Center for Engineering Education Innovation (E^2I)
The Hong Kong University of Science and Technology

Curriculum Development Institute
Education Bureau

Hong Kong Association of the Heads of Secondary Schools (HKAHSS)

Students as Learning Experience Designers (Student-LED) Project

Research Report 2012-13

Submitted to

Education Bureau

by

Center for Engineering Education Innovation (E^2I)

The Hong Kong University of Science and Technology (HKUST)

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Preface

The aims of education for the 21st century are to facilitate all-round development and life-long learning. To achieve these aims, it is essential to prepare students with a number of basic skills such as self-regulated learning, leadership, and reflection. In our opinion, giving students the position and power of a designer with autonomy in setting goals, planning, taking actions and reflecting is one of the best approaches to assist them in acquiring these essential skills.

This value has brought together the three parties, the Curriculum Development Institute of the Education Bureau, The Hong Kong Association of the Heads of Secondary Schools, and the Center for Engineering Education Innovation at the Hong Kong University of Science and Technology, to work wholeheartedly on designing a student-driven approach. For this reason, the Students as Learning Experience Designers (Student-LED) Project was established in 2010. Students were empowered to take an active role and be the owner of their learning through designing learning experiences, implementing plans, reflecting on the outcomes, and making adjustment.

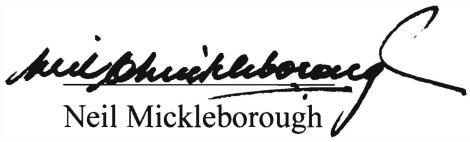
The project was evaluated and this report presents the results showing the impact of the Student-LED Project on the development of students. The evaluation also sought to identify factors that facilitate or inhibit students' learning. Given that the project was new in its design, the research results shall be seen, with a forward-looking lens, as some useful references for the future promotion of such student-driven approaches. With this aim in mind, a number of recommendations were made for further development and meeting the challenges.

The major results of this report are indeed encouraging. The Student-LED Project had a positive and significant impact on students' competencies or practices in self-regulated learning, leadership and reflection. The approaches adopted in the project enabled students to become life-long learners.

Some challenges were however identified and need to be addressed before the approach could attain a broader and sustainable effect at schools. The future directions could be to build learning communities around the student-led approach and to provide pathways for students to develop and excel after the project, particularly through leading and coaching their fellow students.

This report was prepared by the Center for Engineering Education Innovation at the Hong Kong University of Science and Technology. The research design and methodology adopted have been discussed in details among the three organizers. Special thanks are owed to Professor MacBeath for his valuable comments to the instrument design.

Finally, we are grateful to all the students for their commitment and input in the study, and to all the teachers and principals for their enormous support and continuous effort that made the Project possible. We would also like to convey our gratitude to project member, Dr. Stanley Ho of HKAHSS, and all other project members, for their dedication and contribution to this impact study.



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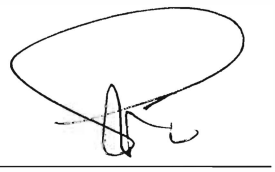

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1. Background and purpose of the report

The Students as Learning Experience Designers (Student-LED) Project is jointly organized by the Curriculum Development Institute (CDI) of the Education Bureau (EDB), Hong Kong Association of the Heads of Secondary Schools (HKAHSS), and Center for Engineering Education Innovation (E^2I) of the Hong Kong University of Science and Technology (HKUST). It has been implemented for three consecutive academic years since 2010. Over the three years, 542 students from 55 schools have participated in the Student-LED Project.

During the implementation of the Project in the first two years, many learning stories have been shared throughout the community. These stories have inspired the formulation of a research study on the impact of the Student-LED Project on students' learning in the third year of the Project (2012-13). It is expected that through the research study, students' learning outcomes and achievements can be consolidated in a scientific and systematic form.

This report presents the aims and implementation of the Student-LED Project, the research purpose and scope, the design and methodologies, important findings, and some challenges. Recommendations are made at the end of the report for the further promotion of the Student-LED approach.

1.1 Aims of the Student-LED Project

"Student-centered" has been one of the emphases in the new secondary curriculum in Hong Kong. Within a "student-centered" curriculum, students are expected to take ownership of their learning and assume an active role in the learning process. Following this notion, the Student-LED Project provides students with the opportunities to take the lead to design their own learning experiences and learn as a community. This is the key feature that distinguishes the Student-LED Project from many other learning experiences at school.

The aims of the Student-LED Project are stated as follows:

- Develop students' reflective habits of learning to make meaning and foster connections with other prior knowledge or experiences;
- Facilitate students to acquire the practical knowledge in applying their learning to new situations; and
- Extend the Student-LED learning approach to other learning experiences of students.

1.2 Project implementation

The Project involves three tiers for teachers and students. The first tier (Tier 1) focuses on developing teachers' skills in guiding students' reflection through a Professional Development

Programme (PDP). The second tier (Tier 2) represents a school-based project level. Students at Tier 2 need to set learning goals, plan actions, work out the plans, make adjustment, and reflect on their learning experience. The third tier (Tier 3) is an advanced level that builds on the successful experience in Tier 2 to adopt a more holistic approach in the school for the development of self-regulated learning and quality reflective habits.

In each year since 2010, the Project commenced around October after the start of the new academic year and ended at around July in that year. Four learning stages were implemented. The initial component of the Project was a teacher workshop as part of the Professional Development Programme. The workshop enabled principals and project teachers to assist students in designing a quality Student-LED Project and developing self-regulated learning capacities.

After the teacher workshop, student workshops were held to develop their capabilities in leading a project. In the student workshop at Tier 2, the importance of reflection was highlighted and students were motivated to focus on learning rather than organizing activities. The workshop for Tier 3 students aimed at increasing students' awareness on leadership. The core value of student leadership at Tier 3 is about students nurturing their fellow students to learn, leading to the sustainability of the Student-LED approach at school.

Students and teachers were provided with support from EDB throughout their project implementation. During April to May in each year, school visits were conducted to promote students' and teachers' reflection on their learning experiences. Taking this opportunity, teachers also explored more about the facilitation of reflection when they observed group discussions of students. This served as a tripartite co-constructing learning process encouraged in the Project. In addition to the school visits, students and teachers were encouraged to write reflections about their learning stories. Guidelines on how to write reflections were provided in order to foster deep learning and meta-cognitive awareness as a self-directed learner.

A poster presentation of students' work marked the final stage of the Project for that academic year in which the learning evidences were explicitly shown and shared among all participants. The most recent poster presentation was held on 6 July 2013 with all the 16 participating schools attending. Students were provided with guidelines that encouraged them to apply reflective skills in the preparation of their presentations. The poster presentations attempted to foster students' self-assessment by elevating their learning stories to an observable status.

1.3 Purpose and scope of the research

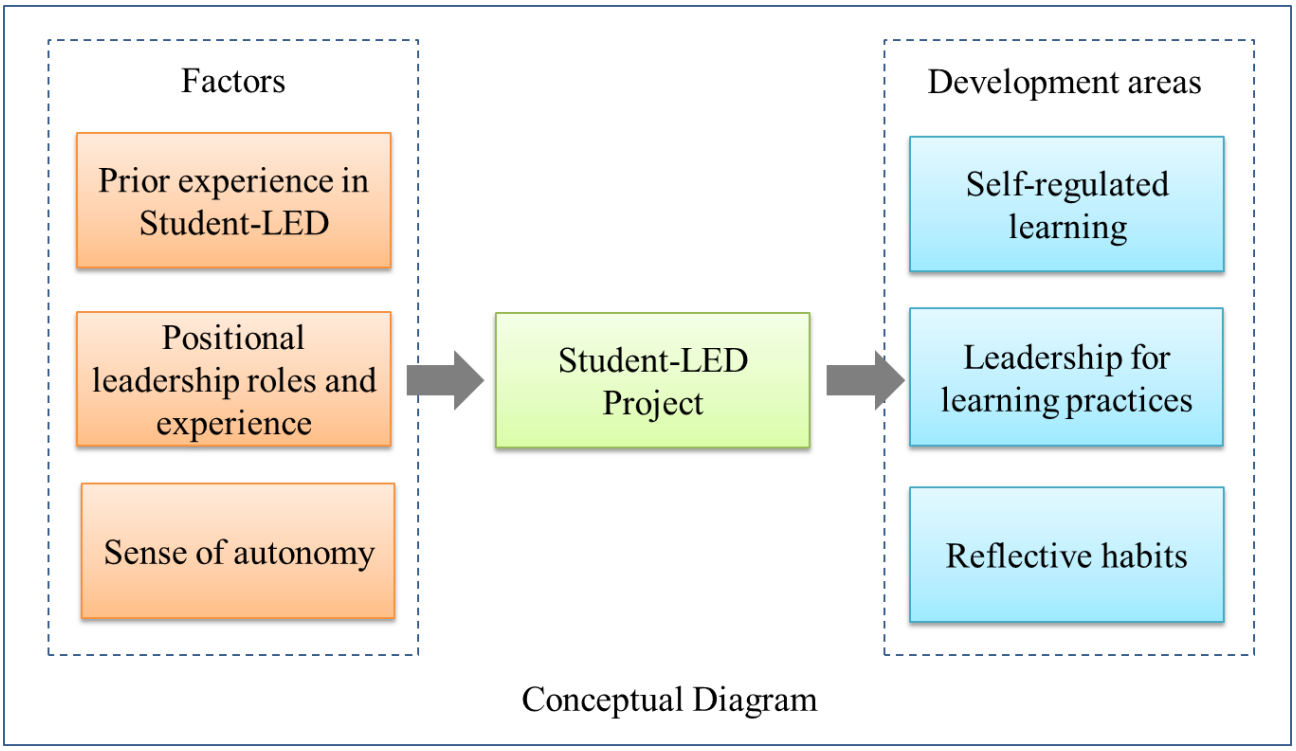
The research aims to address two questions on students' learning and development during the Student-LED Project. The first question deals with the impact of the Student-LED Project on the development of students. The second question concerns the factors that facilitated or inhibited students' development. Three areas have been identified as important for students' holistic

development and are listed below:

- Self-regulated learning;
- Leadership for learning practices; and
- Reflective habits

Self-regulated learning refers to students' abilities in setting goals, making plans, monitoring progresses, and evaluating performance. Leadership for learning practices are activities in which students practice leadership to facilitate their learning and also manage their learning to enhance leadership capacities. A student with good reflective habits can identify learning points from past experiences and apply them to various new situations on a regular basis. These three intertwined areas reflect the project aims and are important for developing whole person and life-long learners. The research started at 2012-13, the third year of the project implementation. Figure 1 shows a conceptual diagram of the research.

Figure 1 Conceptual diagram of the research



2. Methodology

Both qualitative and quantitative approaches were adopted in this research. The results were compared and synthesized to provide a more complete picture on the impact of the Project and the

influence of various factors.

2.1 Quantitative approaches

A survey instrument was developed. The survey items were drafted based on the relevant literature and refined through discussions among the three co-organizers. Consultations with scholars in the education field were also made. The survey instrument was administered to all participating students at the beginning and the end of the Project. The difference between the survey results, at these two points of time, would facilitate an understanding of whether students have made improvement through participating in the Student-LED Project. The survey consisted of eight basic questions on demographic information and 43 multiple choice questions covering four different areas: self-regulated learning, leadership for learning, reflective habits, and sense of autonomy. Each area was measured by 9 to 15 question items to enhance the validity and reliability. The multiple choice questions employed a 7-point scale, i.e., students were asked to choose an option from 1 to 7 that most appropriately reflected their attitudes and behaviors. The survey administered to students at the end of the Project contained one open-ended question related to the personal impact from participation in the Student-LED Project. A total of 112[1] valid questionnaires were matched from the two points of time, representing 65.5% of the total participating students during 2012-13.

2.2 Qualitative approaches

The qualitative approaches refer to the focus group interviews conducted as part of the school visits and analysis of the written reflections collected at the end of the Project. The focus group interviews used open-ended questions to help students recall their experiences and elicit their feelings and learning through the Project. The interviews were audio-recorded and analyzed. The written reflections submitted by students and teachers at the end of the Project served as another important source of qualitative evidence. The reflections were analyzed by content analysis based on the six-level reflection model promoted in the Project.

3. Important findings

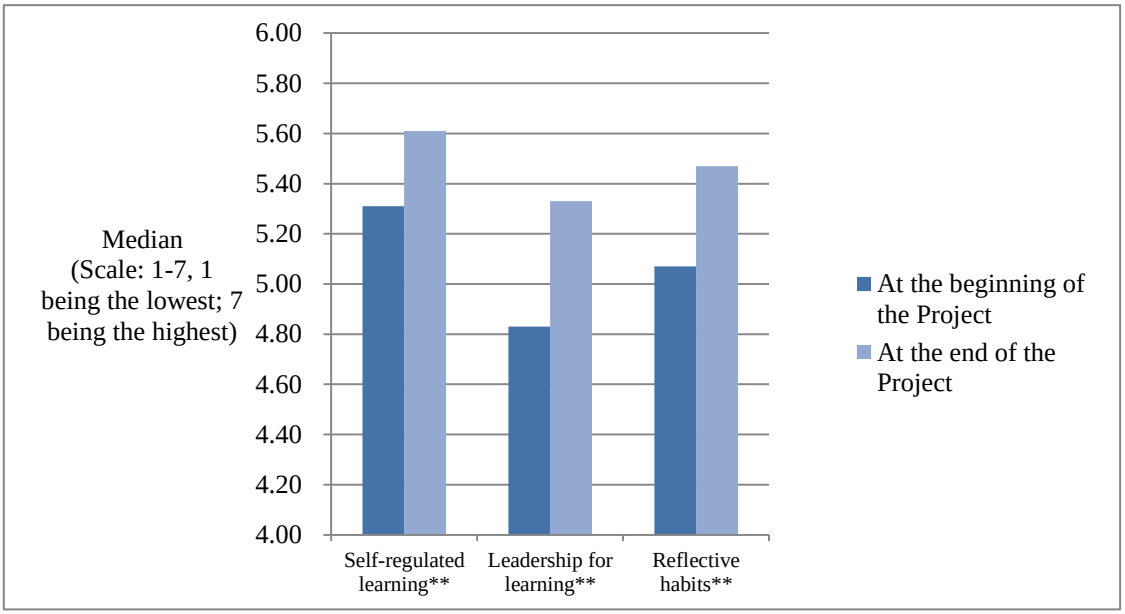
3.1 Self-assessment in self-regulated learning, leadership for learning and reflective habits

Based on the survey results, students reported significantly higher scores in self-regulated learning, leadership for learning practices and reflective habits at the end of the Student-LED Project than they did at the beginning. A higher score indicates better performance, as self-reported by students. Figure 2 shows the difference in median values at the beginning and the end of the Project. Leadership for learning recorded the largest increase (10.4%) in median value, followed by reflective habits (7.9%), and self-regulated learning (5.7%).

[1] The sample size in the following part of the report refers to 112, unless otherwise specified.

In terms of the percentage, 73.8% of the students reported better performance in leadership for learning practices and 67.9% of the students reported better performance in self-regulated learning and reflective habits respectively.

Figure 2 Students' self-assessment in the three areas



*Note: ** The difference between the pre- and post-tests is statistically significant at 0.01 level based on Wilcoxon Signed-Rank Test.*

Students' written responses to the open-ended question in the survey on what changes they observed on themselves after the Project also show their development in different areas. Typical students' voices are shown as follows.

Student's voice

"I realize that I am capable of leading a group of students and assigning them tasks. I also learned a lot from this process, for example, planning, time management, and listening to others' opinions."

(Tier 2 student)

Student's voice

"I learned to reflect after each activity so that I would know what I have got from it."

(Tier 3 student)

Student's voice

"The Student-LED Project made me realize the importance of setting goals…"

(Tier 3 student)

3.2 Benefits for first-time participants and students with experience in the Student-LED Project

Among the students who have completed both surveys, 90.2% are first-time participants during 2012-13 and 9.8% of the students have prior experience in the Student-LED Project in previous year(s).

The survey results show that students who joined the Student-LED Project for the first time have reported significantly higher scores at the end of the Project in all of the three development areas: self-regulated learning, leadership for learning, and reflective habits. In terms of the percentage, 74.7% of the first-time participants reported higher scores in leadership for learning. The percentages of the students who reported higher scores in self-regulated learning and reflective habits were 68% and 66% respectively.

Students with prior experience in the Student-LED Project have also benefited from participating in the Project again. These students reported significantly higher scores in reflective habits. Over 80% of the students with prior experience in the Project reported higher scores in reflective habits at the end of the Project. Table 1 shows the percentages of the students reporting better performance.

Table 1 Self-assessment of students with and without prior experience in the Student-LED Project

	Percentages of the students reporting better performance at the end of the Project	
	First-time participants	**Participants with prior experience in the Student-LED Project**
Self-regulated learning	68.3%	63.6%
Leadership for learning	75.0%	63.6%
Reflective habits	66.3%	81.8%

Learning evidences can also be found in the written reflections of students. The opportunity to design learning experiences made some first-time participants feel both challenged and excited. The student's voice quoted below shows the reflection of a first-time participant.

Student's voice

"I was amazed when I firstly heard about the Student-LED Project. Before that, I have never joined any activities in which I can design my own learning experience. I have been a participant for most of the time. I believe it is really challenging as I need to take up a leader's role…Through the Student-LED Project, I realize that a good plan can save a lot of time and efforts…It can help us cope with various issues happening during the activity…"

(Tier 2 student)

The written reflections from students with prior experience in the Student-LED Project reveal that they have accumulated their learning over the two or three years and made a meaningful connection between the two or three years of participation. Some students were motivated by the previous experience to join the Student-LED Project for a second time in order to pursue a breakthrough in their lives. One student wrote:

Student's voice

"I learned a lot from my last year experience in Student-LED Project. I changed from a passive person to a learning experience designer. I became more proactive, more self-regulated and enjoy more in group activities. However, there are still some areas for me to improve, for example, communication, creativity and leadership. This motivated me to join the Student-LED Project again, hoping to make a breakthrough this year..."

(Tier 3 student)

The results imply that the Student-LED Project has brought a positive impact to both first-time participants and those with prior experience in the Project. More importantly, the prior experience could enable participants to learn and reflect at a deeper level through applying what they have learned in the previous years. To sum up, students with prior experience in the Student-LED Project had a relatively higher starting point in these three areas and also finished the Project with better final outcomes.

3.3 Benefits for students with and without positional leadership roles at school

Among the students who have completed the survey at both times, 76% of the students have positional leadership roles at school, including prefect, class representatives, and leading members in student societies. The survey results show that students with positional leadership roles have reported significantly higher scores at the end of the Project in all of the development areas, including self-regulated learning, leadership for learning, and reflective habits while students without any positional leadership roles have done so in the area of leadership for learning.

For the students with positional leadership roles, over 70% reported higher scores at the end of the Project in each of the development areas. Among the students without positional leadership roles, the percentages of the students who reported higher scores in self-regulated learning and reflective habits were at about 56%. Table 2 shows students' self-assessment in both groups.

Table 2 Self-assessment of students with and without positional leadership roles at school

	Percentages of students reporting better performance at the end of the Project	
	Students with positional leadership roles at school	**Students without positional leadership roles at school**
Self-regulated learning	71.8%	55.6%
Leadership for learning	73.2%	76.0%
Reflective habits	71.4%	56.0%

In their written reflections, a number of students with positional leadership roles at school expressed how they would apply the learning from the Student-LED Project to their leadership positions. Two of the excerpts read as follows:

Student's voice

"…The Project made me understand the role of a leader. A leader needs to pay attention to many different tasks and monitor the progress from time to time…I learned many things in the Project and I believe that they will be very useful for my work in the Student Union."

(Tier 2 student)

Student's voice

"…I would like to apply what I learned in the Student-LED Project to my study and daily life. As a vice president in my class, I hope that I can lead other students to organize different activities, utilize the organization skills, and collect and synthesize students' opinions to make the best plan."

(Tier 3 student)

According to the quantitative and qualitative results, students with positional leadership roles at school can make better use of their learning from the Student-LED Project since they have more opportunities to apply the learning outcomes and reflect on the actions. These students also grasped the concepts of the Student-LED Project better since they related the knowledge to their daily life experiences. Therefore, encouraging more students to take positional leadership roles at school may bring ultimate benefits to their development, which could also be a means to sustain the impact of the Student-LED Project in schools.

3.4 The development of reflective habits

In the six-level reflection model promoted in the Student-LED Project, the first three levels (Levels 1-3) are regarded as reflection on past experiences, or named as backward reflection. To perform backward reflection means to review past experiences and identify the meaning from the experiences. The next three levels (Levels 4-6) are considered as forward reflection. These levels include

internalizing the learning, connecting different experiences, transferring the experience to other situations, and finally making plans for further self-development to become self-directed learners.

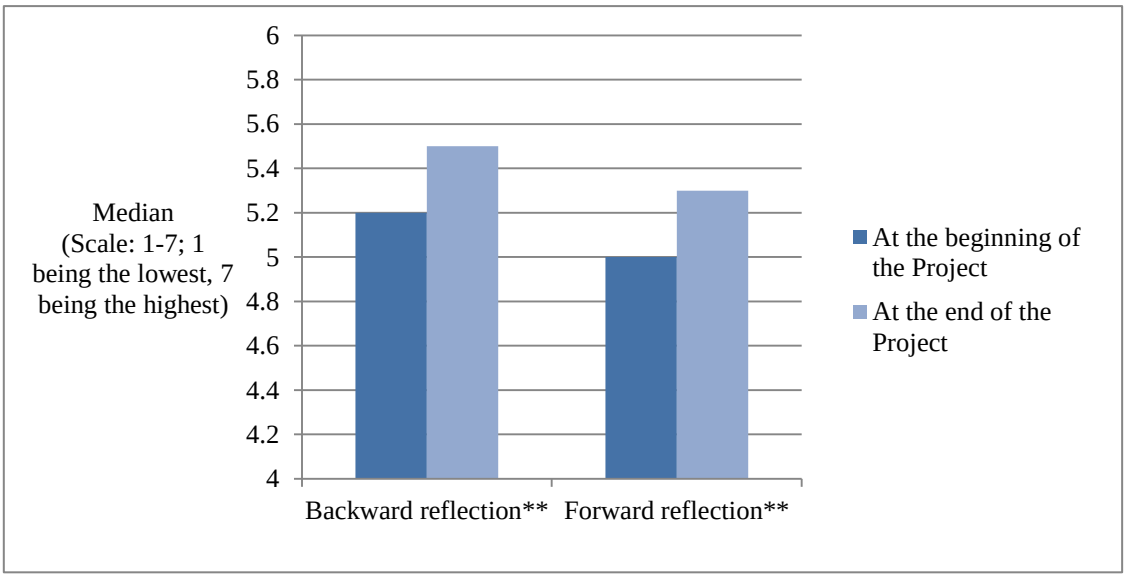
At the commencement of the Student-LED Project (2012-13), students already displayed a certain level of reflective habits. According to the survey results, 62.2% of the students indicated that they practiced backward reflection at a frequent level and 54.5% for forward reflection at the beginning of the Project. At the end of the Project, the percentages of the students who indicated a frequent practice of backward and forward reflection both increased (Table 3). The median frequencies for backward reflection and forward reflection also increased significantly at the end of the Project. Figure 3 shows the comparison between the beginning and the end of the Project.

Table 3 Percentage of students who indicated a frequent practice of the two types of reflection

	Percentage of students indicating a frequent practice of reflection*	
	At the beginning of the Project	**At the end of the Project**
Backward reflection	62.2%	81.1%
Forward reflection	54.5%	72.7%

Note: Practicing reflection frequently includes doing it "frequently", "usually", and "always".

Figure 3 Students' self-assessment in backward and forward reflection



*Note: ** The difference between the pre- and post-tests is statistically significant at 0.01 level based on Wilcoxon Signed-Rank Test.*

Students' written reflections have also demonstrated their ability in both aspects of reflection. Analysis of the written reflections shows that nearly all students (98.9%) have reached the third level of reflection, which means that they have learned and applied skills in conducting backward reflection to make meaning out of the activities in which they participated. This is an important stage

in reflection where experiences are transformed into learning. One excerpt of Level 3 reflection is quoted as follows:

Student's voice

"At the beginning of the project, I set some goals for myself. I expected to learn how to assess the feasibility of an activity, how to prepare stuff, and how to deal with unexpected situations. After the project, I looked back and believe that I have achieved my goals…"

(Tier 2 student)

The percentage of students who reached the fourth level of reflection, also seen as the basic level for forward reflection, was 95.8%. This shows that the majority of students internalized their learning, connected different elements, and integrated different learning experiences. One excerpt of Level 4 reflection reads below:

Student's voice

"...After I join this project, I change my attitude. I was not well planning before I did anything. I always wait till the last minute to finish the work. After these few months, I totally change..."

(Tier 2 student)

The percentage of students who demonstrated their reflection ability at the fifth level was 64.2%. Reaching the fifth level means that students applied what they have learned from one occasion to other situations, for example, subject study at school and daily life. Below shows an example of Level 5 reflection:

Student's voice

"...For areas of improvement, I think we should have better time management and organization skills. As we always have quizzes and tests at school, so we need to work out a schedule for ourselves to ensure a clear flow of activities to be held and the good quality of programmes…"

(Tier 2 student)

There were 23.2% of the students who demonstrated their reflection to the highest level, Level 6. This means that they not only applied what they have learned from one situation to others but also made a plan for whole person development and adapted to different situations as self-directed learners. At this level, lessons learned from experiences are transformed to important implications guiding students' future development. One excerpt of Level 6 reflection is shown below:

Student's voice

"Therefore, everyone can be a leader. Leadership skills can be learned through training and continuous practice…So the first thing is to identify my strengths and try to utilize them as a leader. I learned that a leader should not do everything or even to criticize teammates. What a leader should do is to stay humble and do the work, and mostly importantly, to help the followers complete tasks and achieve goals…"

(Tier 3 student)

Both quantitative and qualitative data show that students have formed good reflective habits. They reflected frequently and also demonstrated a sound reflection ability. Some of the students could even reach the highest level of reflection that will enable them to learn better and become a better leader through continuously adapting to various new situations.

3.5 The importance of sense of autonomy

The survey results show that sense of autonomy is a critical element in the Student-LED Project. According to the averaged value of the nine statements measuring sense of autonomy, more than 60% of the students perceived a high sense of autonomy in the Project. In particular, students highly agreed that they had a choice in making plans and carrying out those plans, and that they enjoyed the challenge in the Project. The percentages of the students who showed agreement to these statements increased at the end of the Project (Table 4). This shows that the Project fulfilled and even exceeded students' expectation in terms of sense of autonomy.

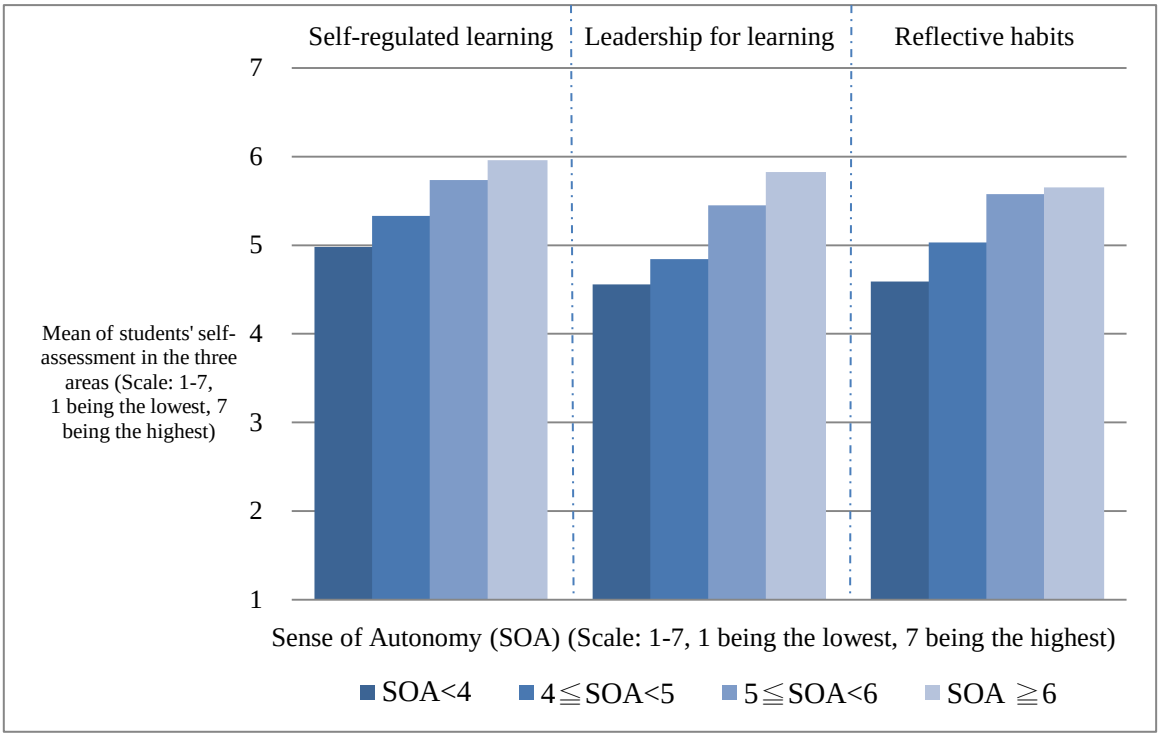
Table 4 Students' perceived sense of autonomy

	Percentages of the students who agreed* with the statements	
	At the beginning of the Project	**At the end of the Project**
"I believe that my team has a choice over how to complete the Student-LED Project."	83.3%	94.4%
"I feel a relaxed sense of personal freedom in the Student-LED Project."	77.8%	86.1%
"I enjoy the challenge in the Student-LED Project."	84.3%	91.7%

Note: Agreeing includes "slightly agree", "agree", and "strongly agree".

It was found that sense of autonomy was significantly correlated with students' reported levels in self-regulated learning, leadership for learning, and reflective habits at both the beginning and the end of the Project. This implies that students who possessed a higher level of sense of autonomy were more likely to rate themselves higher in these three areas. Figure 4 shows students' perceived autonomy and their self-assessment.

Figure 4 Students' perceived autonomy and their self-assessment in the three areas



Note: Only one student rated sense of autonomy below 3 and was grouped with those giving scores below 4.

The qualitative results also implied the positive impact of a high sense of autonomy on students' development. In some schools, all participating students reported a higher sense of autonomy (i.e., every student in the school reported a higher level than the average level of students in all schools this year). Students' written reflections from these schools illustrated how the sense of autonomy resulted in more engaging experiences. For example, one student wrote:

Student's voice

"This is my third time in the Student-LED Project. It is still very attractive to me. The Project provided good opportunities to practice leadership, creativity and organization skills. More importantly, the various activities in every year were all decided and planned by us…"

(Tier 3 student)

Many first-time participants were also aware that the Project was very different from other projects in which they have participated. Some students clearly pointed out in the written reflection that they felt a high sense of autonomy and the feeling encouraged them to participate in the Project. One example is quoted below:

Student's voice

"I think participating in this project is interesting that we need to decide what to do and how to do the project. In other projects, teachers or other organizations will decide all the tasks for us and we only need to follow the instructions. It is more challenging in the Student-LED project so I choose to participate in this project…"

(Tier 2 student)

The importance of sense of autonomy is shown through qualitative and quantitative data. The result confirms that sense of autonomy is an indispensable element in the Student-LED Project and distinguishes the Project from many other learning experiences. It also implies that trusting and empowering students to design their learning experiences is a sensible approach that will generate benefits to students' learning.

4. Challenges

4.1 Adapting to a new mindset

Despite the encouraging results, the Student-LED Project faced some challenges in its implementation. The Student-LED Project requires a new mindset in teachers, students, and school management. Students are changed from passive learners to active designers and owners of their learning. Meanwhile, teachers need to be transformed from instructors to co-learners. They not only provide administrative assistance to students but also facilitate students' reflection. This mindset change is challenging for both students and teachers. Students may lack confidence to assume their new roles while teachers may also feel uneasy to reduce control over students' work. Furthermore, different school cultures and practices also complicated the issue. It was relatively easy for some schools to adopt the Student-LED approach but quite difficult for some others. Voices from students and teachers revealed the efforts they made in adapting to a new mindset.

Student's voice

"The Student-LED Project gives us a lot of room so we must think and act differently. As this is the first time for our school to join the Student-LED Project, we don't have any prior experiences to follow. We have to think about many factors."

(Tier 2 student)

Teacher's voice

"As this is my first time in the Student-LED Project, I did not fully adopt the "hands off" approach. Even though I intended to let students make decisions, I would still monitor their progress. I would also ask them how things had been going. If you ask me to be completely 'hands off', I have some concerns."

(Project teacher)

Teacher's voice

"In the Student-LED Project, a message that is always being emphasized is 'Students are the boss of the project'. Therefore, I always remind myself not to give so much guidance to them…"

(Project teacher)

4.2 Time and space management

As a year-long programme, the Student-LED Project demands substantial amount of time and effort from students and teachers. Empowering students does not mean totally hands-free from the teacher's perspective; instead, constant support and intervention by teachers are necessary. In particular, the teacher is expected to facilitate timely and quality reflection among students during the process. Given the workload from teaching, administration and other tasks, some teachers may find it difficult to commit time for the Project. The same issue applies to students who are occupied by homework, subject study, and other learning tasks. The excerpts below show the difficulties students and teachers met and some strategies they used in managing time and space.

Student's voice

"I also start to write a schedule as the life in school is really busy. We had many things to handle, such as our studies, different extra-curricular activities, and the harsh work in different posts. Setting a schedule can help me (to) have a better time management as I can follow the plan, so that I can finish different work on time."

(Tier 2 student)

Teacher's voice

"In fact students are quite good at leadership, but they don't have enough time. Especially under the new secondary school curriculum, students want to achieve good academic results. If there is sufficient time, I believe that the outcome of the Student-LED Project would be even better. We tried to avoid putting too much expectation on Tier 3 students as they are very busy and concerned much about their grades. If they don't need to care so much about grades, they can have more time for the project. They are all active and self-directed learners. Time is an important factor. With sufficient time, they can perform better. "

(Project teacher)

4.3 Sustainability

Sustainability concerns whether the good practice of students designing learning experiences and conducting reflection can be sustained to be part of the school culture, and whether the benefits from the Project can be extended to other students and teachers in the school. The school visits conducted by EDB revealed that some schools had already taken measures in this aspect; for example, some encouraged the Student-LED Project participants to share their learning in morning briefings. There is a challenge, however, with the graduation of participating students and the job rotation of teachers. The aspiration to sustain the Student-LED spirit can be found in some students' voices. The excerpt below is an example.

Student's voice

"I hope that our school can give this opportunity to more students of different forms to sustain the Student-LED spirit. Therefore our school will have more leaders."

(Tier 3 student)

A project teacher mentioned the problem that resulted from job rotation. For example,

Teacher's voice

"In fact we have seen some turnovers. Some colleagues joined and left the team. It was probably due to the heavy workload. Last year a teacher assisted me in the project, but now he/ she went to other teams. The project does require heavy workload since we need to follow up with students from time to time. I can see the value in the Student-LED Project but young teachers are reluctant to join us…"

(Project teacher)

Some project teachers were aware of the sustainability issue and attempted to extend the approach in their school. One project teacher mentioned the extension of scopes.

Teacher's voice

"With the experiences we have gained these years, we are confident to further cultivate the culture of reflection with the two models PIE and ASK as tools to help students to develop their habit of reflections. We started with the ECA groups and hope to extend these skills in all the groups and even in our teaching…."

(Project teacher)

5. Recommendations

The Student-LED Project has achieved significant and promising results since its commencement at 2010. The research study conducted at the year of 2012-13 has quantified and confirmed the positive outcomes observed in the previous two years, and equally important, revealed the effect of some influential factors that may facilitate students' learning. Based on the results, several recommendations are made for student development using the Student-LED approach.

5.1 Build a learning community

As the Student-LED Project embraces a new approach and requires a change of mindset among students and teachers, it would be beneficial to build a learning community for all participating schools. Good practices identified over the years can be disseminated in the community to serve as references for new participants. Teachers and students can also share their learning from the project experiences and discuss how to tackle the challenges they met. The exchange of ideas among different schools through a learning community would help facilitate mutual learning, build confidence in the new approach, and gradually promote a mindset change.

5.2 Encourage school-based adaptation

School-based adaptation in the Student-LED approach is recommended to reduce the concerns on the amount of time and effort that are possibly required. Some schools have successfully embedded the Student-LED approach in their school year plan or other learning experiences with an appropriate level of adjustment. This implies that there is no single best approach in the Student-LED Project. All projects that embrace the Student-LED approach and nurture students in their self-regulated learning, leadership for learning, and reflective habits are regarded as effective Student-LED Projects.

Good Practice 1:

Principal leadership and School culture

School A has been participating in the Student-LED Project for three years. In the first year, the principal acquired the essence on how to instill in students a reflective habit and self-regulated

learning through the Project. She took the first step to enhance teachers' skills in facilitating students' learning with quality reflection. Also, she implemented a 5-year school plan with the student-LED approach in Other Learning Experiences (OLE) curriculum to pursue her school vision as "Self-directed Learning" in a non-academic context. Meanwhile, the project teachers discovered the needs to emphasize and follow up with students' reflection through the project.

Through professional sharing of principal and project teachers, teachers' skills in facilitating reflection were further enhanced. An internal teacher's manual with guidelines on the implementation of the Student-LED Project was provided to all teachers. Teachers were gradually equipped with the related knowledge and skills, which makes greater impact on student learning at personal, group, and school levels.

5.3 Enable a progressive development

A progressive development for students is recommended to pursue the sustainability of the Student-LED approach. Students who have participated in the Student-LED Project should be provided with opportunities to serve as student mentors to develop and support their fellow students at school. These students can set a personal example as being owners of their learning and share their experiences of using the Student-LED approach to help others learn better. Through the process in which students develop other students, the Student-LED approach can be sustained at school and more students can benefit from the approach.

Good Practice 2:

Examples of progressive development of the Student-LED approaches

Example 1: Sustainable development by Mentorship Programme

School A adopted a mentorship programme for the school-based community services. Experienced Tier 3 students of higher forms served as mentors to coach Tier 2 student mentees of lower forms to run a student-led community service programme. One of the key elements was that both the mentors and mentees reflected on the learning experiences they had gained together.

Example 2: Sharing on leadership experiences

School B provided students with various opportunities to take on a leadership role inside school. Students referred to the five exemplary student leadership model (i.e., Model the way, Inspire a shared vision, Challenge the process, Enable others to act, and Encourage the heart) that they learned through the training workshop and put it into practice. They also deepened their learning

through reflecting on the model and its impact. Practicing leadership roles enabled experienced students to transfer their learning to a new situation and help their fellow students who were new to the Student-LED approach.

Example 3: Gradual extension in scope

Principal of School C had a strong vision of students' whole-person development. Not only did he integrate the Student-LED approach in the school year plan but he also extended the scope to involve different functional groups year by year. Meanwhile, the school emphasized on teacher training so that the Student-LED approach could be embedded in OLE activities. Therefore, students were given various chances to be learning experience designers.

5.4 Provide students with leadership opportunities at school

It is noted that many students have been provided with some positional leadership opportunities at school. This practice was found to be beneficial for student development since it enabled students to apply what they learned in the Student-LED Project to relevant situations as a means to extend their learning. These students also found their learning in the Student-LED Project highly relevant and therefore felt engaged. Providing students with positional leadership roles could therefore be another useful means to sustain the effect of the Student-LED approach.