competence is a multidimensional construct, which includes both intrapersonal and interpersonal aspects. The intrapersonal socio-emotional competence involves one's ability to be aware of oneself, to understand one's strengths and weaknesses, and to express one's feelings and thoughts non-destructively. On the interpersonal level, being emotionally and socially intelligent encompasses the ability

to be aware of others' emotions, feelings and needs, and to establish and maintain cooperative, constructive and mutually satisfying relationships (Bar-on, 2006).

Based on the interviewed graduates' accounts, the program has facilitated the development of their intrapersonal (self-esteem & self-appreciation) and interpersonal (gratitude, altruism, and friendship-making) social-emotional competencies. This should be attributed to the supportive and encouraging atmosphere, warm and loving teachers and peer students, teacher's guidance on appropriate social behavior, and various opportunities to experience positive interpersonal encounters.

Social-emotional development is widely recognized as the core of human development and growth. There is also ample evidence on the importance of social-emotional competencies for academic achievement and mental health in childhood and adolescence (Durlak, Domitrovich, Weissberg, & Gullotta, 2015). Enhancing social-emotional competencies has been on the policy agenda of global institutions. The Organization for Economic Co-operation and Development (OECD, n.d.) is developing a comprehensive international assessment of the social and emotional skills of students, which will facilitate policies and practices that foster the development of social and emotional skills amongst students.

4.2.4. Challenges after Leaving the Program

1) Multiple losses immediately after graduation

As mentioned earlier, a large proportion of the interviewed graduates experienced multiple losses immediately after leaving the program. Graduation means a sudden disconnection from an important linkage for them. They did not know who else they could depend on and ask for help. Graduation also means losing the daily routine of spending time with friends during the program. Although some interviewees kept in contact with each other, they could no longer study and play together every day.

I think the Program duration can be longer, and there should be sufficient time to prepare the students to study without the Program. Take me as an example. I depended much on the Program. It was hard for me to handle when I had to leave the program all of a sudden.

I have met a lot of friends in the Program and it's hard for me to say goodbye. (Kwun Tong, Graduate)

I met a group of close friends in the Program and was quite unhappy when I have to leave, because I lost contact with those friends. (North District, Graduate)

Leaving the program is particularly stressful for interviewees who at the same time are faced with other life difficulties. One interviewee reported that stress came back to him after he has left the program. He could not find ways to deal with these stresses and thus internalized these negative emotions and became quite depressed.

I didn't have much stress when I was in the program. The stress level increased sharply immediately after graduation. I couldn't find ways to cope with these stresses properly. I had experienced some negative thoughts and emotions. (Sham Shui Po, Graduate)

To reiterate, when the interviewees left the program, they lost an important source of instrumental and emotional support. Some graduates were well-prepared to independently deal with challenges in their lives, yet a proportion of graduates were not ready to live without close guidance from the program. During the interview, many graduates expressed their wish that the length of the program could be extended to two years.

It's suggested that the program is extended to two years. Two years will be fine. That may make a bigger difference. (North District, Graduate)

I also think that it's better if the program has a longer duration, e.g., students could be in the program from primary 4 to 6. (North District, Graduate)

In addition, some interviewees offer thoughtful suggestions that the students' characteristics should be taken into account. For instance, they thought that the program should be longer for lower-form students as they need more time to grow and keep good study habits. They also suggested that students without parental support or not manifested significant improvements should be allowed to stay beyond the standard program duration.

The current program duration (one and a half years) may not be sufficient for lower form students, since younger students may need longer time to learn and develop the

habits so as to carry on the routine and habit after they have left. (Kwun Tong, Graduate)

I think the program duration can be extended for those students who come from families with financial burdens or whose parents are of lower education background. There is no need to extend the program for students who have adjusted and improved well. (Kwun Tong, Graduate)

2) Challenges of adolescence

Moreover, even for interviewees who successfully adapted to the challenges immediately after leaving the program, they encounter new and multiple challenges later when they enter adolescence. One interviewee admitted that he was unclear about his future study plan. Several other interviewees noted the changed nature of peer relationships. They realize from their experiences that not everyone is genuine, and sometimes friends may do something bad to them. To protect themselves from being hurt by inappropriate friends, they either avoid meeting new friends or are passive in social interaction.

I am not pleased with myself. I am still uncertain what I aim at. I have to take DSE (public exams) next year and still don't have a clear goal. (Sham Shui Po, Graduate)

I enjoyed making friends when I was in primary school. Now I have very few friends because I am unsure if these people are genuine and sincere to me. Given that, having a few true-hearted friends is good enough. (Tin Shui Wai, Graduate)

I used to think everyone is good. But now I have changed a lot and protect myself from getting hurt due to others' behaviors. I am more passive in friends-making. (Tin Shui Wai, Graduate)

3) Discussion

We agree with the interviewees that there could be a flexible arrangement regarding the program duration. Future research could be conducted to explore further the characteristics of the graduates who adjust poorly after leaving the program. These characteristics could be referenced in considering students' application for the extension of program. Moreover, the

program could be open for voluntary applications from the graduates who need assistance again.

In addition, it is suggested that more resources and trainings should be provided to the graduates-to-be to prepare them for the potential challenges of leaving the program. For instance, training on stress management would assist the students to adjust to losing the academic support and social interaction after graduation. There could also be programs especially designed for P5 and P6 students to enhance their ability to cope with the forthcoming challenges of adolescence.

4) Integrative Discussion and Conclusion

In the report based on interviews with current students, we have identified several developmental outcomes that are defined as internal strengths or skills to benefit the participants in the long run. The identified developmental outcomes include emotion regulation, social skills, empathy, altruism, and improved relationships with peers and students. Interviews with graduates partially confirm the hypothesis as participants reported continuous positive developments in social skills, social relationships and altruism. Moreover, the interviewed graduates also manifested long-term outcomes in other aspects of socio-emotional competences (self-esteem & self-appreciation, gratitude) as well as academic competences (study habit).

Nevertheless, it should be noted that not all of the participants improve or maintain their performance after they have left the program. Some factors determine whether the participants can apply what they have learned from the program in new settings and thus continue to grow (Figure 2). With regard to academic competencies, a good study habit enables the participants to address changing demands of academic tasks while a sense of self-efficacy motivates the participants to hold on to the good habits and persevere despite difficulties. Meanwhile, it is vital that the living contexts (peer, school, and family) provide opportunities for the graduates to practice the socio-emotional skills they have learned from the program. If the practices receive positive feedback from the environment, the graduates will gradually internalize these social-emotional competencies and continue to practice them in daily activities.

It is suggested that positive education programs can be added to increase self-esteem, enhance happiness and wellbeing, prevent mental health problems of the students, as well as to prepare the students for future challenges and adversities. The programs can include activities to increase positive emotions, positive engagement, positive relationships, sense of accomplishment, meaning of study and life. The intensity and level of difficulties of the programs can be adjusted for students of different grades.

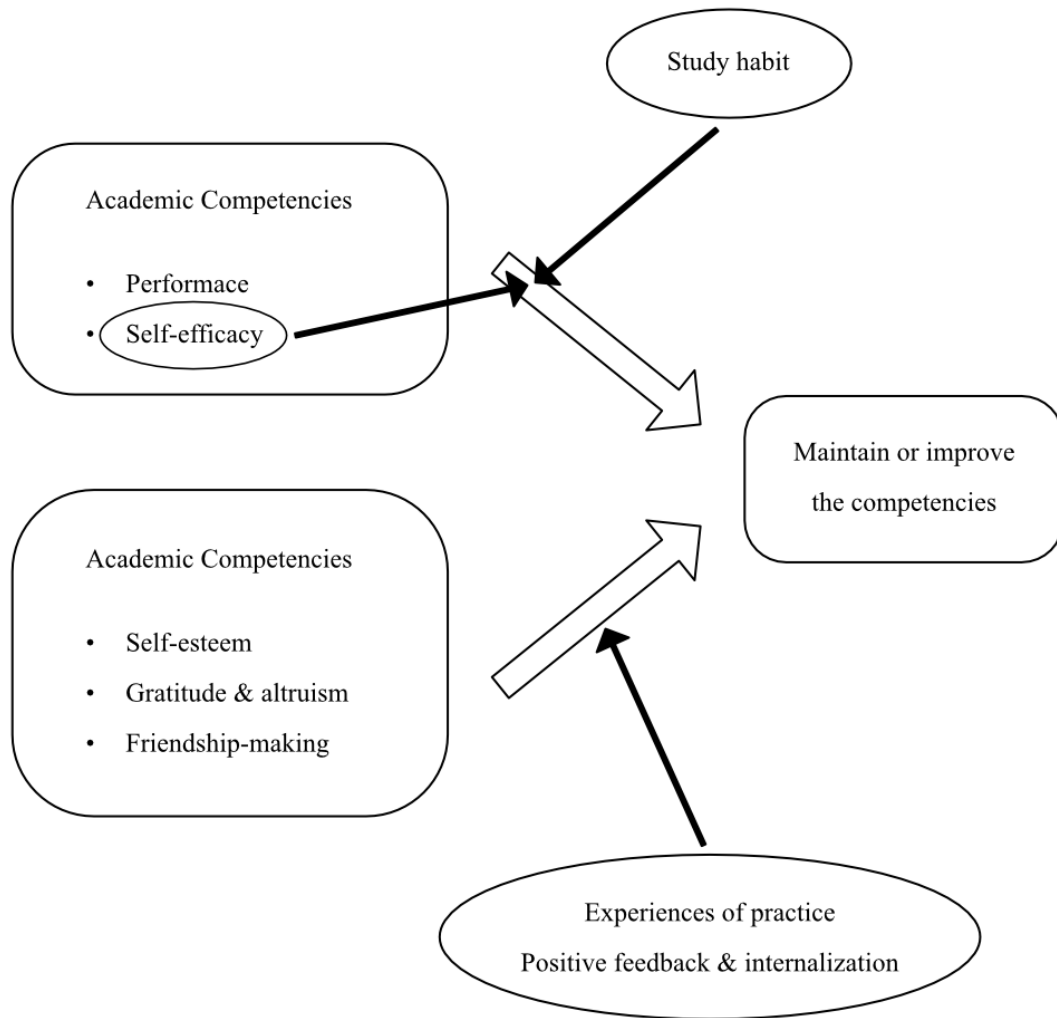


Figure 4.2.1 *Factors that Determine Application of Learning after Program Graduation*

4.3. Report of Second-Round Qualitative Research on 333 Program (Part 3, Teachers)

4.3.1. Introduction

This section presents the results of the **eight interviews with the teachers**. In each center, the vice- commissioner and one instructor¹ were interviewed. The current report begins with a brief presentation of the program outcomes, which corroborates with the findings of previous interviews. Then, the mechanisms that facilitate students' positive outcomes are succinctly described, followed by a summary of what we have known so far about the facilitating mechanisms. Last but not the least, the report explored individual and contextual characteristics that may influence the 333 Program (Program)'s effectiveness. This report ends with a general discussion and suggests an updated conceptual model from the findings.

4.3.2. Program Outcomes

Similar to the previous interviews, the students have improved in study attitude, academic performance, social emotional competence, and have better relationships with parents. Some selective quotes are presented as follows.

Almost 90% of my students have improved their grades. (Center 4, Instructor)

The successful rate is more than 50%. At least the students manage to finish their homework with our assistance. The parent-child relationships improve as well. Many parents thank us at the end of the school term. (Center 3, Instructor)

After participating in the program for one year, the students start to improve not only in their homework completion, but also in their attitude, temper, and behavior. It is rewarding to me. I believe that their schoolteachers could see their improvements too. The schoolteachers would not scold the students anymore since the students can hand in their homework on time. When there is less scolding from the teachers, the students feel better about themselves. (Center 3, Instructor)

¹ To avoid confusion, "instructors" in this report refers to all teaching staff of the 333 Program, while teachers refer to day school teachers and teachers in general.

During the interviews, we asked the instructors to name one student that impressed them most. Here is one student's story, which provides detailed evidence on an individual student's improvement. It also illuminates what the instructors have done to facilitate the changes, which will be elaborated in the next section.

On her first day at the program, this fifth-grade student was very arrogant and impolite. She simply passed by me without acknowledging my presence, picked her own seat and started disrupting the class by throwing stationery and playing with other students noisily. She had a low motivation to learn, especially for English. When it was time for English homework, she either laid her head on the desk and did nothing or disturbed other students.

To build a good relationship with her, I tried to identify what she was doing well. Even though most of her behaviors were not desirable at that time, she had one strength- she was very caring to younger students, e.g., she was attentive when lower form students walked down the stairs because she was afraid, they might fall down accidentally. I praised her in class. I also wrote her letters, as I believe that ideas and feelings expressed in words have another kind of power, and she can review the letters whenever she likes. I also gifted her bookmarks as a token of encouragement

Later on, she started to loosen up. She stopped disturbing others or displaying any destructive behavior. Instead, she sat down and worked on her homework. Whenever I saw desirable behaviors in her, I acknowledged them immediately. She realized that the instructors were not her enemies, and that we cared for and appreciated her. She gained courage in overcoming difficulties in her studies. Once I noticed that she had problems with her English homework, I asked her if she needed any help. She responded that she wanted to try to do it on her own first with a dictionary.

At the end of the program, she had remarkable improvements in all aspects. (Center 1, Instructor)

4.3.3. Facilitating Mechanisms

Facilitating mechanisms can be defined as any agents or resources that are available to bring about changes when the program or intervention is implemented (Lacouture, Breton,

Guichard, & Ridde, 2015). Understanding facilitating mechanisms will guide us to increase program efficiency.

1) No labeling

“No labeling” is frequently mentioned by the interviewed instructors as a code of conduct. The instructors understand that the students have been perceived as lazy or stupid by the day schoolteachers. When the day schoolteachers equate the students with labels, they are also less likely to provide learning opportunities for or put efforts to help the students, since they believe that the learning problems are with the students (Henley, Ramsey, Algozzine, & Hall, 2010). Worse still, the students may internalize the labels because of getting negative feedback from the day schoolteachers. The labeled students may look down upon themselves and even behave in ways that fulfills the prophecies of the labels (Shifrer, 2013).

Nevertheless, joining the Program allows the students to have a fresh start. Setting aside the labels, the instructors strongly believe that everyone has potential and capacity to learn and that the students will make progress at their own pace. This “no labeling” attitude is reflected in the instructors’ daily interactions with the students. The instructors’ attitudes and behaviors give a clear message to the students that they are capable of doing well.

One thing that makes us different from schoolteachers is that we never, never label the students. In day school, these students were seen as troublemakers; some were even accused of wrong doings that were not actually involved. (Center 2, Instructor)

We give them space to change. For instance, some students tell lies or miss homework before joining the program. We do not let these histories bias us from recognizing them as individuals with potential. Moreover, the students do not know other’s background and will not gossip or discriminate against a particular student. (Center 2, Instructor)

A student had been frequently scolded for not handing in homework or chatting with peers at class in day school. (After joining the program) he was able to hand in his homework on time and his teachers stopped labeling him. Then he was more motivated to complete his homework. (Center 3, Instructor)

Most of the students nominated by their school to join the program are labelled as lazy or bad. However, our center is a totally new environment in which they are free from the burden of the labels. Later, when teachers and peer students in day school notice the improvement of our participants, they will stop labeling them as well. These experiences gradually build up their self-esteem. (North District, Vice-director)

2) Care and appreciation

In addition to “no labeling”, the Program instructors took a caring and appreciative attitude towards the students. Some of the students have been constantly criticized and negatively evaluated by the day schoolteachers. These experiences overshadow their view of the teachers in general. Thus, the students were initially defensive and disobedient when they met the instructors. The Program instructors empathize with these students’ experiences. They take various actions to rebuild the teacher-student relationships, e.g., listening actively to the students, taking care of the students’ emotional needs, identifying strengths and good behaviors of the students, and expressing encouragement and appreciation.

Once I had a chat with a graduate. Recalling back, she told me that before she entered the program, she felt that nobody loved her. Her teachers constantly wrote negative and punitive comments all over her school handbook. She considered me to be similar to her teachers. She also considered that participating in this program is a punishment rather than assistance. That is why she was very negative at the beginning of the program. (Center 1, Instructor)

I personally believe that love and care will make a difference. In most mainstream day schools, the teachers do not have time to talk to and get to know the students. Here in this program, we can spare enough time to care for the kids. Many participants came from families lacking love and affection for them. A good relationship with the teachers compensated for their loss and motivated them to behave well. (Center 4, Instructor)

3) A holistic student-oriented paradigm

A holistic, student-oriented approach (Barman, 2013) is adopted in the program. First, the instructors manage to achieve a holistic understanding of the students. Instead of focusing on the students’ difficulties and problems, the instructors seek to understand the unique personalities of the students and how the students were influenced by their living contexts,

especially the families. Second, the instructors design appropriate and individualized development plan for the students. In these individualized plans, the students are considered as unique learners. The students' strengths, weaknesses, preferences, and interests are taken into account when designing plans to help them learn best (Daniels & Perry, 2003). Finally, the instructors monitor the students' development in an ongoing manner. There are daily meetings in which instructors share their observations of the students and discuss how to handle difficult students.

Here in 333, we use a student-oriented teaching method that is tailor-made for every student. (Center 1, Instructor)

We follow closely on each student's learning progress. We teach more to students with high learning capability. We take our time to teach at a slower pace to students with relatively low learning capability, and patiently wait for them to absorb new knowledge. We set individualized learning goals according to the students' capabilities. (Center 3, Vice-director)

We spend a lot of time understanding the students, e.g., their personality and the challenges they are facing. We talk to the students not only in class but also before and after class. We also talk to the parents. A deeper understanding of the students is a requisite for offering effective help. We hold daily meetings to discuss ways to help the students. For instance, we have a "Top Ten" list of the most difficult students. The instructors share the problems they encounter and exchange ideas and suggestions to help these students. (Center 1, Vice-director)

4) Cooperative, activity-based, and reward-reinforced learning

Overall, the Program provides a proper learning atmosphere for the students. The students have a quiet place to study, and they study together with the peers. The Cooperative learning model, or "Little Teacher", is a signature feature of the Program. Cooperative learning is a learning process in which the students work together to maximize their own and each other's learning (Nichols & Miller, 1994). Cooperative learning increases the students' study motivation as it encourages healthy competition and directs students toward improving their knowledge or skills (Nichols & Miller, 1994). Moreover, cooperative learning improves the students' social skills. The students learn to develop interpersonal skills such as getting to

know and trust team members, communicating effectively and clearly, and providing support to peer students (Yurdabakan, 2011).

Most participants did not do their homework at home and their parents nagged about this. Each center provides a good learning environment to them. When students see others working on their homework, they will be influenced and start doing their homework. Later they will develop a good habit of completing their homework on time. (Center 2, Vice-director)

Before joining the program, this student never raised his hand when the teacher asked questions. Encouraged by the learning atmosphere here, he now actively teaches and helps others and asks for help whenever he has any questions regarding the courses. (Center 1, Vice-director)

This shy student was not good at communicating with others. In the program, she learns to ask questions. We give her a chance to be a Little Teacher to tutor other students. She is proud of being able to help others and are more willing to do more. We witness great improvements in her social skills. (Center 1, Vice-director)

The learning model of the Program is also characterized by reinforcement of reward and building a sense of achievement. A system of earning points for rewards has been invented. Moreover, the design of the reward system took into account the levels of difficulty of the tasks so that the students will have equal chances to earn the rewards.

Since the students are more or less on the same level, they have equal chance of achieving goals and getting rewards. It is less competitive in the center. (Center 3, Vice-director)

Finally, the instructors put efforts to design class activities that can engage the students. Some students have experienced confusion and frustrations at classes and might have developed psychological barriers to study. The classes of the Program are easy to understand and flexible in procedure and seating plan, which enable the students to learn through games and play. These tactics successfully reduce the students' psychological resistance to study.

Learning English is challenging for some participants, because of their psychological barrier rather than their language learning aptitude. In view of this, I design English

class with the aim of facilitating the students to have positive feelings and experiences towards learning English. I designed lesson plans to teach English through games. (Center 1, Instructor)

In value-added class, the teaching materials are funnier and more interesting. Even the seating arrangement and lesson plan are more flexible. (Center 3, Vice-director)

To increase students' motivation and interest in learning, the number of courses is not essential; instead, the course materials must be straightforward and funny because the students have a rather short attention span. (Center 4, Vice-director)

5) Summary of the facilitating mechanisms based on existing interview results

So far, four rounds of interviews have been analyzed: the interviews conducted with all concerned parties in June to July 2017 (report 1), the interviews with current students conducted from June to October 2018 (report 2.1), the interviews with graduates in July 2018 (report 2.2), and the interviews with instructors in September and October 2018 (report 2.3, this report). With such a large bunch of data, we tried to integrate the findings and identify themes of facilitating mechanisms. One approach to discover themes is to pay attention to those topics that occur and recur. The more the same concept occurs in a text, the more likely it is a theme (Ryan & Bernard, 2003). To date, the nine facilitating mechanisms have been revealed, and can be further organized under two main themes: teaching approach and teacher-student relationship. Table 1 demonstrates the themes, subthemes and their frequency of occurrence.

Table 4.1 *Themes of Facilitating Mechanisms*

Themes	Brief Definition	Occurrences			
		1	2.1	2.2	2.3
Teaching approach		1	2.1	2.2	2.3
Cooperative learning	The students act as “little teachers” and help each other to complete and review homework.	✓	✓	✓	✓

Rewards and achievement	The students are given various opportunities to gain rewards and build up a sense of achievement.	✓	✓	✓	✓
Activity-based learning	The class activities were funny and enjoyable.	✓	✓	✓	✓
A holistic, student-oriented paradigm	The instructors seek a holistic understanding of the students and formulate individualized plans to help the students.				✓
Teacher-student relationship		1	2.1	2.2	2.3
No labeling	Never labeling students as lazy or stupid children is a basis for establishing genuine teacher-student relationships.				✓
Care & emotional support	When the instructors are warm, caring, and emotionally supportive, the students felt secure and being loved.	✓	✓	✓	✓
Being responsive	The students felt that the instructors are always available for them.		✓		
Encouragement & appreciation	The instructors acknowledge and validate the students' good behaviors and strengths.	✓	✓	✓	✓
Respect for autonomy	The instructors allow the students to take responsibility for their behaviors.	✓		✓	

4.3.4. Factors That May Influence the Program Outcomes

Apparently, not every student has the same degree of improvement. In the quote below, one instructor comments that the degree of improvement is determined by the students' "quality". This instructor further defined "quality" as average intelligence and not having emotional, behavioral, school or family problems.

Regarding academic performance, it mainly depends on the student's quality. Some students improve quickly when given adequate care and academic support. On the contrary, students with lower quality make small improvements, sometimes too small to be noticed by parents. (Center 2, Vice-director)

Thus, the following explores individual and contextual factors that may either promote or hamper the program's effectiveness.

1) Students with Special Education Needs (SEN)

In recent years, we have witnessed a growing number of students with special education needs (SEN). An audit report published in 2018 showed that one in three pupils in Hong Kong aged eight or older were identified as having special educational needs (SEN) (Tsui, 2018). As a part of this trend, the Program has received more SEN students, most of which suffer from dyslexia, autism spectrum disorders, attention deficit and hyperactivity disorder (ADHD), or emotional disorders.

The number of SEN students has increased a lot. We have students with different types of SEN: dyslexia, autism, attention deficiency, and depression. (Center 3, Vice-director)

Working with SEN students requires great patience, dedication and sensitivity. One instructor comments that the time and effort spent in helping SEN students is three or four times as much as that spent with students in general. For instance, students with autism demonstrate pervasive deficits in social communication. It requires the instructors to spend extra time to establish trust and work out a feasible method of communication with the students before providing academic assistance. While their effort is not futile and the students with SEN have made small progress, the improvements cannot be transferred to other contexts.

We have tried our best to assist these students with SEN, which means that we put much more time and effort into working with them than with average students. For the students with mild autism, there are some improvements, albeit not large ones. (Center 1, Vice-director)

The students with SEN, especially those with autism, have difficulties in communicating with others. Hence, we make extra efforts, probably three or four times, to establish relationship and then provide academic assistance to these students. It also takes longer time for these students to improve. (Center 1, Instructor)

There was a student with Asperger syndrome. While he behaves well in the program, he could not control himself in the day school. It is a bit disheartening when I learn from the school that the student shows little or no progress. (Center 2, Instructor)

Most of the instructors were retired teachers and should have a basic understanding of SEN. Additional workshops and seminars could be organized to enhance the instructors' professional attitudes, knowledge, and skills, and equip them with updated and effective support strategies to handle the students' emotions and behaviours. The professional training could target the types of SEN most frequently encountered by the instructors.

2) Students' age and developmental stage

As observed by the instructors, a large proportion of "successful cases" were students of P3 and P4. The interviewed instructors describe P3 and P4 students as docile and sensible.

Most successful cases are grade three and four students, who are at the stage of being responsive to the environmental influence in character-shaping. (Center 2, Instructor)

In contrast, most instructors felt that P5 and P6 students are the most challenging to deal with. This can be explained by three probable reasons. First, some P5 and P6 students have lagged behind academically for a long time before they enter the program. This long history of academic failure, coupled with higher academic demand for higher-grade students, makes it hard for P5 and P6 students to catch up and make significant improvement. Previous research has shown that while attending after-school programs with intensive academic support, children younger than 8 years of age increased their spelling and mathematics achievement at significantly greater levels than did children 8 years and older (Riggs &

Greenberg, 2004). One implication is that the after-school program should start in the early grade-school years in an attempt to promote academic growth more effectively.

There were more unsuccessful cases among fifth and sixth graders. They are faced with higher academic demands, which requires significantly more effort to catch up. If they fail to do so, they might slack off or even give up. (Center 2, Instructor)

Second, these students might also be exposed to adverse family and school environment for a long period of time. On a positive side, these children may cherish the love and care from the Program instructors, which are not available in other contexts. Yet without adequate support from the family and school context, the students' positive changes are less likely to be sustained.

Performance of the higher-grade students were polarized. Some were very willing to change; probably because the instructors gave them attention and care that they did not get at home. (Center 2, Instructor)

Finally, at the stage of entering adolescence, P5 and P6 students seek more autonomy from the influence of adults. They will only follow the instructors' guidance after thoughtful consideration. Hence, the instructors are expected to use a different approach to establish connections with the older children. For instance, an autonomy-supportive teacher asks about students' wants and responds to student-generated questions. The teacher should allow the students to express their dissatisfaction with the learning tasks and provide students with the opportunities to make their own choices on personal goals and interests (Stefanou, Perencevich, DiCintio, & Turner, 2004).

Students in their puberty start to have independent thinking and are reluctant to accept whatever adults tell them. (Center 2, Instructor)

3) School and family contexts

According to the ecological systems perspective, development occurs through a complex process of interactions within and between the individual and the environmental contexts in which he or she is involved over time (Bronfenbrenner & Morris, 1998). Within the broader socioeconomic environment, the Program represents only one context that influences the students. The effectiveness of the Program depends on the conditions of other

contexts. As observed by one instructor, sometimes the student regresses to previous behavior patterns after a term break.

Students' performance fluctuated. There are times for improvement and times for regression. Usually, the students forget all the rules and regulations after a long term-break. (Center 3, Vice-director)

Support from the family is extremely important. Sometimes, students improved at the center but revert to their previous behaviour at home. (Center 1, Vice-director)

The negative impact of the students' previous schooling experiences was discussed earlier. If the students have been treated poorly by the teachers and classmates in the day school, they form a negative image of teachers and peers in general. To regain the trust of the students, the Program's instructors need to behave in a friendly and respectful manner. In addition, the negative schooling experience will increase the likelihood of developing emotional problems in the students, which pose additional challenges to the instructors.

Sometimes, students were in a bad mood because of what had happened in day school. They could not focus when they studied in the center. We need to handle the students' negative emotions first. (Center 3, Vice-director)

Family is another primary context for children. Some parents set unrealistic expectations on their children's academic performance. These parents failed to acknowledge the small progress made by their children. They continually push their children towards higher performance goals, which creates high pressures on the children. Consequently, the students lose their confidence and enjoyment of learning, and even develop anxiety and depression. These parents are also likely to quit the Program prematurely when they perceive that the Program does not have any effect on their children.

There was a parent who quit the program after one or two weeks, saying "no improvement" was seen in her child. Some parents don't understand that it is unrealistic to expect the students to improve from 0 to 50 or even 100 in a short period of time. (Center 2, Instructor)

We need to educate the parents to shift their focus on their children's academic performance and pay attention to their children's improvements in other aspects. Some

parents put extraordinary pressure on their children. They continue to set new goals for their children without acknowledging what their children have achieved so far. We advise the parents to praise more and scold less. (Center 3, Vice-director)

Sometimes the instructors contact the parents when the instructors believe that the students need professional assessment and intervention. One instructor observed temper tantrum and behavioral problems in one student, and she suspected that the student might suffer from attention deficit hyperactivity disorder (ADHD). The instructor then persuaded her parents to face and deal with the problem.

We have a student suspected of having ADHD. He threw a tantrum and refused to get on the school bus. He kept on shouting and making a scene. We contacted his parents. At the beginning, the parents refused to acknowledge the fact that their kid may have learning difficulties. We talked to the parents several times, suggesting that the parents could at least bring the child for an assessment. (Center 3, Instructor)

As mentioned in the first report, a unique strength of the Program is the teacher-parent partnership. When the instructors are not overwhelmed by the Program's workloads, they have space and energy for parent work. The importance of teacher-parent partnership is self-evident. A good partnership provides two-way information flow from the teacher to the parents and from the parents to the teacher. It enables the teacher to accurately understand and assess the child. It also provides the mechanism for the teacher to invite and support the parents' active participation in the child's education in the home environment (Billman, Geddes, & Hedges, 2005). In the first report, we described successful cases of parent-teacher partnership. Yet there are some difficult or failed cases, according to the interviews with instructors as well as with parents (report of parent interviews will be submitted later). In the next-round interviews, we will focus on barriers for establishing the teacher-parent partnership and explore what can be done to remove the barriers.

On the other hand, we wonder if a partnership between the Program's instructors and the day schoolteachers can be established. As far as we know, the Program has cooperated with the day school in recruiting students. In future interviews, we will explore whether the instructors establish regular communication with day schoolteachers and how it will impact the students.

4) Instructors' professional capacity, dedication, and workload

There is no doubt that the quality of the instructors determines the Program effectiveness. The Program's instructors are professionally qualified and dedicated. They do not mind being misunderstood or cheated by the parents. They forget their fatigue when they see that their efforts have paid off. They are only concerned about the students' well-being.

At the beginning, when the parents didn't know me, they held a negative attitude towards me. They were rude to me when I introduced myself, some used foul language at me, and lied to me because they wanted to keep things to themselves. The parents would gradually adjust their attitude when they realized that we were giving our heart to help their kids and they felt our sincerity. It takes patience and care to deal with the parents. (Center 1, Instructor)

We wish to draw attention to the increasing workload of the Program instructors. So far, no definite evidence suggests that the instructors are overloaded. Yet it should be noted that the number of students is increasing, and the instructor-student ratio is decreasing, which means that each instructor needs to handle more students than before.

I suggest lowering the teacher-to-student ratio. While the number of teachers remains the same, we are getting more and more students. (Center 3, Vice-director)

The teaching approach characterized by a holistic, student-oriented paradigm requires the instructor to go beyond traditional classroom teaching. In addition to being an "educator", the instructor plays the role of being a "friend", a "facilitator", an "empowerer", and a "liaison person" (between parents and children, and hopefully between schoolteachers and children). All these demands a large amount of time and effort. Thus, we suggest that the Program should carefully monitor the instructor's workload.

It can get exhausting. We have to tailor-make our teaching approaches for students facing different challenges. It takes a lot of effort and is tiring sometimes. Viewing the students' improvement is my motivation to keep on moving. (Center 1, Instructor)

4.3.5. General Discussion and Conclusion

This evaluative project starts with two fundamental questions, what the program

outcomes are and how these outcomes happen. We as researchers initiated the interviews with some basic understanding of the Program, believing that we would be further informed by the interviewees. As expected, the interviews provided rich information. The interview data have been analyzed in both inductive and deductive ways. Inductively, we recognize themes from the interviews. Deductively, we use theory to guide our conceptualization. While our understanding will keep evolving as the Program continues, a preliminary integrated framework has been formed (Figure 3).

With regard to the “what” question, various program outcomes have been identified, based on students’ self-report and the teachers’ observation. The students’ improvements can be organized into three domains: academic (performance, self-efficacy, study skills and habits), socio-emotional (self-esteem, social skills, gratitude and altruism), and relational (peer relationship, family relationship). These outcomes could be maintained if the students are given opportunities to practice and positive feedback is provided to facilitate internalization. These outcomes can be understood with reference to the self-determination theory (Deci and Ryan, 2002). It is contended that children will be motivated when their three fundamental psychological needs for autonomy, competence, and relatedness are satisfied. Autonomy is the universal urge to act on one’s true self and make decisions for one’s own life. Competence stands for the demand to experience mastery and accomplishment. Relatedness is the human need for love and belonging. So far, the most frequently identified program outcomes are related to the satisfaction of needs for competence (performance, self-efficacy, study skills and habits) and relatedness (social skills, gratitude and altruism, peer relationship, family relationship). One outcome, improved self-esteem, could contribute to satisfying needs for autonomy, since one is more likely to act on one’s true self when one feels confident about himself. The next-round interview may focus on exploring other program outcomes related to autonomy, especially for older children.

To answer the “how” question, we invited the interviewees to reflect on what they have done to create a nurturing environment for the students. The Program instructors (mostly retired teachers) adopted a teaching approach that they think is appropriate but is impossible to implement due to the competitive atmosphere of the day school in the past. The instructors add more fun to the class activities, regard the students as unique individuals in understanding and supporting them, and express more encouragement and appreciation. The teacher-student relationship is also different. The instructors are caring, supportive and

responsive, which makes the students feel secure and loved. The unique teaching approach and teacher-student relationship are considered as two major facilitating mechanisms to ensure the Program's effectiveness. We will explore additional facilitating mechanisms in the forthcoming interviews.

Last but not least, the "how" question should also address factors that enhance or hinders the Program's effectiveness. As informed by the developmental-ecological perspective (Bronfenbrenner & Morris, 1998), a child lives in a multitude of contexts that affect his or her development. Accordingly, effective practice requires thorough and accurate examination of these contextual influences. Moreover, a child develops across multiple domains and along a continuum of progressive stages. At each developmental stage, a child presents a particular set of physical, emotional and intellectual characteristics, which require specific responses. The current report has found preliminary evidence that the family, the day school, as well as students' individual characteristics and developmental stage may moderate the program outcomes. Future interviews will collect more detailed evidence on these influencing factors, which could serve as a reference for future program design and implementation in order to optimize the program outcomes.

It is suggested to organize workshops for the instructors so that they can better understand and help to explore the character strengths of the students, and learn ways to enhance the students' positive emotions, positive relationships, positive engagement, sense of accomplishment and meaning of study/life, hence contributing to the intrinsic learning motivation and building up self-esteem of the students. A more interactive and experiential teaching pedagogy can be adopted.

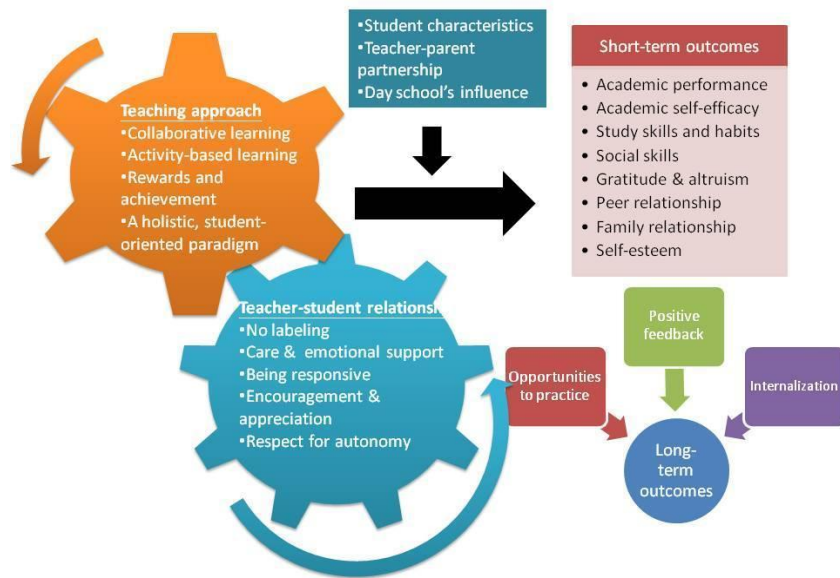


Figure 4.3.1 *The Integrated Framework for the 333 Program*

4.4. Report of Second-Round Qualitative Research on 333 Program (Part 4, Parents)

4.4.1. Introduction

This report aims to examine how the Program may impact the parents/caretakers and their children from the parents/ caretakers' perspectives. A total of eight parents or caretakers were interviewed, two from each center. After analyzing and synthesizing the interviews, this report presents results in two aspects: (1) parents' observations on their children's performance after joining the Program, and (2) parents' experiences of establishing partnership with the instructors in promoting children's growth and competence. In addition, two parents whose children dropped out from the Program were interviewed and a brief summary of these two cases is presented. The final section of this report discusses the results and gives suggestions regarding future research.

4.4.2. Program Outcomes

Similar to the previous interviews with teachers or students, parents/caretakers are convinced that they have benefited from the Program greatly. Some of the Program outcomes reported by parents/caretakers are similar to those reported in previous interviews, which are briefly summarized in Table 2.

Table 4.2 Program Outcomes that are Similar to Previous Interviews

Theme	Selective Interview Excerpts
Improved academic performance	<p><i>She is able to finish homework on time. (Kwun Tong, Parent B). He does a good job in dictation. Most recently he got over 90 marks out of 100, which is amazing. I cannot really believe it. (Tin Shui Wai, Parent A)</i></p>
Improved study attitude and academic self-efficacy	<p><i>He becomes self-disciplined. Last night he told me that he had four types of homework, he said, “grandma, I will have dinner and take a bath, and then finish the homework by myself”. He knew how to deal with his tasks. (North District, Parent A)</i></p> <p><i>Prior to participating in the Program, she did not care about her studies. If she encountered problems in study, she never asked; instead, she just jotted down a few words no matter if they were correct or not. Now she has taken her studies seriously. If she has any problems, for example, in mathematics, she will come and ask me. If I cannot answer her question, she will search for answers online or ask the teachers later. (Kwun Tong, Parent B)</i></p>
Improved self-esteem	<p><i>She gains self-confidence by acting as a little teacher and helping others. She has made a big improvement in this aspect. (Kwun Tong, Parent A)</i></p>

<p>Altruism and prosocial behavior</p>	<p><i>She likes to be helpful to others. She told me, “Mom, I started to do my homework early; I did my homework during class break. Thus, I could have more time helping others.” I am happy that she can take into consideration others’ needs. (Kwun Tong, Parent A)</i></p>
<p>Better communication and social skills</p>	<p><i>He has better communication ability and presentation skills. He also has more vocabulary to express his feelings and thoughts. (Tin Shui Wai, Parent B)</i></p> <p><i>She becomes more forgiving. Once I misunderstood her, later I apologized to her, and she said, “It does not matter, it is not a big deal.” (Kwun Tong, Parent A)</i></p>
<p>Better emotional well-being</p>	<p><i>She is happy every time she returns home. She tells me, “Mommy, I am doing well today. Other students ask me questions, and I give them the right answers. I was praised by the instructor.” (Kwun Tong, Parent A)</i></p> <p><i>My child used to draw people with tears in black background. Yet recently in a drawing contest held by the Program, she drew a colorful picture, there is no black color, and all of the colors she used are bright. I can sense that her mood is as bright as sunshine from that picture. (Sham Shui Po, Parent B)</i></p>

In addition, the interviewed parents/caretakers provided vivid first-hand accounts on how their family relationships are improved as a result of the Program. First, the Program relieves parents' stress and burden in supervising their children's homework. Some interviewed parents/caretakers have full-time jobs with long working hours and are already stressed-out after work. Even full-time household caretakers are burdened by various household chores. Due to the Program, the parents feel less stressed. Moreover, the parents can make best use of their limited time helping children with revision.

Now I feel quite relaxed since my child can finish most of his homework at the center. I help him with revision at night. (NT, Parent A)

The parents are also less likely to get into conflict with children during homework supervision. This further enhances good parent-child relationships and turns hostile parent-child interaction around.

Now there is less conflict between me and my son. Previously, when he did homework, he was either inattentive or reluctant, and I did not know how to guide him. I felt tense and upset. This pattern repeated every day, which almost crushed me. (Kwun Tong, Parent B)

I no longer need to "force" my daughter to do her homework, and our relationship becomes better. We have always been close, now we are even closer. (Kwun Tong, Parent A)

There are also several parents or caretakers who are incapable of responding to their children's education needs due to their limited education background and physical condition. Two of the eight interviewees reported that they were illiterate, one had dyslexia and was suffering from slight dementia, and the other two became incapable of tutoring as their children moved to higher grades.

After the kid entered Grade 1, I was asked to help him with his homework, the homework of all subjects. However, I barely understood them. This made me feel sad and helpless. I cried a lot before the kid was sent to the Program. (Sham Shui Po, Parent A)

My child got poor grades in mathematics, but I cannot help it, I do not know how to answer these questions either. I cannot understand these assignments after my child enters Grade 4. (Kwun Tong, Parent A)

In addition to reducing parent-child conflicts, the Program has improved family relationships by educating the participating children to take care of their family members. One elderly caretaker appreciated that the kid actively took up some family chores. Another parent observed that the child tutored the younger brother by applying what she had learned in the Program.

I was most impressed when the kid offered to help me clean the tables after dinner. (Tin Shui Wai, Parent A)

She acted like the little teacher when she returned home. Apparently, she had learned something about how to be a good teacher from her experience in the Program. When her younger brother brought out a question, she did not immediately give him the answer. Instead, she discussed it with her brother and encouraged him to think it over. (Kwun Tong, Parent B)

Finally, the Program has provided some families opportunities to visit theme parks or watch performances in theaters, which these families may not afford. These great experiences create happy family memories that strength family bonds (Xu, Xie, Liu, Xia & Liu, 2018).

My child and I participated in the parent-child activities organized by the center. We had an enjoyable time together, and we took this opportunity to get to know more about each other. (North District, Parent B)

The Program treated us to a circus show in Hong Kong Cultural Center in Mother's Day. The tickets cost too much for me. I would never go to see the show without their generous financial support. (Kwun Tong, Parent B)

4.4.3. Parent-Instructor Partnership

Parent-teacher partnership is defined as a constructive relationship in which families and educators work together in meaningful ways to execute their respective roles in promoting the academic and social development of children. Existing research has shown that a good parent-teacher partnership improves students' academic performance and social emotional competence as well as reduces their behavioral problems (Bryan, 2005). In addition, parent-teacher partnership is beneficial to both educators and parents as teachers have greater job satisfaction (Sapungan & Sapungan, 2014), while parents reported improved parent-child relationships, development of effective parenting skills, and an increased sense of wellbeing and competence (Bryan, 2005). Moreover, there is growing evidence that families' involvement with the schooling of their children could compensate for the lack of educational resources in low-income families (Hidalgo, Sui, & Epstein, 2004).

One peculiar feature of the Program, which differentiates it from other after-school programs and most of the day schools, is that it has established a strong parent-instructor partnership. In the previous reports, we have delineated this partnership from the instructors' subjective experiences. This section describes parent-instructor partnership from the perspectives of the parents or caretakers. As detailed below, the parent-instructor partnership in this Program manifests itself in four aspects: (1) routine and effective communication, (2) extended and prolonged interaction, (3) trust building, and (4) shared goals and strategies.

1) Routine and effective communication

The instructors and the parents maintain routine and effective communication between each other. In this study, the interviewed parents indicated that they have received routine reporting about their children's conditions from the instructors. The report is about children's performance in class as well as their emotional state as observed by the instructors. Different means of communication are adopted: face-to-face talk when the parents pick up their children, phone call, and instant messaging (e.g., WhatsApp).

The instructor told me how my child was doing today. (North District, Parent A)

The instructor told me, “Your daughter is willing to ask questions when she does not understand. She has a good study attitude. She gave up on her study and did not ask questions probably because no help was available.” (Kwun Tong, Parent A)

The instructor calls me once a week to tell me about my son’s performance in class. I really appreciate that. (Tin Shui Wai, Parent B)

In addition to telling me what my daughter is doing in class, the instructor also shares her observations of my daughter’s emotional state. (Sham Shui Po, Parent B)

Instructor-parent communication can also occur when the instructors invite parents to share information relevant to the child’s learning and well-being. However, this kind of communication was less frequently reported by the parents in this study. One parent noted that he shared with the instructors his child’s personality and behavioral/emotional patterns so that the instructors could know how to deal with the child.

I gave information on my child’s character and behavioral pattern, so that the instructor knows how to handle him. (Tin Shui Wai, Parent A)

2) Extended and prolonged interaction

The interaction between parents and teachers occurs outside of the classroom and the center. According to the interviews, the parents were welcome to contact the instructors outside of the program period to discuss matters concerning the children. This after-program support provided a channel for parents to seek help when they encounter challenges in teaching and disciplining their children. The conversations and exchange of ideas between parents and instructors not only help address children’s academic problems but also give an ease of mind to stressful parents.

During the term break, I had difficulties when tutoring my kid’s homework. I tried to call the instructor. He was unavailable at that time and told me that he would

call me later. He did return the call! These instructors, all of them, are dedicated to work. (Kwun Tong, Parent A)

I felt frustrated when I found that my child hadn't finished his homework despite my repeated efforts to assist him. I told the instructor, and she comforted me, "Don't worry, the kid is making progress. Let's have confidence in him." (North District, Parent A)

In addition, two of the interviewees were parent volunteers of the program. Parent volunteers often have closer relationships with the program instructors as they have more face-to-face interactions with the instructors. Moreover, volunteering provides the parents a great opportunity to observe and learn skills and methods that instructors use in teaching and disciplining students.

I registered as a volunteer as soon as I saw the recruitment post. I am among the first batch of the volunteers. I wanted to know more about the Program, e.g., its daily operation and the kind of approach used. Another benefit is that I interacted more frequently with the instructors and thus got to know more about my child's performance in the center. (Sham Shui Po, Parent B)

I learnt better ways to deal with my kid from the instructors through observing the instructors' interactions with the students. I did not realize how hardworking these instructors are before I volunteered in the program. (Kwun Tong, Parent A)

Extended and prolonged interaction is important as it provides ongoing opportunities to allow parents and instructors to learn from and about each other and increase acceptance and understanding of each other (Christenson, 2004). It is particularly important for parents of this Program who have inadequate parenting skills and resources, and who can learn from the instructors' coaching and modeling behaviors.

3) Trust building

A number of characteristics or dimensions have been identified as important to healthy partnerships among families and educators, while trust is a foundational element

that makes the other dimensions or elements of partnerships possible (Dunst & Trivette, 2009). Three phases of trust may be applied to the family-school partnership: predictability, dependability, and faith (Reschly & Christenson, 2012). The first phase of trust is typified by families and educators responding to interactions in ways that are predictable (e.g., returning phone calls). As interactions continue, predictability yields to a view that the other (family or school) is dependable and gradually having faith/confidence, in the other.

As discussed above, through routine and effective communication as well as extended and prolonged interaction, parents and teachers get to know each other and enter into a partnership that is predictable and dependable. In addition to that, trust building occurs when the instructors demonstrate to parents their genuine care and support towards the students. All of the interviewed parents or caretakers are touched by the instructors' genuine care and patience towards students.

All the instructors are kind and nice. I feel so grateful. (North District, Parent A)

The instructor knows me shortly after we met. I assume that a teacher cannot remember each parent if he is not dedicated to work. Yet the instructor knows each child and parent (which proves that he has a heart for students). (North District, Parent B)

The instructor prepared gifts with encouraging words for my daughter's birthday. My daughter was joyful, saying "Mom, check it, this was made by my instructor!" I was very impressed. I almost forgot my child's birthday, but the instructor remembered it. (Kwun Tong, Parent B)

The instructors treat the students as their children. They are so warm and tender. (Sham Shui Po, Parent B)

4) Shared goals and strategies

Finally, in an established partnership the instructors and teachers adopt shared goals and strategies in educating children. As discussed in the previous reports, one teaching

approach is to provide students various opportunities to get rewards and recognition, and to build up a sense of achievement. In this study, the interviewed parents adopt similar strategies as the instructors inform them of their children's good-doings and remind them to acknowledge the children for their accomplishment and efforts.

The instructor keeps sharing with me my child's achievements. When my child won the Fast Progress Award, the instructor immediately took a picture of the award and sent it to me. She was happy to share this information and noted that my child did make great progress in this period of time. (Kwun Tong, Parent B)

The instructor told me that my son became more proactive at class. He raised his hand and answered questions, and his answers were correct. All of these behaviors were never seen before (and thus should be acknowledged). (Tin Shui Wai, Parent A)

As a result, the parents have learnt to use verbal rewards to encourage desirable behaviors at home. As shown by the citation below, parents and teachers offer a consistent rewarding environment which reinforces children's positive behavior.

I told my child, "You are a good boy, and you help me a lot. I will tell your instructors about your good behaviors." The child responded, "Fine, I will stick to these behaviors because I want both you and my instructors consider me as a good kid." (Tin Shui Wai, Parent A)

However, one parent observed that some other parents failed to adopt teaching approaches that are congruent with the instructors. The parent commented that it is important for parents and teachers to work together to take care of the children. However, there are some parents who are less involved in their children's study.

Some parents rarely attended parent meetings or other activities organized by the center. They come (to the center) once a month, or even less. They don't realize the importance of keeping abreast of their children's conditions. If they don't come (to the center), if the family does not know how to deal with the child, the instructors' efforts are VERY likely to be wasted. For some parents, they simply transfer all

their responsibilities to the center and the instructors. This is unacceptable for me.
(Sham Shui Po, Parent B)

4.4.4. Interviews with Drop-Out Cases

The aim to interview parents of dropout cases is to understand why they are dissatisfied with the Program, which may imply how the program can be further improved to respond to the needs of students and their families. However, the two parents interviewed this time do not provide much information in this regard. As a matter of fact, the two parents have quite high satisfaction with the Program as they witness their children's significant improvements in study attitude and academic performance, and they regret leaving the Program because such improvements cannot be sustained afterwards.

(After leaving the Program) my daughter had several emotional ups and downs, and her grades fell, too. She is less proactive and hardworking than she was when participating in the Program. It is clearly reflected by her dictation homework and examination papers. (Dropout, Parent A)

My son was self-disciplined when he participated in the Program. Now both his academic performance and study attitude are less positive. (When the child participated in the Program) we had more communication and a good relationship. After leaving the program I know less about my son's campus life, and we spend less time together. (Dropout, Parent B)

As for reasons for dropout, one parent stated that his child had other after-school tutoring classes while the other parent said that the family moved, and the new household is far away from the center. Both parents expressed interest in joining the Program again in the future.

4.4.5. Discussion

This report presents findings on students' improvements in academic, behavioral, and social-emotional, and relational aspects from the perspectives of eight parents or

caretakers interviewed. In addition, two parents whose children did not finish the Program were interviewed, who reported that their children made similar improvements during the Program. Thus, these findings collaborate with those of previous reports which lent strong empirical support for the Program's benefits on children and their families.

This report also focuses on exploring the parent-instructor partnership that has been established in the Program, which is posited to benefit students, instructors, as well as parents. Partnership can occur in different forms and at different levels. As discussed earlier, there is routine and effective communication, extended and prolonged interaction, mutual trust, and shared goals and strategies between the instructors and parents in this Program. According to the interviewed parents, they benefit from this partnership by obtaining timely information about children's school performance, learning more constructive ways in dealing with children, and feeling more relaxed and at ease because they know that there is always help available. The partnership is particularly important to facilitate the adjustment after the families leave the Program one and half a year later. During the interviews, several parents have expressed concerns that they lack resources to support their children's study. If the partnership is strong enough, the parents may learn the essential skills and attitudes from their experiences of involving in their children's study.

However, not all parents are actively involved in the Program. Parents' reasons for lack of engagement at school and with learning are delineated in the literature as barriers (Christenson, 2004). Christenson (2004) proposed a framework by describing barriers in terms of structural aspects and psychological (i.e., attitudinal) aspects. Structural barriers include socioeconomic status, parental education, and number of adults in the home, and economic, emotional, and time constraints. Psychological barriers include parents' low sense of self-efficacy, taking a passive role by leaving education to schools, perceived schools' lack of responsiveness to parental needs or desires, negative attitudes toward education, and low expectations for their children's performance.

Structural barriers can be best addressed by policies. The Program's efforts in supporting low-income families have been acknowledged in The Chief

Executive's 2014 Policy Address, which suggests drawing in more governmental and private findings for after-school tutoring programs. The Program may advocate for other policies that favor low-income families, such as housing assistance, childcare subsidies, and expansion of social services, so that parents or caretakers from low-income families have more time and financial resources to support their children's education needs.

On the other hand, the Program and all the teaching staff have spent a large amount of time and efforts in addressing the psychological barriers that prevent parents' involvement in the center, which was detailed in the report of teacher interviews. Several scholars (e.g. Christenson, 2004; Edwards, 1992) have proposed principles and strategies in increasing parent involvement, that is (1) negotiating and affirming parents' roles and responsibilities (e.g. explaining the importance of family influence for children's learning and clarifying how parents can help), (2) reducing home-school barriers (e.g. devising opportunities for involvement that parents view as practical and meaningful), (3) creating a spirit of cooperation with the purpose of meeting children's needs (e.g., reaching out to parents with warmth and sensitivity continuously, developing an ongoing training program in which parents and staff are both teachers and learners), (4) leveraging other people and using communication outreach (e.g. home visits or meeting in neutral sites, identifying a person having connections with an uninvolved parent that can help pass on the message to the parent).

In line with these principles, one suggestion for consideration is the establishment of a parent resource center (Christenson, 2004). Previous research has shown that in schools where parent resource centers have been implemented, parents reported higher comfort levels with and sense of belongingness towards the school (Johnson, 2001). One of the primary functions of the parent resource center was to create a safe and convenient place where parents could find parenting resources (e.g. books or videos). In addition, the parent resource center coordinator can conduct groups or workshops for parents to develop their parenting skills. The parent resource center also provides a place where parents can come to meet with other parents. This kind of social network allows parents to give mutual support, share their experiences and feelings in handling their children's academic and developmental issues. This idea was brought out by one interviewee.

There could be a group for all parents, a WhatsApp group or a real group that parents gather regularly. In such a group parents could talk to each other; they could share their feelings and experiences and support or be supported by other parents. Don't you think this could be helpful? (Sham Shui Po, Parent B)

Furthermore, future research would like to explore further barriers and facilitating factors for parent-instructor partnership. We would be interested in interviewing parents who were less involved initially but became more involved later. We would also interview uninvolved parents if possible. The interviews could be conducted in the center or other places that are convenient for both interviewee and interviewers, and phone interview could also be considered as an option.

4.5. Report of Second-Round Qualitative Research on 333 Program (Part 5, Secondary School Student Volunteers)

4.5.1. Introduction

Ten volunteers were interviewed in the second round and 8 were interviewed in the third round. They are **secondary school students from Form 3 to 6**. Their serving period ranges from six months to two years. The frequency of serving ranges from twice to ten times per month. None of them were graduates of the Program. Since the volunteers may play the roles of both “big brother/sister” and “little teacher”, they are in a good position to observe how the Program impacts the participants. In addition, the interviewed volunteers shared their own volunteering experiences and how such experiences enrich their lives.

4.5.2. Volunteers’ Observations of Program Participants

As observed by the volunteers, the Program participants are generally in a positive mood. The participants are found to be friendly and helpful, work hard at homework, and be concerned about their academic performance.

The students get along well with one another. They help each other out. (Sham Shui Po, Volunteer)

The students are nice and pure, and most importantly, they are very happy. (Tin Shui Wai, Volunteer)

I found them diligent. They focused on their homework. Some primary six students talked to me about their concerns on transitioning to secondary school. (Sham Shui Po, Volunteer)

Some students are eager to finish their homework as soon as possible. (Sham Shui Po, Volunteer)

The students are willing to listen to others, complete homework and teach other students. (Sham Shui Po, Volunteer)

I noticed that the students were increasingly engaged in the Program, becoming more competent in academic work and more willing to express their talents. (Kwun Tong, Volunteer)

In addition, in the eyes of the volunteers, the students are polite and grateful, as well as responsive to intervention and teaching of tutors in reducing undesirable behaviours.

The students say thank you to me after I help them out. Once a student dropped a pen, I picked it up for him. The student took the initiative to thank me. (North District, Volunteer)

The students reciprocate after I do something for them, like a word of appreciation. (North District, Volunteer)

The students became attentive and compliant in my class. They even shared candies with me as an appreciation. (Tin Shui Wai, Volunteer)

The volunteers also observed changes of the students and how the instructors facilitate such changes. One volunteer shared a story that he was treated impolitely by a student, yet the instructor took this event as an opportunity to educate the student.

There was a student who, rather rudely, demanded me to come and help by saying to me “Come now!” A program instructor heard how impolite he was and immediately took him to me and asked him to apologize. The instructor explained to him that he needs to be polite when asking for help. The student apologized and I accepted his apology. (North District, Volunteer)

The instructors and volunteers gave encouragement and teaching that increased the confidence among the students. (North District, Volunteer)

The instructors teach with their heart. The teacher-student relationships are like friendship with the instructors willing to act like friends to the students. The students compare each other’s performance in a positive way. (Kwun Tong, Volunteer)

4.5.3. Motivations and Gains from the Volunteering Experience

1) Motivations for volunteering

All of the interviewees learned about the Program from their day schoolteacher. They signed up for volunteers out of their free will; however, they do have different motivations for participating. The first quoted motivation is to serve the program participants in need.

I wanted to help the students and reduce the burden of their family and teachers. (SSP, Volunteer)

I was interested in teaching students to do their homework. (North District, Volunteer)

I am interested in gaining meaningful new experiences and help out children with limited resources. (Sham Shui Po, Volunteer)

In addition, for some volunteers, the program provides them an opportunity to learn how to mentor and teach younger children.

I wished to learn more, meet more people, and have more life experience. (Kwun Tong, Volunteer)

I wanted to experience how it feels to be a teacher. (Kwun Tong, Volunteer)

I would like to gain relevant teaching experience, as a first step to enter the field of education. (Kwun Tong, Volunteer)

Other cited reasons include recommendation from former volunteers, available free time, convenient location, and monetary incentive as the student volunteers are paid \$50 per hour for their service.

2) Gains from volunteering

Under the supervision of the Program's instructors, the volunteers assist the Program participants to do homework, do revision and prepare for dictation. This is a novel experience for most of the volunteers. To become competent at their job, the volunteers observe the instructors' ways to deal with these young children and practice what they have learnt in classroom contexts. As a result, the volunteers not only improve their social skills but also achieve a sense of satisfaction and accomplishment.

a) Enhanced communication and teaching skills

The volunteers have learnt and understood that to be a good teacher, one must be a good communicator. One volunteer noted that she became proactive in approaching the students and offering assistance. Other volunteers described how they explained a concept or a problem to the students in a simple and lively way. The volunteers also became more patient and managed to understand the students' difficulties and feelings.

I learnt to empathize with what the students felt when they did not understand a question. I tried to find out which part of the question confuses them, and if they said that they did not understand everything, I would guide them slowly, step by step, and that's how real teaching starts. (Kwun Tong, Volunteer)

I tried to understand the students' line of thinking. If there are two solutions to a problem, one is complicated, and another is simple, I'd explain the question in a simple way. My task is to find a simple and vivid way to present a complex idea so that the students can understand it easily. (Kwun Tong, Volunteer)

I was a little bit shy at the beginning. But now I am not afraid to take the initiative to ask the students if they have homework problems. (Tin Shui Wai, Volunteer)

I used to have a bad temper and was rather irritable. I stopped explaining a question that was easy to me when the students could not understand it. Now I am willing to try more times. (Kwun Tong, Volunteer)

I have grown to be more patient since it took a lot of time and patience to teach the students. When students don't understand a question even after I have explained it

to them, I would not give up but instead try again with a different approach. Sometimes, they still don't get it and I have to try again and again. (North District, Volunteer)

I got first-hand experience of working with the students, especially those who are less academically competent. I have changed my opinions towards these children. Previously I thought most of them were very annoying. Now, I understand each student is unique and their uniqueness should be considered in teaching. (Kwun Tong, Volunteer)

In addition, the volunteers have learnt how to respond appropriately to students with emotional problems. They also mastered the ability to encourage passive students by offering them verbal encouragement or small gifts.

Some young children can be quite emotional. I can be neither too strict nor too lenient. Also, I need to tailor my teaching to the students' varied capabilities. Every student is unique in their own way, and I need to be flexible. (Kwun Tong, Volunteer)

There is a student who liked dozing off in class. Every time I wake him up, he dozes off right away. I have tried various methods to coax him, for instance, giving him a treat, to keep him awake. (Tin Shui Wai, Volunteer)

Moreover, some volunteers are able to apply these skills in their daily lives, e.g., interactions with peers and friends.

Interviewer: Have you ever applied what you have learnt from the volunteering experiences in your daily lives?

Interviewee: I learnt to encourage my friends with the right words. For instance, instead of saying "if you don't finish this, you can't have a break", I would say "imagine once you finish this, you can have a break earlier". The former sentence sounds like a punishment while the latter implies rewards and is more motivating for the audience. (Kwun Tong, Volunteer)

b) Feeling of satisfaction and achievement

A sense of satisfaction and achievement is another thing that the volunteers gain from their volunteering experiences. The interviewed volunteers experienced joyful and fulfilling feelings as they saw the students' improvements. They feel satisfied as they realize that their efforts have paid off. They are glad that they can be helpful to others, and deeply impressed when the students show appreciation to them.

I have a sense of success. I am even happier than the students who finally get the correct answers. I feel like a teacher and am happy for myself. (North District, Volunteer)

I am happy every time I am here. The students told me about their days and what's bothering them. Talking to younger kids takes my mind off my own problems. (Sham Shui Po, Volunteer)

I was very touched when students shared with me the treats they got from the program instructors after class. (Sham Shui Po, Volunteer)

I was very happy when the students remembered me after a long vacation. I never thought they would remember me, because I had tutored them for several hours. This is impressive. (Tin Shui Wai, Volunteer)

c) Career aspiration to be a teacher

Two interviewees expressed their aspiration to become a teacher. As discussed above, the volunteering experiences provide the volunteers a valuable opportunity to learn how to teach, communicate with and handle the emotions of young children. The experiences not only give them a taste of satisfaction as a teacher, but also equip them with some skill sets that will be beneficial for their prospective career.

It has been my dream to become a primary school teacher. Tutoring students at the Centre train up my communication skills. I gradually know how to teach young students using different approaches and how to handle students who are having a tantrum. I am guided by the Program instructors. I can also try and learn from the

experiences. I believe that these hands-on experiences of teaching kids will be useful for me in the future. (Sham Shui Po, Volunteer)

Interviewer: Have you ever considered becoming a teacher in the future?

Interviewee: Yes, I am seriously considering it. (Kwun Tong, Volunteer)

Teaching the students gives me a sense of meaning and satisfaction. I would like to become a teacher in the future. (Kwun Tong, Volunteer)

d) Consolidate volunteers' own learning

As is often said, the best way to learn is to teach and experience. Through teaching and helping the younger students, the interviewees review the materials they have learned before, such as grammar and mathematical formula. Besides, the volunteers search for answers when they come across questions that they do not know the answers to. This improves their problem-solving and self-learning skills.

My overall academic performance has improved, because I gain a better grasp of some basic knowledge such as English grammar and mathematical formula. These are still important for secondary school curriculum. (Tin Shui Wai, Volunteer)

I think tutoring helps my academic performance. It gives me the chance to review and learn some materials I didn't fully understand before. I learn these things together with the kids, and we improve together as well. (Sham Shui Po, Volunteer)

Teaching others can consolidate my academic foundation. In addition, when students ask me questions that I do not know the answer to, I will do some research on the internet and get back to them. I teach them and also learn during the process. (Sham Shui Po, Volunteer)

4.5.4. Opinions on Quantitative Research Findings

Previous quantitative research findings showed that the improvements of the students sometimes fluctuate and are non-linear. For example, some Primary 1 and 2

students had better teacher-student relationships and higher STEM interest in the beginning and later deteriorated. For Primary 3 to 4 students, different sources of stress, for example, academic work, peer relationships and teacher-student relationships, seem to influence them more negatively and significantly compared to other forms of students. In the fourth-round interviews, the volunteers were asked about their opinions and observation of these findings. Some volunteers disagreed with the research findings. According to their observations, the students showed steady improvements in all aspects.

I disagree with the research finding. I observed that the teacher-student relationships are always good and the students' interest in STEM is consistently high. (Sham Shui Po, Volunteer)

Some volunteers thought that having ups and downs in learning is normal.

Occasional failures are normal. The students show overall improvements. (Kwun Tong, Volunteer)

Sometimes, the students are not very attentive and focused. Then their academic performance would drop, which motivates them to work harder next time. (Sham Shui Po, Volunteer)

On the other hand, the volunteers agreed that the Primary 3 and 4 students faced increased stress in academic work and daily life. Admission to secondary school is competitive in Hong Kong, and therefore the Primary 3 and 4 students are expected to start early to prepare for it.

Primary 3 and 4 students have much more homework and TSA tasks. (Sham Shui Po, Volunteer)

Primary 3 and 4 students are considered as "more mature" and thus parents and teachers have higher expectations on them. Living under these conditions may make these students feel stressed and unhappy. (North District, Volunteer)

Some volunteers believed that the students' performance is largely influenced by their family and day school, which may explain why some students fail to show consistent improvements.

The improvements of the students depend on whether different parties' efforts can be integrated. The students come to the Program for 2.5 hours each day only. Schooling and family have greater impacts on the students. (North District, Volunteer)

Finally, several volunteers mentioned that the students may have their unique growth, different students are unique and some of the different characteristics may explain this phenomenon.

Every student got different inborn tendencies and so as their learning from the same teaching. For example, some students are willing to try new challenges and some of them are not. (Sham Shui Po, Volunteer)

Some students would give up half-way and some would persist till the end. (Sham Shui Po, Volunteer)

4.5.5. Suggestion and Conclusion

The volunteers need to pair up with program instructors and fellow volunteers in tutoring the Program participants. Some volunteers expressed their wish to be in the same tutoring team with instructors or volunteers that they are familiar with. They also hoped that they could tutor the same group of students so that they would be better at establishing relationships with the 333 students and tracking the students' progress.

I prefer some consistency. Instead of going to different classes with different tutors, I'd rather focus on the same class. (Kwun Tong, Volunteer)

It's better to teach the same class instead of meeting new students all the time. Remaining in the same class allows tutors to know the students better and save time to establish bonding with them. (Kwun Tong, Volunteer)

We understand that the volunteers had to partner with different people due to the lack of regular attendance. In this case, we suggest that there could be some training workshops provided for the volunteers, teaching them some skills to quickly team up with other people. If possible, it is also suggested that the volunteers should be given priority to tutor the same group of students.

To sum up, this report shows that the volunteers benefit from the volunteering experience in multiple aspects. The volunteers may also contribute to the Program participant's improvements through assisting the Program instructors and playing the roles of "big brother" or "big sister". In future interviews if applicable, we plan to explore more about how the volunteers interact with the Program participants and instructors, the methods of instruction, and the impact on the Program participants. We are also interested in investigating whether there are additional findings on the Program participants' improvements from the volunteers' perspectives.

4.6. Report of Third-Round Qualitative Research on 333 Program (Part I, Students)

4.6.1. Introduction

In the third-round student interviews, a total of 39 current participants were interviewed in June 2019. In each of the four centers, two groups consisting of 4-6 students were arranged. Similar to the previous student interviews, the students reflected on their improvements after participating in the Program. In the first reports, we term these improvements as Program outcomes and classify them into two dimensions. The first dimension is academic versus social emotional outcomes. The second dimension is remedial versus development outcomes. As aforementioned, the remedial academic outcomes are finishing assignment in time and achieving better scores while the developmental academic outcomes are study habit and academic self-efficacy. As for social emotional outcomes, one markedly remedial outcome is increased self-esteem. Other outcomes such as emotion regulation, social skills, and interpersonal relationships are considered as developmental.

In this report, we further conceptualize the Program outcomes in alignment with the PERMA model in the field of positive psychology. Introduced by Martin Seligman (2011), the PERMA model is one of the pioneering theoretical models in positive psychology that suggests the building blocks of a sustained and authentic happy life. There are five elements of the PERMA model, i.e., positive emotions, engagement, relationships, meaning, and accomplishments. In the following, each element and the corresponding Program outcome are discussed with supporting quotations from student participants.

4.6.2. Positive Emotion Outcomes

The positive emotion element focuses on feeling good in various aspects of life and experiencing positive emotions such as joy, gratitude, interest, and hope. Experiences of positive emotions not only protect people against the consequences of negative emotions, but also enhance people's emotional, cognitive, and behavioral competence. According to

the Broaden and Build theory, positive emotions broaden people's thought-action repertoires and further build one's enduring personal and social resources that contribute to one's resilience in the face of adversity (Fredrickson and Losada, 2005).

In the interviews, students reported an enhanced enjoyment of school and learning. They also experience more positive emotions such as gratitude and savoring. Finally, the students increased their ability to regulate negative emotions and enhance positive emotions.

1) Increased interest in learning and enjoyment in school life

The students reported increased interest in schooling. It goes without saying that enjoyment in education is linked to higher levels of student engagement and so improved learning. Enjoyment of schooling constitutes a key component of academic intrinsic motivation, which predicts students' active learning and persistence in the face of challenging and difficult tasks (Marcoulides, Gottfried, Gottfried, & Oliver, 2008).

I like going to school now. (Sham Shui Po, Student)

I have more interest in studying. (Tin Shui Wai, Student)

I feel happy going to school. (Tin Shui Wai, Student)

2) Enhanced gratitude and savoring

The Program and the instructors make use of formal classes and informal daily interactions to instill gratitude in the students and thus promote their emotional and social wellbeing.

We learn about gratitude in moral class. The instructors shared their personal experiences that helped me understand the meaning of gratitude. After that, on some occasions, such as teachers' appreciation day, I sent thank-you cards to the instructors to show my gratitude towards them...I used to dislike the instructors here and considered them as annoying. But now I realized they meant well. They told us off and nagged us because they wanted us to improve. I become grateful and

thus I stop being naughty so as not to bother the instructors. (Sham Shui Po, Student)

I become more grateful with the help of the instructors. They remind me to be thankful in various aspects of life. For that I thank them. Also, my parents work hard to earn a living, I thank them as well. (Sham Shui Po, Student)

Probably because of the enhanced gratitude, the students are more capable of noticing and appreciating the positive things in their lives. Some students expressed thoughts of savoring.

I treasure the time spent with my fellow classmates here. I may lose their contact after graduating from the Program. (Sham Shui Po, Student)

3) Enhanced emotional regulation abilities

In addition to experiencing more positive emotions, the students also increased in their abilities to down-regulate negative emotional states. The students reported that they had reduced their anger or anxiety. They learnt to distract themselves from things that annoy them. They also focused more on positive things to feel happy or calm.

I have learnt to manage my emotions. When I first came here, I was very impulsive and aggressive. I hit on others when I felt bad. But now I stop behaving like that. I am able to control myself. (Sham Shui Po, Student)

I used to be very nervous when doing homework. Now I am much calmer. (Tin Shui Wai, Student)

A classmate kept annoying me the other day. The instructor and I had a long chat and he suggested I could ignore the classmate. So, I tried to ignore him and let go these bad feelings. (North District, Student)

4.6.3. Positive Engagement Outcomes

Engagement is a positive, fulfilling state of mind that is characterized by vigor,

dedication, and absorption (Schaufeli & Bakker, 2004). Engagement can lead to a number of positive outcomes such as life satisfaction, good performance, a sense of achievement, and life satisfaction in general. The concept of engagement was initially considered as a work-related measure but then introduced to the field of education. Study engagement refers to the amount of physical and psychological energy that the student devotes to the study experience (Schaufeli, Martinez, Pinto, Salanova, & Bakker, 2002). Study engagement enables students to have higher confidence in their ability to succeed and have success in study as a result (Upadyaya, K., & Salmela-Aro, 2013). As discussed in previous reports, the Program instructors have deployed various strategies to engage students. The interviewed students recalled that they memorized knowledge through games and were strongly encouraged by rewards from the instructors.

We memorize materials through playing games. It is a happier way to memorize. It is also quicker, and the memory is long-lasting. (North District, Student)

The instructors give us rewards. We therefore pay more attention. We study hard to get the rewards. (Tin Shui Wai, Student)

As illustrated by the following interview excerpts, the students' study engagement co-occurs with higher self-regulation and better time management. The relationship between study engagement and time management could be reciprocal. On one hand, students who are engaged in study are more willing to spend time on study and have higher motivation to schedule time for study. On the other hand, good time management facilitates timely completion of study assignment and increases students' academic self-efficacy, which may further promote their interest and engagement in study (Liu, Liu, & Yang, 2014).

I planned a schedule to motivate myself to allocate time for revision. (Kwun Tong, Student)

When I finish my homework, I take a short break. I closely monitor the length of the break. Once the time (for break) is up, I would drop whatever I am playing and resume studying. (Kwun Tong, Student)

I used to start doing homework late, because I spent a lot of time playing. Now, I finish homework first, have some snacks, and continue to do revision. (North District, Student)

4.6.4. Positive Relationship Outcomes

One of the most pronounced findings of the Program outcomes is improved relationships. The interviewed students consistently reported that they have better relationships with parents after joining the Program. In addition, the students get to know more friends and develop supportive relationships with the Program instructors. According to the PERMA theory, positive relationships are associated with the other four pillars of PERMA and serve as the starting point in boosting wellbeing of people. Specifically, for the students joining the Program, positive relationships not only bring joy and happiness to their lives but also encourage engagement and achievement in academic aspects as well as in daily life.

1) Improved peer relationship

Similar to the previous reports, the students reported that they were happy spending time together with their peers. They were capable of making new friends and mastering basic interpersonal communicative skills.

It's enjoyable to hang out with my classmates here. (Sham Shui Po, Student)

I love playing with friends. I was very lonely in the past. (North District, Student)

Now I take the initiative to talk to and get to know new friends. (Sham Shui Po, Student)

I respect others. When people are talking, I listen attentively. (Kwun Tong, Student)

2) Improved teacher-student relationship

Patient and caring instructors at the Program earn the students' trust. The instructors refrain from giving harsh comments and praise the students. When the

students feel sad, the instructors help the students open up and express themselves, which is effective in soothing the students' negative emotions.

The instructors here will approach you when they notice that you are upset. They acknowledge that they are willing to listen to you, and they ensure you that you will feel better after the talk. (Sham Shui Po, Student)

When a teacher talks to you alone, he is open and tells you everything without hiding a thing. (Sham Shui Po, Student)

3) Improved family relationship

Consistent with previous reports, the Program relieves parents' stress of supervising their children's homework. Their children's improved school performance also significantly reduces parent-child conflicts and increases family happiness.

Before I joined 333, the schoolteachers called my parents to complain about my school performance. My mother then said to me, "your teacher just told me that you did this wrong, you did that wrong." Now, when I return home, my mother praises me for what I have done well because the (Program) instructors have called to praise me. (Kwun Tong, Student)

In the past, my mother was always unhappy because of my poor grades, and I was constantly scolded by the teachers. Now I was rarely criticized by the teachers and my mother is in a better mood. (Kwun Tong, Student)

4.6.5. Positive Meaning Outcomes

Belonging to and serving something that we believe is greater than ourselves gives us a sense of meaning. While searching for life's meaning may be too complex an idea for primary school students, the Program fosters and promotes prosocial behavior in the students which may contribute to their sense of meaningful life. Existing research has shown that helping other people increases helpers' sense of self-worth, which is one of the basic needs that must be satisfied to achieve life meaning. Helping behavior may also

increase meaningfulness by increasing and expanding one's connection to others (Klein, 2017).

In the Program, the students act as Little Teacher and help their peers with the homework. The teachers also educate the students about the importance of being helpful and altruistic.

I did not see the value of helping other students at the beginning, so I was reluctant to do so. I offered help only when the instructors asked me to do. Later, I started to appreciate the importance of being helpful, and took the initiative to assist the younger students. (Sham Shui Po, Student)

I am willing to help anyone who is in need of help, even though I do not know him. I help to hold the elevator doors and press the buttons for older ladies. I help students of lower grades if I notice that they have difficulty with assignments or homework. (Sham Shui Po, Student)

I keep the habit of being helpful after graduating from the Program. I come back to the Program and assist other students from time to time. I understand that there are a lot of students in need of help, which sometimes goes beyond the instructors' capacity to deal with them. So I want to come back and help. (North District, Student)

4.6.6. Positive Accomplishment Outcomes

A sense of accomplishment leads to positive emotions and wellbeing (Sheldon et al. 2010). Having goals, pursuing them with hard work and eventually achieving them give us satisfaction. For these underprivileged students of the Program, mastery of study method and achievement in academic performance provide them a particularly important and rare source of accomplishment.

1) Mastery of study means and cultivation of study habits

Echoing previous reports, the interviewees reported that they have mastered various skills and developed good habits that help them cope with study requirements and excel

in academic work. The students also showed high self-efficacy that they can maintain these study habits without supervision from the instructors after graduating the Program.

The instructors taught me how to study. For instance, how to break down the vocabulary phonetically and then memorize them as a whole. (Sham Shui Po, Student)

I know various means to review the course materials. (Sham Shui Po, Student)

Here is an example of a revision method. You read a word three times, and then dictate it. Repeat after all the words have been dictated. Then dictate the whole sentence. Circle the words that you fail to get right and make a try again. (Kwun Tong, Student)

I have developed some good study habits. I will keep them even after graduation (after the Program). (Sham Shui Po, Student)

(With all the things I have learnt during the Program) I am confident that I don't need teachers to remind me, and I can do well myself when I go to secondary school. (Tin Shui Wai, Student)

2) Setting goals and making efforts to achieve

Helping students to strive for meaningful outcomes and persist despite obstacles is especially important as young people today face many challenges. Students may feel satisfied at the end of the day knowing that they have committed effort to achieving important objectives such as completing their homework, studying for a test or obtaining higher grades.

When I realized that my grade worsened, I worked harder. I did revision every day. Gradually, I improved. (Kwun Tong, Student)

I used to do really bad in tests and quizzes. Yet after attending the Program, my test score improved. This reminds me that efforts could lead to improvement, despite

how slow it is. Now I am determined to put more efforts to study English. (North District, Student)

4.6.7. Discussion and Conclusion

Comparing the findings of this interview with findings of previous interviews, it is found that the Program outcomes summarized in this round of interview replicate those already discovered and discussed. The following table shows a summary of the outcome in the three rounds of student interviews.

Table 4.3 *A Summary of Program Outcomes Derived from Three Rounds of Interviews*

Program Outcomes	Interview		
	1st-Round	2nd-Round	3rd-Round
Improved academic performance	✓	✓	
Cultivated study habit	✓	✓	✓
Enhanced study engagement	✓	✓	✓
Higher academic self-efficacy	✓	✓	✓
Enhanced social skills and peer relationships	✓	✓	✓
Improved communication and family relationships	✓	✓	✓
Enhanced teacher-student relationship	✓	✓	✓
Increased positive emotions		✓	✓
Improved emotion regulation skills and emotional competence		✓	✓
Enhanced empathy and altruistic behavior		✓	✓

Thus, we could consider that the student interviews have reached “data saturation”. Saturation means that no additional information is found. During the process of conceptualizing data into theoretical categories, when the researcher sees similar categories over and over again, the researcher becomes more confident that this research is saturated (Saunders et al., 2018). In this view, we conclude that we have so far derived a comprehensive list of Program outcomes from the student’s perspective.

For future practice, the identified Program outcomes reflect short-, medium-, and long-term gains that are possible. Hence, these findings could be referenced in designing a framework of outcome indicators for the Program. Since we have used several theoretical lenses for conceptualizing these outcomes, a final presentation is illustrated below.

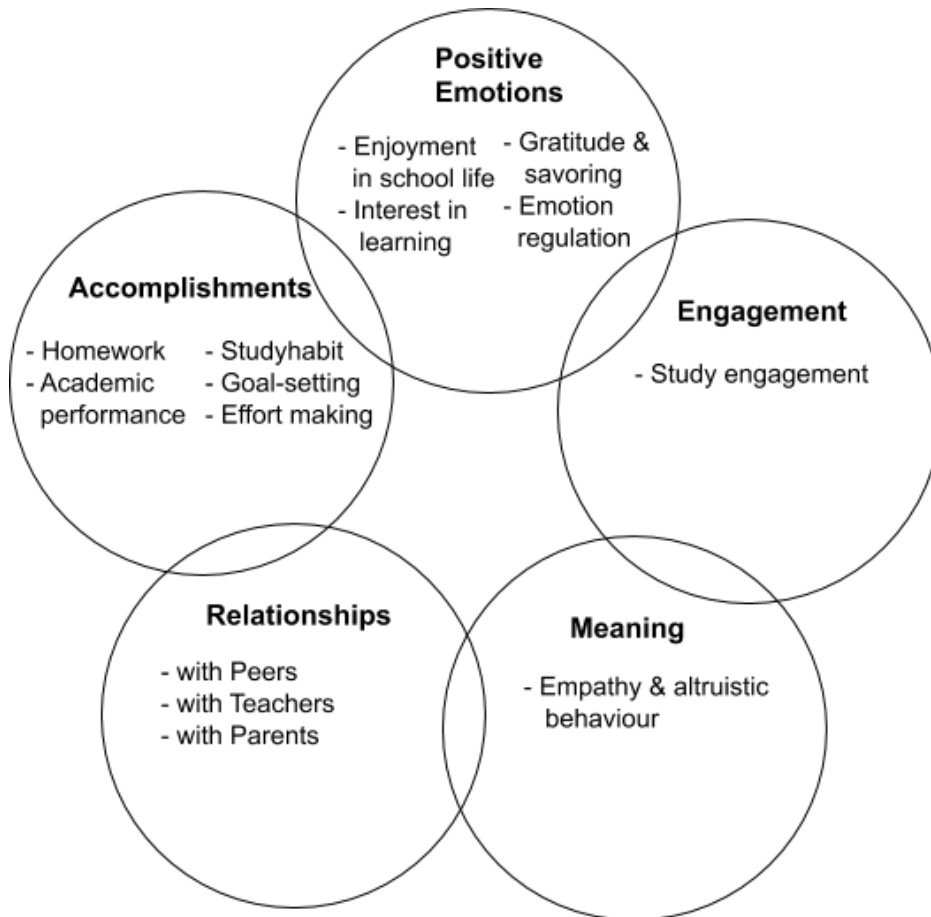


Figure 6 Positive Education Framework (PERMA)

4.7. Report of Last-Round Qualitative Research on 333 Program (Parents and Students)

The third-round interview with parents and the fourth-round interview with students were conducted in June 2021. Ten parents were interviewed individually, and 39 students were interviewed in groups of 4-6 students. The interview aimed to understand the quantitative research findings from the perspective of parents and students. Particularly, we focused on discussing the unsatisfactory performance in Primary 3 (P3) and Primary 4 (P4) students, the curvilinear improvement of the students, and the inconsistent observations of the students' performance by parents and teachers.

4.7.1. P3 and P4 - A Challenging Time for Students

The quantitative research results demonstrated that P3P4 students reported decreased stress management abilities and increased level of depression. P3P4 students also fared less well in academic and interpersonal functioning. The interview results collaborated with the quantitative research findings as the students and parents reported difficulties and challenges faced by P3P4 students.

1) Academic Challenges

It appears that the academic workload increased significantly in P3P4. The P3P4 students are also pressured to achieve higher grades for public assessment so that they could have a better chance of being placed in their desired secondary schools.

There weren't many problems (for my child) from P1 to P3. He began to feel stressed at P4, probably because of too much homework to complete. (Kwun Tong, Parent)

The stress was huge around the time of P3 going to P4. The materials in Mathematics were much harder. (North District, Student)

We started to get more homework and it's more difficult too. (Kwun Tong, P4 Student)

(When I was in P4) I was told that my grades would influence the secondary school application and Territory-wide System Assessment (TSA). If I did not hard enough, the consequence would be serious. I was so concerned about bad exam results. (Tin Shiu Wai, Student)

2) Peer relationship problems

A few P3 and P4 students reported that their circle of friends shrank and they had fewer friends than before. Some kids feel the pressure to fit in and be accepted by the peer group. Moreover, given that some of the students are from underprivileged families and have poor academic performance, they are susceptible to be the target of bullies. Some P3 and P4 students reported negative emotions related to peer relationship problems.

When I was in P1 and P2, I had a lot of friends. Then, after I was in P3, I did not know why but suddenly I had fewer friends. Sometimes I even had the feeling that I had no friend. This made me feel depressed and moody. (Kwun Tong, Student)

I am in P4, and I feel like I have lost a lot of friends. I have only one friend to play with now. In fact, I have lost more than half of my old friends. I feel like I am surrounded by darkness. I try hard to make new friends (but to no avail). (Kwun Tong, Student)

Sometimes, I ask my friends to come and play together. I ask but they ignore me. I have to ask for a few more times to get their response. I feel like they only do this to me because when other people ask, they would respond immediately. (Kwun Tong, Student)

My classmates think that my skin tone is dark and therefore I never do exercises. In fact, I do a lot of outdoor exercises. I explained but they did not believe me. They keep saying that I am dark-skinned and don't play with me. (Tin Shui Wai, Student)

4.7.2. Curvilinear Trend in Students' Improvement

Findings of the quantitative research showed that the students' improvements are not linear. While some students make progress in a consistent manner, others improve slowly, with occasional setbacks. Interviews with parents and students echoes the quantitative research findings yet the interviewees pointed out that despite fluctuations, there is a gradual upward trend in the students' performance.

There are some ups and downs. The progress is slow and sometimes her (the child) performance drops. But I think her overall performance has improved. (Kwun Tong, Parent)

There are improvements, based on the exam scores. Before joining the program, she was completely ignorant in English. She started improving with the help of the instructors. There are ups and downs in her learning process, but the most important thing is that she becomes willing to learn. (Kwun Tong, Parent)

We further explored with the interviewees their understanding of this curvilinear improvement. First, the parents mentioned that the social unrest and the covid-19 pandemic might influence the students' performance. Due to the program suspension and the implementation of remote learning, the students have to make extra adjustments to the new learning mode.

(The deterioration in the students' performance) may not be about the children. It may be caused by social unrest and the pandemic. The children couldn't attend the program regularly and this should have a big impact on them. (Tin Shui Wai, Parent)

There were (fluctuations in the academic performance) when my child had online classes. The difference was huge without physical classes. Not just me, but the instructors noticed (the impact of online classes on my child) too. He is less attentive during online classes. (Tin Shui Wai, Parent)

Second, some students admitted that the amount of attention they paid at class and the time and effort they spent on revision changes from time to time. This may also explain why not all students consistently improve throughout the year. It's noteworthy, however, that most students reported that they would be motivated to work harder after getting a disappointing result.

When I did well in exams, I was too proud to think that I could get good marks easily, without making efforts. I stopped working hard and eventually got lower marks. (Kwun Tong, Student)

My performance dropped during the period when I kept playing video games and didn't do much revision. Lately, I spent less time on gaming and spent more time for revision. I did better in the recent exams. (Kwun Tong, Student)

4.7.3. Difference Between Parents' and Teachers' Assessment on Students'

Performance

Another interesting finding of the quantitative research is that parents' assessment of their children's academic, emotional and interpersonal functioning was lower than the instructors'. According to the interviewed parents, their children have a higher respect for teachers than for parents when it comes to academic matters. The children prefer to listen to and follow through teachers' advice and instructions. Hence, the lower rating by the parents might reflect parents' difficulties in monitoring their children's behavior at home.

The reason (for the lower rating) is because I don't know how to teach the kid. I tell him to go to study, but he does not listen to me. He only listens to his teachers and instructors. (Kwun Tong, Parent)

She (the child) can't focus on doing homework at home. If I ask her to do, she simply ignores me. I feel that she puts on two different faces in school and at home. Her behaviour at school and at home are completely different. Maybe that's why parents gave their child lower ratings (in quantitative research). (North District, Parent)

I think that they (the children) only listen to their teachers. They listened to their parents when they were younger. But now they no longer listen to their parents and think parents don't know much. In contrast, whatever their teachers say is always right for them. (Kwun Tong, Parent)

4.7.4. Discussion and Conclusion

The interview results add to our understanding of the survey results and provide many details regarding the difficulties faced by students (particularly P3 and P4 students) and parents. Given that the students are influenced by multiple contexts (e.g., family, peer, school), the impact of the program might vary for each student. Most of the students are making progress, but due to their different starting points, some do not reach the level required. The program has already set up the structure to deal with special cases of the students. We suggest expanding this effort to include more students. In addition, we suggest providing more educational workshops and activities for parents so as to enhance their parenting skills.

Chapter 5. General Discussion

5.1. Summary of the Quantitative Results

In general, students' improvements can be categorized into five domains: academic competences (Chinese, Mathematics, and General Studies), emotion regulation competences (optimism, anxiety, depression, and stress management), relational aspects (peer and teacher-student relationships), self-directed learning, and STEM Interest and Knowledge.

In terms of academic competences, significant increases in all subjects were found among levels and groups. Students were more confident in Chinese, Mathematics, and General Studies. More specifically, general Studies reported more mixed results. Students show the least confident in English learning when compared to other subjects. This is understandable as students are usually less confident in learning second language. Interestingly, students reported more positively and were more confident in academic performance than parents. Parents are usually more stringent in rating the performance of their children. After graduation from the program, however, students generally reported lower confidence in subjects like Chinese, English, and General Studies. It is suggested that continuous practice may be more effective for improving confidence in academic performance.

Regarding emotion regulation aspect, a general trend of improvement was observed in emotion regulation aspects, including optimism, anxiety, depression, and stress management. Specifically, 1) significant decreases in anxiety were found in majority groups, showing positive outcomes in students' emotion regulation; 2) significant increases were found in optimism; 3) depression tends to show a decreasing trend and stress management shows an increased tendency in general, although no significant result was observed; and 4) The student group scored highest in emotion regulation among parent, teacher, and student groups, which means the students were the most optimistic and confident among the three groups. It is encouraging to see that there are decrease in

anxiety and depression, and increase in optimism and stress management. This shows the impact of the program on students' mental health.

In terms of relationship aspect, significant increases were identified in peer relationships. Peer relationship and teacher-student relationship were reported mostly positive, although significant improvements are less common in teacher-student relationship. Again, prolonged positive effects were found upon graduation from the program in relationship aspects, including peer and teacher-student relationships.

Regarding self-directed learning aspect, mixed results were observed in self-directed learning. Although some significant decreases were observed, most students reported positive attitude towards self-directed learning throughout all time points, showing an increased tendency. More importantly, prolonged positive effects were observed upon graduation. Similar with the results of academic performance, the student group reported the highest scores in learning motivation among parent, teacher, and student groups, which means that the students are the most optimistic and confident for the learning compared to teachers and parents.

Last but not least, in terms of the STEM Interest and Knowledge dimension, most students reported neutral or positive attitude towards these aspects throughout all time points, presenting a positive trend. However, mixed results were observed in STEM interest and knowledge over time. Some students reported decreased scores in STEM interest and knowledge significantly. Fortunately, prolonged positive effects were observed upon graduation.

In the meantime, we also performed group comparisons among various subgroups to identify the potential differences in between, which includes grade and comparisons, as well as student, parent and teacher perspective comparisons.

For the results of grade comparison, we found positive improvements in emotion regulation aspect among all grades. Specifically, no significant results were observed in P1-2 students in all aspects. Compared to other grades, P3-4 students reported significant improvements in emotion regulation aspects (i.e., optimism and anxiety). However, the

aspects of academic, STEM, and self-directed learning presented negative trends among P3-4 students. More significant decreased results were found in P3-4 compared to p5-6. Moreover, P5-6 students reported significant increases in all academic aspects, and positive trends in both STEM interest and knowledge, and self-directed learning aspects. The program seems to be more effective in promoting emotion regulation for P3-4 students, but more effective in enhancing academic elements like STEM interest and knowledge, self-directed learning for P5-6 students.

We also performed the comparison of two phases (T1-4 and T5-7, before and after COVID-19 pandemic). A positive trend was observed in T1-4 results, in particular emotional regulation and STEM aspects. The trends were positive in terms of academic aspects, although mixed significant results were identified among different grades. Significant improvements were found in all academic aspects and self-directed learning during T5-7, whereas more significant decreases in STEM aspects were reported in T5-7 compared to T1-4.

In terms of the differences among student, parent and teacher perspectives, parents reported significantly higher scores in self-rated parent involvement than teacher-rated results, whereas teachers reported significantly higher level of social competence in students when compared to the perceptions of parents. Moreover, parents scored significantly lower scores in all academic subjects of their children, compared to students' self-reports on their confidence in learning. In addition, we compared the scores of the emotion regulation and learning motivation in students reported by parents, teachers, and students. It is found that parents always reported the lowest scores among the three groups, with teachers following, whereas students reported the highest scores in both aspects.

Furthermore, due to COVID-19 pandemic, the "333 Plan" cannot provide face-to-face courses during the school closure period. Therefore, the program initiated "Telephone voice transmission learning" project, the tutor taught 15 minutes a day in the form of "calling and asking homework" one-on-one to the students. The main aims are to help students to continue learning and instilling supplementary knowledge, to assist

students to continue the learning. Results indicated that, in general, students from different grades reported positively towards the phone assistance practice during class suspension. Most students found phone assistance very helpful in supporting their academic learning and personal growth. Some students reported that they encountered difficulties with the phone assistance practice at the beginning. Fortunately, a trend of decrease in difficulties encountered was observed gradually later. We assumed that students may have been familiar with phone assistance, or they found the solutions and support in solving the difficulties encountered over time.

5.2. Summary of Qualitative Results

Based on the qualitative study results, students' improvements can be categorized into three domains: academic competences (performance, self-efficacy, study skills, and habits), socio-emotional competences (self-esteem, emotion regulation, social skills, empathy, gratitude, and altruism), and relational aspects (relationships with peers, teachers, and family members).

The first group of facilitating mechanisms that ensure the effectiveness of the program are related to teaching. Regarding the first theme of teaching approach, four subthemes are found: 1) Cooperative learning; 2) Rewards and achievement; 3) Activity-based learning; and 4) A holistic, student-oriented paradigm. Regarding the second theme of teacher-student relationship, five subthemes are found: 1) No labeling; 2) Care & emotional support; 3) Being responsive; 4) Encouragement & appreciation; 5) Respect for autonomy.

The parent-instructor partnership that has been successfully established in the Program is another key factor for program success. The partnership can occur in different forms and at different levels which includes, but not limited to, routine and effective communication, extended and prolonged interaction, mutual trust, and shared goals and strategies between the instructors and parents in this Program. The partnership has long-lasting impacts, and it is important to facilitate adjustment after the families leave the Program 1.5 year later.

Meanwhile, barriers to family involvement were identified: 1) structural barriers (i.e., socioeconomic status, parental education, and number of adults in the home, and economic, emotional, and time constraints) and 2) psychological barriers (i.e., parents' low sense of self-efficacy, taking a passive role by handing out the responsibility of education to schools, perceived schools' lack of responsiveness to parental needs or desires, negative attitudes toward education, and low expectations for their children's performance).

Other individual and contextual factors that may influence (promote or hamper) the program effectiveness: 1) Students with Special Education Needs (SEN); 2) Students' age and developmental stage; 3) School and family contexts; 4) Instructors' professional capacity, dedication, and workload.

Graduates further confirmed the sustained effectiveness of the program. They reported continuous positive developments in social skills, social relationships, and altruism. Moreover, long-term improvements were manifested in other outcomes including socio-emotional competences (self-esteem & self-appreciation, gratitude) and academic related competences (study habits).

Some factors determine whether the participants can apply what they have learned from the program in new settings and thus continue to grow. On the one hand, academic competencies and a good study habit enable the participants to address changing demands of academic tasks while a sense of self-efficacy motivates the participants to hold on to the good habits and persevere despite difficulties. On the other hand, it is vital that the living contexts (peer, school, and family) provide opportunities for the graduates to practice the socio-emotional skills learned from the program. If the practices receive positive feedback from the environment, the graduates will gradually internalize these social-emotional skills and continue to practice them in daily activities.

Volunteers benefit from the volunteering experience in multiple aspects, including enhanced communication and teaching skills, feeling of satisfaction and achievement, career aspiration to be a teacher and consolidation of volunteers' own learning.

Meanwhile, they contribute to the Program participant’s improvements through assisting the Program instructors and playing the roles of “big brother” or “big sister”.

The qualitative study results supplemented the survey results and provided many details regarding the difficulties faced by students (particularly P3 and P4 students) and parents. Given that the students are influenced by multiple contexts (e.g., family, peers, school), the impact of the program might vary for each student. Most students have made progress. However, due to their different starting points, some did not reach the level required.

5.3. General Conclusion

Based on the overall outcomes of the quantitative and qualitative research, an integrated framework is established (Figure 5.2). This framework will be explained in detail in the following sections.

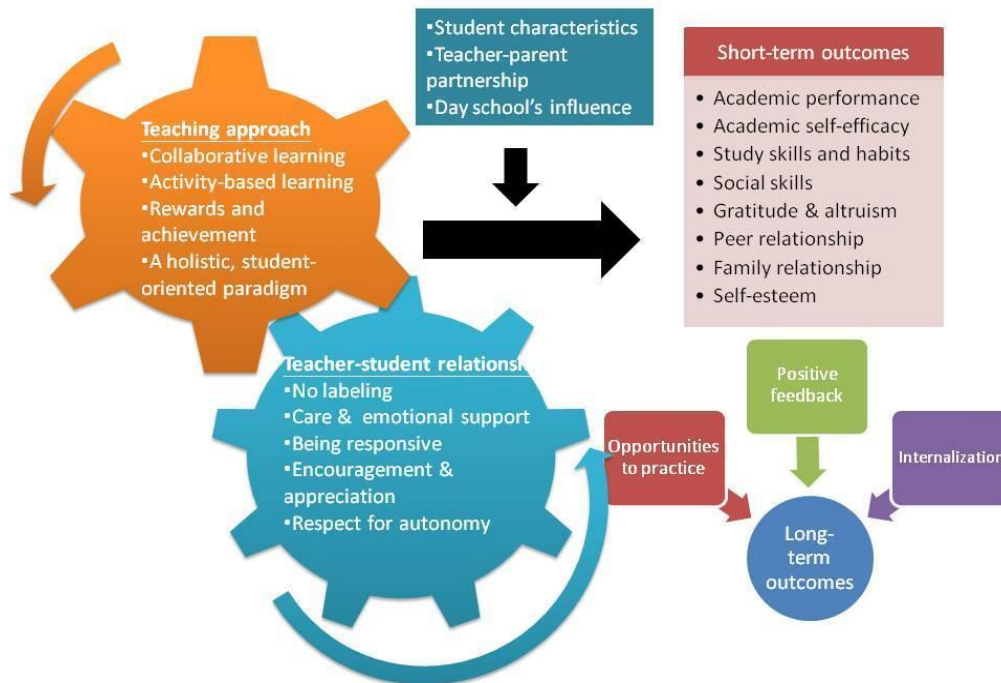


Figure 5.2 The integrated framework for the 333 Program

5.3.1. Student Achievements

Students' improvements can be categorized into four domains: 1) academic competences: academic performance, STEM Interest and Knowledge, and self-efficacy; 2) learning skills and habits: self-directed learning; 3) social-emotional competences: self-esteem, emotion regulation (optimism, anxiety, depression, and stress management), social skills, empathy, gratitude, and altruism; and 4) relational aspects: relationships with peers, teachers, and family members.

It is worthwhile to highlight the achievements in the social-emotional competences. It is a multidimensional construct, which includes both intrapersonal and interpersonal aspects. The intrapersonal socio-emotional competence involves one's ability to be aware of oneself, to understand one's strengths and weaknesses, and to express one's feelings and thoughts non-destructively. On the interpersonal level, being emotionally and socially intelligent encompasses the ability to be aware of others' emotions, feelings and needs, and to establish and maintain cooperative, constructive and mutually satisfying relationships. The program has facilitated the development of their intrapersonal (self-esteem & self-appreciation) and interpersonal (gratitude, altruism, and friendship-making) social-emotional competencies.

Social-emotional development is widely recognized as the core of human development and growth. There is also ample evidence on the importance of social-emotional competencies for academic achievement and mental health in childhood and adolescence (Durlak, Domitrovich, Weissberg, & Gullotta, 2015). Enhancing these competencies has been on the policy agenda of global institutions. The Organization for Economic Co-operation and Development (OECD, n.d.) is developing a comprehensive international assessment of the social and emotional skills of students, which will facilitate policies and practices that foster the development of social and emotional skills amongst students.

Moreover, both quantitative and qualitative results from the graduates' studies confirmed the sustained effectiveness of the program. They reported continuous positive developments in 1) social skills; 2) social relationships; and 3) altruism. Moreover, long-

term improvements were manifested in other outcomes: 1) socio-emotional competences (self-esteem & self-appreciation, gratitude); 2) academic related competences (self-directed learning, STEM interest and knowledge, and study habits), and 3) relational aspects (relationship).

Specifically, many graduates have developed good study attitudes, skills, and habits because of participating in the program. All of these helped them improve or at least sustained their academic performances even without the direct assistance from the program. Many dimensions of the program have been found relevant. For example, similar to the reports of the current students, the graduates felt that interesting class materials in the program stimulated their study interest. The graduates also emphasized that their interactions with the program's teachers changed their feelings and attitudes about school. Moreover, the encouragements received from the program's teacher have long-lasting positive impact.

Finally, volunteers benefit from the volunteering experience in multiple aspects, which includes: 1) enhanced communication and teaching skills; 2) feeling of satisfaction and achievement, 3) career aspiration to be a teacher and 4) consolidation of volunteers' own learning. Meanwhile, they contribute to the Program participant's improvements through assisting the Program instructors and playing the roles of "big brother" or "big sister".

5.3.2. 1st Facilitating Mechanism: Good Practices in Teaching

One key factor for program success lies in good teaching practices. Regarding teaching approaches, four critical elements are found: 1) Cooperative learning; 2) Rewards and achievement; 3) Activity-based learning; and 4) A holistic and student-oriented paradigm. Regarding building teacher-student relationships, five good practices are identified: 1) No labeling; 2) Care & emotional support; 3) Being responsive; 4) Encouragement & appreciation; 5) Respect for autonomy.

5.3.3. 2nd Facilitating Mechanism: Establishing Parent-Instructor Partnership

Another key factor for program success is the establishment and maintenance of parent-instructor partnership. The partnership can occur in different forms and at different levels which includes, but not limited to, 1) routine and effective communication; 2) extended and prolonged interaction, 3) mutual trust, and 4) shared goals and strategies between the instructors and parents in this Program. The partnership has long-lasting impacts, and it is important to facilitate adjustment after the families leave the Program 1.5 year later.

5.3.4. Influencing Factors for Long Term Effects

Some factors determine whether the students can apply what they have learned from the program in new settings and thus continue to grow in the long term. On the one hand, academic competencies and good study habits enable them to address changing demands of academic tasks while a sense of self-efficacy motivates the participants to hold on to the good habits and persevere despite difficulties. On the other hand, it is vital that the living contexts (peer, school, and family) provide opportunities for the graduates to practice the socio-emotional skills learned from the program. If the practices receive positive feedback from the environment, the graduates will gradually internalize these social-emotional skills and continue to practice them in daily activities.

5.3.5. Other Factors and Potential Barriers Hindering Success

In the meantime, several factors and potential barriers were identified. On the one hand, individual and contextual factors that may influence (promote or hamper) the program effectiveness: 1) Students with Special Education Needs (SEN); 2) Students' age and developmental stage; 3) School and family contexts; 4) Instructors' professional capacity, dedication, and workload.

On the other hand, barriers to family involvement may also affect the program outcomes: 1) structural barriers (i.e., socioeconomic status, parental education, and number of adults in the home, and economic, emotional, and time constraints) and 2) psychological barriers (i.e., parents' low sense of self-efficacy, taking a passive role by

handing out the responsibility of education to schools, perceived schools' lack of responsiveness to parental needs or desires, negative attitudes toward education, and low expectations for their children's performance).

Last but not least, the pandemic affected student learning and well-being unprecedentedly. It was perhaps one of the most challenging for educators and students in history. The impact of the pandemic on student learning was significant. It widened preexisting opportunity and achievement gaps, hitting historically disadvantaged students hardest. And the crisis had an impact on not just academics but also the broader health and well-being of students.

5.3.6. Alignment with the PERMA Model

The Program outcomes were further conceptualized in alignment with the PERMA model in the field of positive psychology which consists of five elements (i.e., positive emotions, engagement, relationships, meaning, and accomplishments) (Figure 5.2).

Based on the PERMA model, it is suggested that positive education programs can be added to increase self-esteem, enhance happiness and wellbeing, prevent mental health problems of the students, as well as to prepare the students for future challenges and adversities. For example, workshops can be organized to facilitate students to better understand and help to explore the character strengths of the students, and learn ways to enhance the students' positive emotions, positive relationships, positive engagement, sense of accomplishment and meaning of study/life, hence contributing to the intrinsic learning motivation, and building up self-esteem of the students. The intensity and level of difficulties of the programs can be adjusted for different levels.

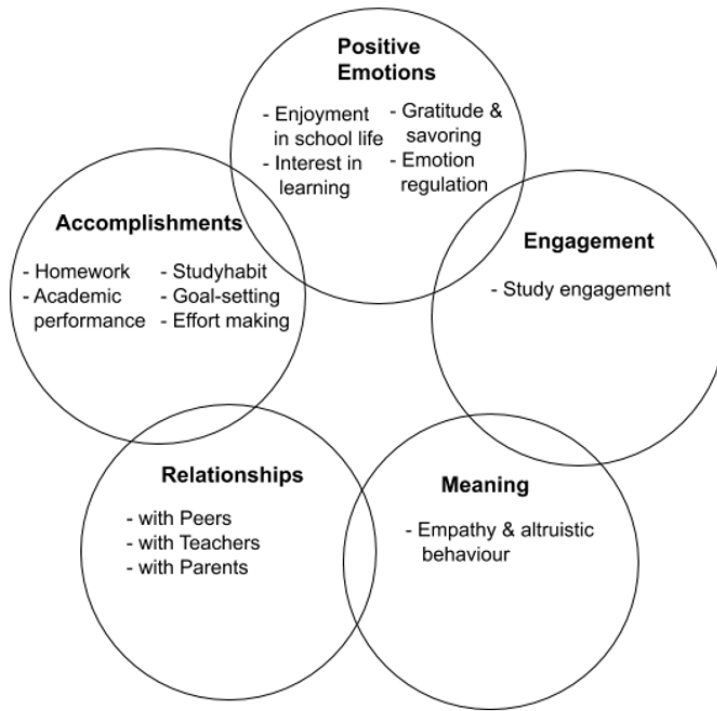


Figure 5.2 Positive Education Framework (PERMA)

Chapter 6. Recommendations

6.1. Recommendations for Program Design

6.1.1. Align Good Teaching Practices

There is no doubt that the quality of the instructors determines the Program effectiveness. The Program's instructors are professionally qualified and dedicated. As mentioned earlier, four critical elements of teaching approaches (i.e., Cooperative learning; Rewards and achievement; Activity-based learning; and A holistic and student-oriented paradigm) and five good practices of building and maintaining teacher-student relationships are identified (i.e., No labelling; Care & emotional support; Being responsive; Encouragement & appreciation; Respect for autonomy). These good practices should be well promoted and aligned across centers and for new teacher training in the future.

6.1.2. Consider a Flexible Arrangement Regarding the Program Duration

Regarding the program duration, it is suggested to have a flexible arrangement regarding the program duration. For example, the 1.5 years duration may not be sufficient for lower grade students, since younger students may need longer time to learn and develop the habits to carry on the routine and habit after they completed the program. And when graduates left the program, they lost an important source of instrumental and emotional support. Some were well-prepared to deal with challenges in their lives independently, yet a proportion of graduates were not ready to live without close guidance from the program. During the interview, many graduates expressed their wish that the length of the program could be extended to two years.

Due to the different characteristics of the students, the program may consider opening for applications by the graduates who need assistance again, according to the students' characteristics and specific needs. It is suggested that students in need (e.g., without parental support, with financial burdens, or not manifested significant improvements) should be allowed to stay beyond the standard program duration. Also, the intensity and level of difficulties of the programs can be adjusted for different levels.

In addition, a proportion of the interviewees are concerned about the long class hours. Though they appreciate the homework assistance and added-value classes, they feel tired for spending additional three hours in the center after the day school. The program may take into account the possible low energy level and concentration level of students, and consider a shorter class duration, a less intensive lesson plan, or a flexible arrangement that students can choose to attend one or all of the modules.

6.1.3. Arrange Additional Activities if Possible

Since school and family failed to meet the 333 participants' needs for fun classes and extra-curricular activities, the participants were grateful for program efforts in providing additional activities. Several desirable classes and activities are listed for consideration: 1) Physical exercises (e.g., basketball and jumping rope); 2) General Science class; 3) Hiking/Outings/ Trips; 4) Cooking class; 5) Music instrument class/ Singing class/ Dance class; 6) Water sports; 7) Etiquette class; and 8) Visiting Disneyland if possible.

6.1.4. Provide More Resources and Trainings for Graduates-to-be

More resources and trainings should be provided to the graduates-to-be to prepare them for the potential challenges of leaving the program. For instance, training on stress management would assist the students to prepare for losing academic support and social interaction after graduation. There could also be programs especially designed for P5-6 students to enhance their ability to cope with the forthcoming challenges of adolescence.

6.1.5. Promote Positive Education Programs

Based on the PERMA model, it is suggested that positive education programs can be added to increase self-esteem, to enhance happiness and wellbeing, to prevent mental health problems of the students, and to prepare the students for future challenges and adversities. For example, workshops can be organized to facilitate students to better understand and help to explore the character strengths of the students, and learn ways to enhance the students' positive emotions, positive relationships, positive engagement, sense of accomplishment, and meaning of study and life, hence contributing to the

intrinsic learning motivation, and building up self-esteem of the students. Furthermore, more informal learning activities can be provided to enhance teachers and parents' wellbeing.

6.1.6. Consider Proper Workload and Working Hours for the Instructors

The teaching approach characterized by a holistic, student-oriented paradigm requires the instructor to go beyond traditional classroom teaching. In addition to being an “educator”, the instructor plays the role of being a “friend”, a “facilitator”, and “empowerer”, and a “liaison person” (between parents and children, and hopefully between schoolteachers and children). All demands a large amount of time and effort. In addition, a unique strength of the Program is the teacher-parent partnership. When the instructors are not overwhelmed by the Program's workloads, they have space and energy for parent work. A good partnership provides two-way information flow from the teacher to the parents and from the parents to the teacher. It enables the teacher to accurately understand and assess the child. Thus, we suggest drawing attention to the increasing workload of the program instructors. So far, no definite evidence suggests that the instructors are overloaded. Yet it should be noted that the number of students is increasing, and the instructor-student ratio is decreasing, which means that each instructor needs to handle more students than before.

6.1.7. Prepare Necessary Knowledge to Support Students in Needs

Most of the instructors were retired teachers and should have a basic understanding of SEN. Additional workshops and seminars can be organized to enhance the instructors' professional attitudes, knowledge, and skills, and equip them with updated and effective support strategies to handle the students' emotions and behaviors. The professional training could target the types of SEN most frequently encountered by the instructors.

6.1.8. Provide Training for Volunteering

We understand that the volunteers had to partner with different people due to the lack of regular attendance. In this case, we suggest offering some training workshops for

the volunteers, teaching them some skills to quickly team up with other people. It is also suggested that the volunteers be given priority to tutor the same group of students.

6.1.9. Optimize the Site Facilities

We summarized some students' feedback on the program's implementation and logistics. For instance, one student mentioned insufficient seats and another student wished that there could be more classrooms to hold different classes. One student complained about the hygiene of the host school. These opinions are personal opinions for reference.

6.2. Recommendations for Parent Education

Some students might have been exposed to adverse family environments for a long period of time. On a positive side, these children may cherish the love and care from the Program instructors, which are not available in other contexts. Yet without adequate support from the families, the students' positive changes are less likely to be sustained. As such, parental education is important for sustaining the long-term effects. Specifically, the main aim of parent education is to shift their focus on their children's academic performance and pay attention to their children's improvements in other aspects. For instance, some parents put extraordinary pressure on their children. They continue to set new goals for their children without acknowledging what their children have achieved so far. In the following section, we suggest some strategies for parent education.

6.2.1. Establish Parenting Groups (Online and Offline)

Parenting groups can play a significant role in child development. It can be a WhatsApp group or a real group that parents meet regularly. In such groups, parents can talk to and discuss with each other; they can share their feelings and experiences, as well as can support or be supported by other parents.

6.2.2. Create a Parent Resource Center if Possible

One suggestion for consideration is to create a parent resource center. One of the primary functions of the parent resource center is to create a safe and convenient place where parents can find parenting resources (e.g., books or videos). In addition, the parent resource center coordinator can conduct groups or workshops for parents to develop their parenting skills. It also provides a place where parents can come to meet with other parents. This kind of social network allows parents to offer mutual support, share their experiences and feelings in handling their children's academic and developmental issues.

6.2.3. Promote Positive Parenting Programs

Positive parenting programs could be provided to parents through schools and/or NGOs. These programs aim to increase parents' awareness of the importance of well-being, introduce positive parenting concepts and practices, and promote cooperation between school and family. For example, the Positive Education Laboratory of City University of Hong Kong supervised by the Prof. Sylvia Kwok offer diverse positive parenting programs to primary and secondary school parents aiming to increase their awareness on the importance of well-being, introduce positive parenting concepts and practices, and promote cooperation between school and family. In the positive parenting program, parents learn positive parenting attitudes, knowledge, and skills, including but not limited to contents as: 1) identification and application of character strengths; 2) appreciation of their own and children's character strengths; 3) enhancement on PERMAH (i.e., positive emotions, meaning, relationship, engagement, accomplishment, and health). Various strategies can be adopted to involve as many parents as possible, such as involving parents through parent talk, workshop, and providing information via website.

6.3. Recommendations for Day Schools and Communities

It is ideal that parents, schools, 333 learning sites, and the communities could work closely together to set up programs that ensure proper child development. It would be

very helpful if a partnership could be established between the program's instructors and the day schoolteachers. As far as we know, the program has cooperated with the day school in recruiting students. Community education such as public parenting seminars could also be organized regularly. Community caring schemes, such as organizing volunteer groups, visiting families living in poverty and having high vulnerability to help those families in need could be launched.

6.4. Recommendations for Policy Holders

6.4.1. Digital Learning Support

Due to the COVID-19 pandemic, many schools and learning centers have implemented online-teaching mode. Even with phone assistance, some families may not be sufficient for this approach, not to mention using iPad or computer. Public-private funding should be allocated to ensure that equal digital schooling opportunities are provided to all students, especially for families in need.

6.4.2. For Various Vulnerable Groups

Social Welfare Department (SWD) could encourage non-government organizations (NGOs) to reform the neighborhood level community development project (NLCDP) service, enhancing child learning supports within the community, especially in public estates, under privileged families, and various vulnerable groups.

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Appendix 1

Questionnaire for P1-2 Students



姓名

中文: _____

英文: _____

日期: _____

333 小老師培訓計劃 (小一至小二小老師版)

請準確填寫上中英文姓名; 此問卷共分五個部分, 請回答問卷內所有問題。

第一部份: 請細心閱讀以下各句子, 然後在答案欄內, 圈出最能代表你的同意程度。

	非常同意	同意	中立	不同意	非常不同意
1. 我容易和小老師們相處	5	4	3	2	1
2. 小老師們都喜歡我	5	4	3	2	1
3. 小老師們都希望跟我做朋友	5	4	3	2	1
4. 我有很多朋友	5	4	3	2	1
5. 我在中心很受小老師們歡迎	5	4	3	2	1
6. 很多人都喜歡我	5	4	3	2	1

第二部份: 請細心閱讀以下各句子, 然後在答案欄內, 圈出最能代表你的同意程度。

	非常同意	同意	中立	不同意	非常不同意
1. 中心的導師公正地對待我	5	4	3	2	1

	非常 同意	同意	中立	不 同意	非常 不同意
2. 中心的導師樂於在學習上幫助我	5	4	3	2	1
3. 中心的導師樂於聽我傾訴	5	4	3	2	1
4. 中心的導師協助我做到最好	5	4	3	2	1
5. 我得到中心的導師在班上公平對待	5	4	3	2	1
6. 中心的導師樂於助我解決疑難	5	4	3	2	1
7. 中心的導師耐心地指導我	5	4	3	2	1

第三部份: 請細心閱讀以下各句子，然後在答案欄內，圈出最能代表你的同意程度。

	非常 同意	同意	中立	不 同意	非常 不同意
1. 我對 STEM (科學、科技、工程及數學) 感興趣	5	4	3	2	1
2. 我增加了對 STEM (科學、科技、工程及數學) 的知識	5	4	3	2	1

第四部份: 請細心閱讀以下各句子，然後在答案欄內，圈出最能代表你的同意程度。

	非常 同意	同意	中立	不 同意	非常 不同意
1. 你覺得電話傳音學習對你的學習有幫助嗎？	5	4	3	2	1
2. 你覺得電話傳音學習對你的溝通能力及提升自信有幫助嗎？	5	4	3	2	1
3. 你在適應電話傳音學習時是否遇到困難？	5	4	3	2	1

第五部份:基本資料

請在以下各題，選一個適當答案（除了第 2）·並在該答案前的空格加上「✓」號。

1. 你的性別是：1. 男 2. 女

2. 你的年齡是：_____歲

3. 你是否和家人同住？

1. 是 2. 否 3. 其他：_____

4. 你的主要照顧者是 (可選多項):

1. 媽媽 2. 爸爸 3. 爺爺/嫲嫲
4. 外公/外婆 5. 其他：_____

5. 你有沒有兄弟姐妹？如有, 請註明多少個。(例如: ✓ 哥哥 1 個, ✓ 姐姐 1 個)

1. 哥哥：_____ 2. 姐姐：_____
3. 弟弟：_____ 4. 妹妹：_____

- 問卷完 -

Appendix 2

Questionnaire for P3-6 Students



姓名
中文: _____
英文: _____
日期: _____

333 小老師培訓計劃 (小三至小六小老師版)

請準確填寫上中英文姓名; 此問卷共分十個部分, 請回答問卷內所有問題。

第一部份: 請細心閱讀以下各句子, 然後在答案欄內, 圈出最能代表你的同意程度。

	非常同意	同意	中立	不同意	非常不同意
1. 我容易和小老師們相處	5	4	3	2	1
2. 小老師們都喜歡我	5	4	3	2	1
3. 小老師們都希望跟我做朋友	5	4	3	2	1
4. 我有很多朋友	5	4	3	2	1
5. 我在中心很受小老師們歡迎	5	4	3	2	1
6. 很多人都喜歡我	5	4	3	2	1

第二部份: 請細心閱讀以下各句子, 然後在答案欄內, 圈出最能代表你的同意程度。

	非常同意	同意	中立	不同意	非常不同意
1. 中心的導師公正地對待我	5	4	3	2	1
2. 中心的導師樂於在學習上幫助我	5	4	3	2	1

	非常 同意	同意	中立	不 同意	非常 不同意
3. 中心的導師樂於聽我傾訴	5	4	3	2	1
4. 中心的導師協助我做到最好	5	4	3	2	1
5. 我得到中心的導師在班上公平對待	5	4	3	2	1
6. 中心的導師樂於助我解決疑難	5	4	3	2	1
7. 中心的導師耐心地指導我	5	4	3	2	1

第三部份: 請細心閱讀以下各句子，然後在答案欄內，圈出最能代表你的同意程度。

	非常 同意	同意	中立	不 同意	非常 不同意
1. 我會主動探究新事物	5	4	3	2	1
2. 對不明白的事情，我會主動尋求答案	5	4	3	2	1
3. 我會主動搜集資料	5	4	3	2	1
4. 我會主動回答導師的發問	5	4	3	2	1
5. 我會主動參與討論	5	4	3	2	1

第四部份: 請細閱以下每句句子，然後在答案欄內，圈出最能代表你的同意程度。

	非常 同意	同意	中立	不 同意	非常 不同意
1. 當未有結果時，我會預期較好的結果	5	4	3	2	1
2. 我看不到將來會有令我開心的境況	5	4	3	2	1
3. 我對將來常感樂觀	5	4	3	2	1
4. 事情都不會如我所願	5	4	3	2	1
5. 從來好的事情不會發生在我身上	5	4	3	2	1
6. 我預期開心的事情會多過不開心的事情	5	4	3	2	1

第五部份: 你認為自己在以下四個學科的學習能力如何呢?

	比別人好 很多	比別人好	同別人一 樣	比別人差	比別人差 很多
1. 中文	5	4	3	2	1
2. 英文	5	4	3	2	1
3. 數學	5	4	3	2	1
4. 常識科	5	4	3	2	1

第六部份: 請細閱以下的描述，並按照你對以下描述在右方圈上適當分數。

	經常	有時	很少	從不
1. 我感到神經緊張	4	3	2	1
2. 我依然享受事物	4	3	2	1
3. 我有一種驚恐，好像有可怕的事情會發生	4	3	2	1
4. 我能看到事物有趣的一面並且會心微笑	4	3	2	1
5. 煩惱的念頭在我腦海中浮現	4	3	2	1
6. 我感到高興	4	3	2	1
7. 我能安坐並感到放鬆	4	3	2	1
8. 我感到缺乏衝勁，整個人都慢下來	4	3	2	1
9. 我有一種擔心的感覺	4	3	2	1
10. 我已經沒有心情去理會自己的儀容和外表	4	3	2	1
11. 我感到不能安靜，像要不停地走動	4	3	2	1
12. 我對未來的事抱有熱切期望	4	3	2	1
13. 我突然感到驚惶失措	4	3	2	1
14. 我享受閱讀喜歡的書、收聽喜歡的電台或收看喜歡的電視節目	4	3	2	1

第七部份: 請細心閱讀以下各句子，然後在答案欄內，圈出最能代表你的同意程度。

	非常 同意	同意	中立	不 同意	非常 不同意
1. 我擁有個人理想	5	4	3	2	1

	非常 同意	同意	中立	不 同意	非常 不同意
2. 我會以開放的態度面對批評	5	4	3	2	1
3. 我接納和喜歡自己	5	4	3	2	1
4. 我會改善自己的短處	5	4	3	2	1
5. 我會處理學業上遇到的壓力	5	4	3	2	1
6. 我有令自己開心的方法	5	4	3	2	1
7. 我會控制自己的情緒	5	4	3	2	1
8. 在面對壓力時，我會用適當的途徑抒發情緒	5	4	3	2	1
9. 我有與人相處的適當方法	5	4	3	2	1
10. 我會處理朋友間的衝突	5	4	3	2	1
11. 我喜歡與別人建立友誼	5	4	3	2	1
12. 我懂設身處地，能想像自己處於他人的情況和環境，顧及他人感受	5	4	3	2	1

第八部分請細心閱讀以下各句子，然後在答案欄內，圈出最能代表你的同意程度。

	非常 同意	同意	中立	不 同意	非常 不同意
1. 我對 STEM (科學、科技、工程及數學) 感興趣	5	4	3	2	1
2. 我增加了 STEM (對科學、科技、工程及數學)的知識	5	4	3	2	1

第九部份: 請細心閱讀以下各句子，然後在答案欄內，圈出最能代表你的同意程度。

	非常 同意	同意	中立	不 同意	非常 不同意

	非常 同意	同意	中立	不 同意	非常 不同意
1. 你覺得電話傳音學習對你的學習有幫助嗎？	5	4	3	2	1
2. 你覺得電話傳音學習對你的溝通能力及提升自信有幫助嗎？	5	4	3	2	1
3. 你在適應電話傳音學習時是否遇到困難？	5	4	3	2	1

第十部分基本資料

請在以下各題，選一個適當答案（除了第 2）·並在該答案前的空格加上「✓」號。

1. 你的性別是：1. 男 2. 女
2. 你的年齡是：_____歲
3. 你是否和家人同住？
 1. 是 2. 否 3. 其他：_____
4. 你的主要照顧者是 (可選多項):
 1. 媽媽 2. 爸爸 3. 爺爺/嫲嫲
 4. 外公/外婆 5. 其他：_____
5. 你有沒有兄弟姐妹？如有, 請註明多少個。(例如: ✓ 哥哥 1 個, ✓ 姐姐 1 個)
 1. 哥哥：_____ 2. 姐姐：_____
 3. 弟弟：_____ 4. 妹妹：_____

- 問卷完 -

Appendix 3

Questionnaire for Parents



(配對資料)只作配對之用

孩子姓名中文：_____

孩子姓名英文：_____

日期：_____

中心：_____

學生就讀： 培訓班 延伸班 自力進修班

333 小老師培訓計劃問卷 (家長版)

親愛的家長或監護人：

為評估 333 小老師培訓計劃的成效，幼吾幼慈善基金委託香港城市大學應用社會科學系進行研究，我們希望各位家長可以填寫這系列的追蹤評估問卷，以幫助記錄該孩子在 333 小老師培訓計劃推行前後以及期間的改變。各位家長在問卷上填寫的所有資料只會用作研究評估 333 小老師計劃成效，而孩子與家長的個人資料絕對保密，不會公開。為更準確反映你的孩子在期間的改變，請留意以下事項：

1. 請準確填寫孩子的中英文姓名在右上角；每份問卷只填寫一位孩子的資料。如有兩名孩子於同中心就讀，請填寫兩份問卷，如此類推；
2. 此問卷共分七個部分。請回答問卷內所有問題；
3. 問題沒有對與錯之分，只需憑你對孩子的認識和日常觀察作答即可；
4. 問卷請由孩子的主要照顧者填寫；
5. 每次填寫的時候，盡量由同一位照顧者填寫；
6. 完成問卷後，煩請將問卷對摺 (最尾空白頁向外)，並以膠紙封好，交回中心

如果你知悉上述的保密措施並同意填寫本問卷，請填寫以下的同意書並簽署。

同意書

簽署：_____ 日期：_____

再次感謝各位家長在 333 小老師培訓計劃成效評估上的支持與配合。

香港城市大學
應用社會科學系
郭黎玉晶博士 (副教授)

第一部分:請細心閱讀以下各句子，然後在答案欄內，圈出最能代表你的項目。

	非常適合	適合	部分適合	不適合	非常不適合
1. 在我的家庭中,我們會好好傾談對我們重要的事情	5	4	3	2	1
2. 家人之間會細心聆聽大家的事情	5	4	3	2	1
3. 我們相信每個家人	5	4	3	2	1
4. 當某一位家庭成員感到煩惱,他/她會獲得其他家人的安慰	5	4	3	2	1
5. 我們都擅長尋找新方法去解決困難的事情	5	4	3	2	1

第二部分:圈出最能代表你的項目。如果孩子做了一些您喜歡或您准許的事,您會...

	總是	經常	常常	有時	從不
1 不會與孩子說什麼或直接忽略孩子	5	4	3	2	1
2 給孩子一個認同的眼神或微笑	5	4	3	2	1
3 會說讚美或認同的話	5	4	3	2	1
4 給孩子擁抱,拍背或親吻	5	4	3	2	1
5 給孩子某些獎勵,例如禮物,額外零用錢,或特別零食	5	4	3	2	1

6	給孩子一些權限，例如可以看電視、或玩耍	5	4	3	2	1
7	跟孩子一起做一些特別活動,例如一起看電影，玩遊戲	5	4	3	2	1
8	跟其他人提及孩子做得好的事情	5	4	3	2	1
9	會問孩子為什麼不可以一直做到這樣	5	4	3	2	1

第三部份: 你認為孩子在以下四個學科的學習能力如何呢?

	比別人好很多	比別人好	同別人一樣	比別人差	比別人差很多
1. 中文	5	4	3	2	1
2. 英文	5	4	3	2	1
3. 數學	5	4	3	2	1
4. 常識科	5	4	3	2	1

第四部分: 請細心閱讀以下各句子，然後在答案欄內，圈出最能代表你孩子的項目。

	非常有信心	有信心	略有信心	略沒有信心	沒有信心	非常沒有信心
1.我的孩子能專注學習過程	6	5	4	3	2	1
2.我的孩子對課題或某些問題，有持久的興趣	6	5	4	3	2	1
3.我的孩子遇到困難或失敗時，不會放棄，堅持到底	6	5	4	3	2	1
4.我的孩子努力把功課做到最好	6	5	4	3	2	1

第五部分:請細心閱讀以下各句子，然後在答案欄內，圈出最能代表你在過去 3 個月的項目。

	每星期超過一次	差不多每星期	差不多每月	一年一次或兩次	從來沒有	不適用
1. 我曾致電聯絡中心的導師	6	5	4	3	2	1
2. 中心的導師曾致電聯絡我	6	5	4	3	2	1
3. 我曾 WhatsApp 給中心的導師	6	5	4	3	2	1
4. 中心的導師曾 WhatsApp 給我	6	5	4	3	2	1
5. 中心的導師曾與我面對面傾談	6	5	4	3	2	1
6. 我曾被邀請到中心參加特別活動	6	5	4	3	2	1
7. 我曾到訪中心參加特別活動	6	5	4	3	2	1
8. 我曾被邀請到訪中心參加家長會	6	5	4	3	2	1
9. 我曾到訪中心參加家長會	6	5	4	3	2	1
	總是	經常	常常	有時	從不	不適用

10. 我曾送東西到中心 (如:故事書和其他東西)	6	5	4	3	2	1
11. 我會在家中幫助孩子處理他感到困難的學科	6	5	4	3	2	1
12. 我會帶孩子到圖書館	6	5	4	3	2	1
13. 我會確保孩子完成他的功課	6	5	4	3	2	1
14. 我會在中心做義工	6	5	4	3	2	1
	非常 同意	同意	中立	不同意	非常不 同意	不適用
15. 我認為中心是孩子成長的好地方	6	5	4	3	2	1
16. 我認為中心的導師做的事是對孩子有益的	6	5	4	3	2	1
17. 我對中心的導師充滿信心	6	5	4	3	2	1
18. 我認為中心為孩子迎接未來作出最好的準備	6	5	4	3	2	1

第六部分: 請細心閱讀以下各句子，然後在答案欄內，圈出最能代表你孩子的項目。

	非常 適合	適合	部分 適合	不適 合	非常 不 適合
1. 我的孩子能接受事情不如他 / 她的期望	5	4	3	2	1
2. 我的孩子能好好面對失敗	5	4	3	2	1
3. 我的孩子會在作出行動前好好思考	5	4	3	2	1
4. 我的孩子會與他 / 她的兄弟姊妹或朋友一起解決問題	5	4	3	2	1
5. 當我的孩子感到興奮或緊張時，他 / 她能冷靜下來	5	4	3	2	1
6. 我的孩子可以做到他 / 她被吩咐好的事	5	4	3	2	1

7. 我的孩子能理解他人的感受	5	4	3	2	1
8. 當發生爭執時，我的孩子仍可控制好自己的脾氣	5	4	3	2	1
9. 我的孩子懂得與別人分享事物	5	4	3	2	1
10. 我的孩子樂於助人	5	4	3	2	1
11. 我的孩子願意聆聽他人的觀點	5	4	3	2	1
12. 我的孩子能夠謙虛地提出建議和意見	5	4	3	2	1

第七部分: 請細心閱讀以下各句子，然後在答案欄內，圈出最能代表你孩子在過去 3 個月的項目

	非常 有幫 助	有幫 助	中立	沒有 幫助	非常 沒有 幫助
1. 你覺得電話傳音學習對你孩子的學習有幫助嗎？	5	4	3	2	1
2. 你覺得電話傳音學習對你孩子的溝通能力及提升自信有幫助嗎？	5	4	3	2	1
	完全 沒有 困難	比較 沒有 困難	中立	比較 有困 難	完全 有困 難
3. 你孩子在適應電話傳音學習時是否遇到困難？	5	4	3	2	1

第八部分: 基本資料: 請在以下各題，選一個適當答，並在該答案前的空格加上「」號。

1. 你的性別是：1. 男 2. 女

2. 你的年齡是： 30 歲以下 31 歲-40 歲 41 歲-50 歲 51 歲以上

3. 你是否香港永久性居民？ 是 否，你在香港居住的年期是：_____

4. 你的工作狀況是：

1. 全職工作 2. 半職工作 3. 時薪及日薪工作

4. 料理家務 5. 沒有工作或失業 6. 不適用

5. 你的教育程度是：

1. 未有接受正式教育 2. 小學或以下 3. 中一至中三

4. 中四至中七 5. 工業學院或職業訓練 6. 大專或以上

6. 你的家庭總收入約：

1. \$ 10,000 以下 2. \$ 10,001 - \$20,000

3. \$ 20,001 - \$30,000 4. \$ 30,001 或以上 5. 不適用

7. 你的孩子是否有長期病患？

0. 否 1. 是

1. 哮喘 2. 鼻敏感 3. 糖尿病 4. 心臟疾病 5. 自閉症

6. 焦慮症 7. 讀寫障礙 8. 抑鬱症 9. 弱聽 10. 過度活躍症

11. 地中海貧血症 12. 弱視 13. 其他: _____

- 問卷完 -

Appendix 4

Questionnaire for Instructors



(配對資料)只作配對之用

學生姓名中文： _____

學生姓名英文： _____

日期： _____

中心： _____

學生就讀： 培訓班 延伸班 自力進修班

333 小老師培訓計劃問卷 (導師版)

親愛的導師：

為評估 333 小老師培訓計劃的成效，幼吾幼慈善基金委託香港城市大學應用社會科學系進行研究，我們希望各位導師可以填寫這系列的追蹤評估問卷，以幫助記錄小老師在 333 小老師培訓計劃推行前後以及期間的改變。

各位導師在問卷上填寫的所有資料只會用作研究評估 333 小老師計劃成效，而小老師的個人資料絕對保密，不會公開。為更準確反映該小老師在期間的改變，請留意以下事項：

1. 每份問卷只填寫一位小老師的資料；
2. 請準確填寫小老師的中英文姓名在問卷上；
3. 此問卷共分四個部分。請回答問卷內所有問題；
4. 問題沒有對與錯之分，只需憑你對小老師的認識和日常觀察作答即可；
5. 完成問卷後，煩請將問卷交回中心。

如果你知悉上述的保密措施並同意填寫本問卷，請填寫以下的同意書並簽署。

同意書

簽署： _____ 日期： _____

再次感謝各位導師對 333 小老師培訓計劃成效評估的支持與配合。

香港城市大學

社會及行為科學系

郭黎玉晶博士 (副教授)

第一部分: 請細心閱讀以下各句子，然後在答案欄內, 圈出最能代表你在過去 3 個月的項目

	每星期超過一次	差不多每星期	差不多每月	一年一次或兩次	從來沒有	不適用
1 我曾致電聯絡該小老師的家長	6	5	4	3	2	1
2 小老師的家長曾致電聯絡我	6	5	4	3	2	1
3 小老師的家長曾 WhatsApp 給我	6	5	4	3	2	1
4 我曾 WhatsApp 給小老師的家長	6	5	4	3	2	1
5 小老師的家長會停下來與我說話	6	5	4	3	2	1
6 小老師的家長被我邀請到中心參加特別活動	6	5	4	3	2	1
7 小老師的家長會到中心參加特別活動	6	5	4	3	2	1
8 小老師的家長被我邀請到中心參加家長會	6	5	4	3	2	1
9 小老師的家長會到中心參加家長會	6	5	4	3	2	1
10 小老師的家長會到中心做義工	6	5	4	3	2	1

第二部分: 請細心閱讀以下各句子，然後在答案欄內，圈出最能代表該小老師的項目

	非常適合	適合	部分適合	不適合	非常不適合
1 該小老師可以接受不順利的事情	5	4	3	2	1

2	該小老師可以面對失敗	5	4	3	2	1
3	該小老師會遵守規則	5	4	3	2	1
4	該小老師可以適當地表達需要和感受	5	4	3	2	1
5	該小老師會在行動前想清楚	5	4	3	2	1
6	該小老師可以解決自己與其他人的問題	5	4	3	2	1
7	該小老師興奮的時候可以冷靜下來	5	4	3	2	1
8	該小老師能懂得耐心等待	5	4	3	2	1
9	該小老師能了解別人的感受	5	4	3	2	1
10	該小老師意識到他/她的行為會影響他人	5	4	3	2	1
11	該小老師能遵守遊戲的規則	5	4	3	2	1
12	當與人意見不合時，該小老師能控制脾氣	5	4	3	2	1
13	該小老師會與他人分享	5	4	3	2	1
14	該小老師在沒有提示下，能主動與他人合作	5	4	3	2	1
15	該小老師會幫助他人	5	4	3	2	1
16	該小老師會聆聽別人的觀點	5	4	3	2	1
17	該小老師可以提出建議和意見，而不是堅持己見	5	4	3	2	1
18	該小老師對別人友善	5	4	3	2	1

第三部分: 請細心閱讀以下各句子，在過去一星期內，圈出最能代表該小老師的項目

1. 估計該小老師已完成的數學功課的百分比 (不管答案的對錯)	0-49% (1)	50-69% (2)	70-79% (3)	80-89% (4)	90-100% (5)
2. 估計該小老師已完成的語文(中文和英文) 功課的百分比(不管答案的對錯)	0-49% (1)	50-69% (2)	70-79% (3)	80-89% (4)	90-100% (5)
3. 估計該小老師在已完成的數學功課中的準 確度(例如答對的百分比)	0-49% (1)	50-69% (2)	70-79% (3)	80-89% (4)	90-100% (5)

	0-49%	50-69%	70-79%	80-89%	90-100%
	(1)	(2)	(3)	(4)	(5)
4. 估計該小老師在已完成的語文(中文和英文)功課中的準確度(例如答對的百份比)					
5. 該小老師功課表現維持一致的水平	1 從不	2 很少	3 有時	4 經常	5 常常
6. 該小老師可以跟從導師指引和/或參與課堂討論	1 從不	2 很少	3 有時	4 經常	5 常常
7. 該小老師可以準確地跟從導師指引和/或參與課堂討論	1 從不	2 很少	3 有時	4 經常	5 常常
8. 該小老師學習新知識的速度(例如學懂一個新概念)	1 很慢	2 慢	3 普通	4 快	5 很快
9. 該小老師書寫的質素或整潔度	1 很不好	2 不好	3 一般	4 好	5 很好
10. 該小老師的閱讀能力	1 很不好	2 不好	3 一般	4 好	5 很好
11. 該小老師的說話能力	1 很不好	2 不好	3 一般	4 好	5 很好
12. 該小老師經常輕率地完成功課	1 從不	2 很少	3 有時	4 經常	5 常常
13. 相比起其他小老師, 該小老師需要更多時間完成習作	1 從不	2 很少	3 有時	4 經常	5 常常
14. 該小老師在沒有你的督促下都能夠專心學習	1 從不	2 很少	3 有時	4 經常	5 常常
15. 該小老師經常需要你的協助來準確地完成他/她的習作	1 從不	2 很少	3 有時	4 經常	5 常常
16. 該小老師在未有清楚指示之前便開始做作業	1 從不	2 很少	3 有時	4 經常	5 常常
17. 該小老師在回想前一天在課堂學習到的知識時感到困難	1 從不	2 很少	3 有時	4 經常	5 常常
18. 該小老師會不專心或遊魂	1 從不	2 很少	3 有時	4 經常	5 常常
19. 該小老師在社交活動時表現出缺乏情感的反應或退縮	1 從不	2 很少	3 有時	4 經常	5 常常

第四部分: 請細心閱讀以下各句子，然後在答案欄內, 圈出最能代表該小老師在過去 3 個月的項目

	非常有幫助	有幫助	中立	沒有幫助	非常沒有幫助
1 你覺得電話傳音學習對該小老師的學習有幫助嗎？	5	4	3	2	1
2 你覺得電話傳音學習對該小老師的溝通能力及提升自信有幫助嗎？	5	4	3	2	1
	完全沒有困難	比較沒有困難	中立	比較有困難	完全有困難
3 該小老師在適應電話傳音學習時是否遇到困難？	5	4	3	2	1

基本資料

請在以下各題，選一個適當答案（除了第 4 題），並在該答案前的空格加上「✓」號

1. 你的性別是：1. 男 2. 女
2. 你的年齡是：1. 30-40 2. 41-54 3. 55 或以上
3. 你的教育程度是？
 1. 大專或以上 2. 大學 3. 碩士或以上
4. 你在中心任教的年資是：_____

-問卷完-