



優質教育基金
Quality Education Fund

M:FR/E

Final Report of Project

Project No. : 2013/0193

Part A

Project Title: Promoting Holistic Health Utilizing Models of Health Behaviors: Collaboration project among health education academics, elite athletes and schools in Health Education

Name of Organization/School: The Education University of Hong Kong

Project Period: From August 2014 (month/year) to November 2016 (month/year)

Part B

*Please read the **Guidelines to Completion of Final Report of Quality Education Fund Projects** before completing this part of the report.*

Please use separate A4-size sheets to provide an overall report with regard to the following aspects:

1. Attainment of objectives
2. Project impact on learning effectiveness, professional development and school development
3. Cost-effectiveness – a self-evaluation against clear indicators and measures
4. Deliverables and modes of dissemination; responses to dissemination
5. Activity list
6. Difficulties encountered and solutions adopted

** Final Report of Project should be submitted via "Electronic Project Management System" (EPMS). Once submitted, these reports are regarded as already endorsed by the supervisor of the school/the head of the organization or the one who signed the Quality Education Fund Agreement for allocation of grant on behalf of the organization.*

This form/guidelines can be downloaded from the QEF webpage at <http://qef.org.hk>.

Final Report of QEF Projects

Promoting holistic health utilizing models of health behaviors: Collaboration project among health education academics, elite athletes and schools in Health Education

Project No.: 2013/0193

1. Attainment of objectives

Evaluation of the attainment of each of the project objectives stated in the project proposal is summarized in Table 1.

Table 1: Attainment of Objectives

Objective statement	Activities related to the objective	Extent of attainment of the objective	Evidence or indicators of having achieved the objective
<p>Objective 1 Teachers should be able to design and conduct holistic health education programmes in more than one specific area in two years;</p>	<p>Activity 1 Professional learning: Four concurrent teacher training sessions for teachers were held. Participants were required to attend all sessions of the professional training programme.</p> <p>Activity 2 Professional learning: Health education proposal drafting with small group tutorials.</p>	<p>Fully achieved</p>	<ul style="list-style-type: none"> ● A total of seventy teachers/principals from twenty schools attended the professional training sessions. ● Ten meaningful and useful health education program proposals were selected after panel meetings which were implemented successfully in schools.
<p>Objective 2 Students of participating schools should be able to adopt a healthy lifestyle after participating in the holistic health programmes delivered in their schools; and</p>	<p>Activity Implementation of a series of holistic health education programmes in ten primary schools with support from elite athletes, health education academics and tertiary student helpers.</p>	<p>Fully achieved</p>	<ul style="list-style-type: none"> ● More than one thousand students and their parents participating in seminars on health education and their health awareness were enhanced. ● 335 students including 30 SEN students and 20 parents participated in various holistic health education programs. Overall, most of the implemented health education programs were well received by the schools and students. The encouraging findings of the interventions reflected that they were able to adopt a healthy lifestyle after active participation. Session 2c and 2d of this report would further

student-health educators and fifteen elite athletes from the Education University of Hong Kong joined the event. Renowned speakers at the event included Dr Tsang Fan-kwong, an experienced psychiatrist; Ms Ngai Chau-kei, the Gold International Yoga Champion; and Ms May Chan, an experienced mindfulness instructor. A number of elite athletes, including Mr Cheng Kwok-fai (windsurfing), gold medallist at the Asian Games, and Ms Yip Pui-yin (badminton), Hong Kong Olympian, conducted fun games with the participants. The event was well received by the participants and was covered by the media at http://orientaldaily.on.cc/cnt/news/20160124/00176_068.html and http://the-sun.on.cc/cnt/news/20160124/00407_036.html. Focus group meeting with some of the participants reflected that the carnival was meaningful, useful and joyful to participate and the school partners were highly motivated to run the school-based mental health education programs in their schools with commitment and support of the principals and parents.

b. Increasing students'/teachers' sense of achievement

One of the objectives of this project was to facilitate the teachers to explore more about how to promote effective health education among young aged children and how the healthy lifestyle be transformed to daily activity. With the tremendous support from elite athletes, health education academics and tertiary student helpers, the project was a huge success, fostering sense of achievement among the students and teachers.

Two panel meetings were held to provide feedback to the submitted health education program proposals and five supervision sessions were conducted to help prepare for the school-based health education programs. Elite athletes acting as role models in the health education programs were selected from different fields including badminton, rowing, fencing, karate, table tennis, cycling or triathlon. Health education academics and practitioners had taken the role of consultants who were with wide expertise in ergonomics, biomechanics, sports science, school health education, nutrition, physical fitness, nursing, social work, and school-based curriculum development.

Consultations, co-ordinations, school meetings and visits were conducted to monitor the quality assurance of the implementation in which problems identified were resolved timely and project variations were rectified immediately.

Focus group meeting with teachers and principals indicated that all the planned activities were implemented which could reach the intended target group. Most of the students were active in participation and enjoyed the interventions very much. It was encouraging to learn that most of the teachers showed willingness to collaborate with EdUHK again. In fact, four out of ten schools had ongoing collaboration with us to conduct health education intervention programs after the project completion.

c. Fostering students' development in their potential and specific abilities

With active participation in ten different school-based health education intervention programs, students' development in physical health, social health and mental health was promoted. Their abilities to adopt a healthy lifestyle were fostered by active involvement in a range of creative health education activities which were briefed as follows:

- *Molecular transformer* to cultivate students' fruit and vegetable eating habits by using an innovative food preparation technique namely *Molecular Gastronomy*;
- *Exergame, gain your body shake* to enhance hand-eye coordination by Exergaming;
- *Super karate kids* to promote karate dance as a means to physical fitness improvement;
- *Eat smart @Traffic Light* to promote wise choice of healthy snack and optimal physical activity via health talks, cooking demonstration and competition, exercises and site visit;
- *Yoga for fall prevention in children* to practice yoga to strengthen students' muscles and balance;
- *Self-defense with Spiderman* to promote participants' social health through self-defense training and co-creating healthy school environment without bullying;
- *Relax and smile, live in a different way* to promote melodic dances as a means to release stress and build up a positive and cheerful life;
- *Get rid of stress, just dance* to promote melodic dances as a means to release stress and build up a positive and cheerful life;
- *Yoga! Embrace stress and find serenity* to promote participants' mental health through yoga; and
- *Clean your mind, sadness say bye* to promote participants' mental health through mindfulness.

d. Training students to adopt a healthy lifestyle

335 students including 30 SEN students and 20 parents participated in various holistic health education programs. They were trained to adopt a healthy lifestyle and the results were positive and encouraging which were summarized as follows:

- *Molecular transformer*
Sensory evaluation found that modifying the fruits and vegetables into another form might alter their odour, taste, appearance and texture as compared with their original forms. Modified form of fruits and vegetables could attract students to try those they did not consume before, cultivating their daily fruits and vegetables eating habits, hence increasing their daily consumption of dietary fibres.
- *Exergame, gain your body shake*
Wilcoxon signed-rank test revealed a significant decrease between pre- and post-intervention Mean Mirror Tracing Test (MTT), indicating a significant improvement in hand-eye coordination among students after intervention, hence promoting their daily exercise habits with improved mastery of motor skills.

- *Super karate kids*
Paired t-test revealed a significant paired difference between post- and pre-intervention, indicating the Mean Long Jump was 14.2 cm longer than pre-intervention, and 4*5 Shuttle Run was 0.6 s shorter than pre-intervention, both were significant at the .05 level. The intervention had promoted students' daily exercise habits, hence improving their physical fitness.
- *Eat Smart @Traffic Light*
Students' knowledge on nutritional label increased and could tell what healthy snack was and students were able to choose them from the supermarket. Students had regular exercise at each week and demonstrated that they could cook their healthy snack. As a result, most of the students' BMI were decreased by around 3%, adopting a healthy lifestyle.
- *Yoga for fall prevention in children*
There was 80% reduction in slip and fell after eight weeks of yoga class. Students' performance on physical fitness test showed positive improvement especially on sit and reach test (increased by 24.7%), followed by hand grip (increased by 12.6%) and 15m run (increased by 8.6%). Results of foot assessment showed that more students belonged to normal range of the tibial torsion after participating in the yoga program. The intervention had strengthened students' motor skills, hence their confidence in ongoing exercise practice.
- *Self-defense with Spiderman*
Paired-sample t-test was conducted to analyze the data at pre-intervention (T0) and post-intervention (T1). Findings indicated that there was significant difference between the mean knowledge of the participants at T0 and T1 which demonstrated that the intervention was effective to promote self-defense knowledge, hence their social health. There was also statistically significant improvement in the self-defense techniques.
- *Relax and smile, live in a different way*
Student Perceived Stress scale was used to assess stress level of participants before and after the program. Findings of paired-sample t-test indicated that there was a significant improvement in stress level of students on peer relationship, hence promoting their mental health.
- *Get rid of stress, just dance*
Student Perceived Stress scale was used to assess stress level of participants before and after the program. There were 5 – 23% reduction of stress level in the peer relationships, parent-child relationships, personal health and personal self-expectations domains of the stress scale after the program. There was 61% improvement in the quiz score after the lesson.
- *Yoga! Embrace stress and find serenity*
Physical fitness test including 9 minutes run, sit up, sit and reach, hand grip and single leg stance were conducted before and after the program. Student Perceived Stress was used to assess stress level of participants. There was significant

improvement in sit and reach tests but no significant improvement for other outcome measures.

- *Clean your mind, sadness say bye*

Student Perceived Stress scale was used to assess stress level of participants before and after the program. There was 7% reduction in the total score of Student Perceived Stress Scale, and their mental health was promoted.

- e. Increasing training opportunities for teachers and enhancing their professional development

A total of seventy teachers/principals from twenty schools attended the professional training sessions which had provided them new knowledge and skills to devise and carry out health education practice in a holistic way in schools. Evaluation of Training Questionnaires was collected from 61 teachers and the response rate was 87%.

Figure 1 shows the mean score of each question with the lowest score of 4.56 (the last question) and the highest score of 4.79 (the 8th question). In general, teachers/principals were very satisfied with the training experience. It was revealed that they were satisfied with the facilitators because all sessions were well prepared (mean score 4.8), and most of the teachers found the materials distributed to them were very helpful, and the topics covered were closely related to their work (mean score above 4.7).

Evaluation of Training Questionnaire- Statistical Summary of Part A Results

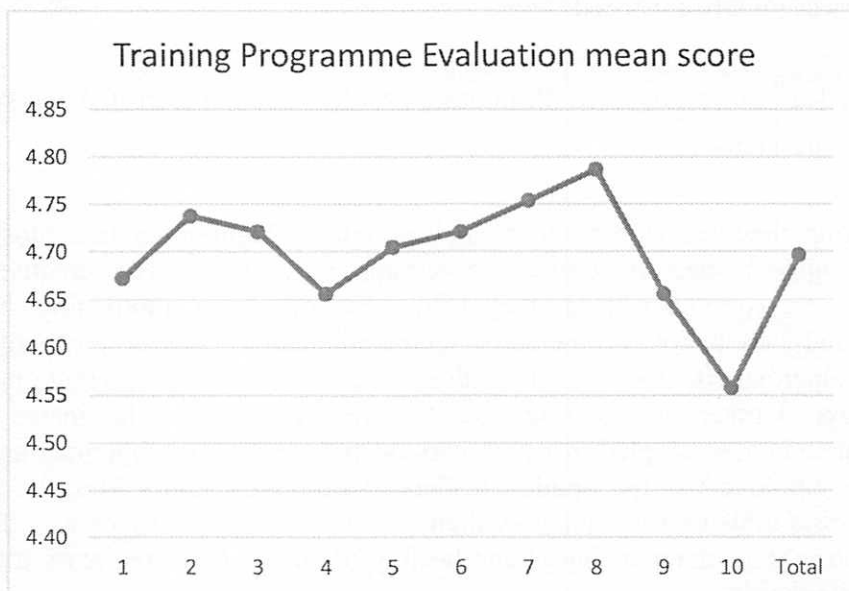


Figure 1 Evaluation of Training Questionnaire- Statistical Summary of Part A Results

Summary of Part B Results (Open-ended questions)

In general, teachers/principals highly commented the experiments and examples given in the training program which facilitated their understanding and applications of the health behavioural theories into effective intervention programs. They

appreciated the nice presentation and energetic attitudes of the facilitators very much. Most teachers/principals remarked that the training program was almost perfect and there was no need to improve anything. However, a few teachers suggested that more examples and analysis should be provided. In fact, six tried-out written proposals were given as references in the training sessions, and they were guided to tour the e-Health promotion@HKIED to browse for more examples of good proposals.

Ten meaningful and useful health education program proposals were selected after panel meetings which were implemented successfully in schools. Overall, the proposals were well written with clear connection to literature to support the claims and program designs. Good application of health behavioral theories to promote healthy lifestyle was displayed. Objectives of the health education programs were well-stated. Eye-catching sub-theme titles were devised for each session to facilitate promotion. Content of the programs were interesting, creative and stimulating with various effective instruction methods adopted which could fully reflect the objectives of the program. A variety of evaluation methods were well devised. Most of the proposals were well structured and easy to read. They were pieces of high quality work.

Focus group meeting with teachers and principals revealed that they appreciated the health knowledge they could master, and enjoyed the discussion and sharing among the teachers. It was encouraging to learn that most of them had a deeper understanding of health education after the professional training sessions and were willing to commit to improve health status together with their students in the implementation stage. With the useful consultations with the elite athletes and the health education academics, their confidence in implementing the health education programs was greatly enhanced.

- f. Improving learning atmosphere- Promoting healthy habits in a created and supportive healthy environment

Focus group meeting with teachers and principals highlighted that most of the students enjoyed their intervention programs very much. The creative health activities were commendable as they were very interesting, motivating, inspiring, practical and easy to follow, including recipe adaptation, cooking competition, site visit to supermarket, food label reading, melodic dancing, exergaming, yoga, mindfulness, karate, and self-defense training. They were fascinated by the promotion strategies adopted in which cartoon figures such as superman and spider man were employed as the opinion leaders to promote healthy lifestyle. Students welcome elite athletes very much as their positive attitude, unflinching efforts and determination to lead a meaningful and healthy life had set an exemplary role model for them at schools.

- g. Fostering team spirit and enhancing the overall image of the school

The project would never be a great success without the tremendous support from the elite athletes, health education academics and tertiary health education student helpers. Their commitment and passion to health education promotion had touched

many hearts of the teachers, fostering their team spirit to co-operate with us and implement the intervention programs wholeheartedly. For example, *super karate kids* intervention program was very successful and the school management team decided to launch a whole-school healthy lifestyle program in 2015-2020, targeting to apply for QEF for financial support. As mentioned earlier, four schools had contacted us for ongoing collaboration after the project completion, committing them to health education promotion.

Besides, the use of elite athletes as the ambassadors for health education and the creative use of health education strategies had attracted the attention of the media for publication which had enhanced the overall image of the participating schools. For instance, *Exergame, gain your body shake* intervention programme was covered by media in March-April 2015, including Ming Pao and Sing Tao. Please refer to the following link for details, <https://www.eduhk.hk/hpe/view.php?secid=5732>.

Good practices of ten pilot schools for promoting holistic health were published at the website <http://ehealthpromotion.ied.edu.hk/health-practices>. Undoubtedly, it was the best way to recognize and reward for participating schools' contributions by creating and sharing stories of their successes (digital stories) to capture best practices and create excitement and momentum via various platforms, promoting the overall image of the participating schools.

h. Inducing collaboration with other schools / professional organizations

The project model and the good practices of the 10 pilot schools were disseminated through publications, experience sharing and program resources sharing. By replicating the tested intervention programs in other schools, the number of students from other schools could be benefited in a snowball effect. For example, the intervention program with exergaming had been conducted in two new schools after the project completion, i.e. exergaming to improve balance, eye-hand coordination and exercise enjoyment in both normal and special education schools.

3. Cost-effectiveness

With reference to Table 2, the cost-effectiveness of the project is evaluated as follows:

Table 2: Budget Checklist

Budget Items (Based on Schedule II of Agreement)	Approved Budget (a)	Actual Expense (b)	Change [(b)-(a)]/(a) +/- %
Staff Cost	\$558,150	\$469,453	-15.9%
Equipment	\$20,000	\$15,080	-24.6%
Services	\$176,080	\$109,200	-24.6%
General Expenses	\$208,142	\$197,391	-5.2%
Contingency	\$8,328	\$0	-100%

- a. utilization of available resources (e.g. equipment, human resources of applicant school/ participating school(s))

Available resources were well utilized for project implementation:

The project officer provided administration and coordination among the project team, schools and suppliers; student helpers provided assistance in schools, workshops and activities, while health education academics trained the school teachers and supervised them to provide deliver the services to students. Training material was developed with the help of relevant equipment i.e. computer, digital camera and video camera, and printer.

- b. unit cost for the direct beneficiaries

Unit cost for 100 teachers and 300 students was \$1,978.

- c. sustainability of the learning programme and materials developed

Good practices of ten pilot schools for promoting holistic health were published at the website <http://ehealthpromotion.ied.edu.hk/health-practices> for programme resources sharing and the tested intervention programs could be replicated in other schools, and the number of students from other schools could be benefited in a snowball effect. Good practices were in print form as well. Putting train-the-trainer principle into practice, the trained teachers could provide training and share their experiences to other colleagues in schools through the developed materials in the website.

- d. expenditure items which require no injection of resources when the project is replicated by other schools (including setup cost of the project, deliverables ready for use)

They were equipment including notebook computers, digital camera, digital video camera and printer; training materials and project report; and the developed website.

- e. alternative approaches for equivalent benefits at less cost

I think this project had adopted the most effective and efficient approaches for maximum benefits at the least cost.

4. Deliverables and modes of dissemination

Evaluation of the project deliverables and their value for dissemination is summarized in Table 3.

Table 3: Dissemination Value of Project Deliverables

Item description (e.g. type, title, quantity, etc.)	Evaluation of the quality and dissemination value of the item	Dissemination activities conducted (e.g. mode, date, etc.) and responses
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<p>Good practices of ten pilot schools for promoting holistic health were published at the website http://ehealthpromotion.ied.edu.hk/health-practices</p>	<p>Findings of the CSUQ in Dec 2016 revealed that 85% respondents strongly agreed/agreed that they were overall satisfied with the system use, information quality of the website.</p> <p>The website could make program resources sharing possible and the tested intervention programs could be replicated in other schools, and the number of students from other schools could be benefited in a snowball effect.</p>	<p>The website was made known to the teachers and schools during the recruitment of primary schools as collaborators briefing sessions on 12 Aug 2014, 28 Aug and 23 Sept 2015; and experience sharing sessions on 18 June 2015 and 3 May 2016.</p> <p>The initial usability report of the website revealed that it received more than 6,000 hits from HK with an average of 80 visits per day. 92 % of the audience responses were OK.</p>
<p>A book titled, “Promoting Holistic Health in Action: Good practices of Ten Pilot Primary Schools” was published.</p>	<p>The health education intervention protocols were published in print form for resources sharing.</p>	<p>The book was distributed to 600 schools in 2/2017.</p>
<p>Two referred journal papers and a conference paper were published.</p>	<p>NA</p>	<p>NA</p>

It would be useful if the website could be promoted via QEF for wider replication of the health education practices in schools.

The project was successfully implemented as a win-win collaboration strategy was adopted. For schools, it was essential not to impose extra workload on teachers. Professional inputs from the organizing party were huge. Human resources with strong track record in health education who were able to mobilize student-health educators of EdUHK including elite athletes, registered social workers, registered nurses, and in-service teachers to assist in health education program proposal formulation and implementation; to attract passionate educators to participate through the established strong network with school; and to demonstrate rich experience in supervising the student health educators of EdUHK to run health education programs for more than twenty schools in the past three years. Besides, we were able to assist the schools to design innovative school-based health education intervention program to cope with schools’ needs and to sustain their interest and to share fruitful outcome of schools’ active participation widely to the general public through publicity, mass media and website.

For the organizing party, we were provided golden opportunity to conduct evidence—based health education intervention program so as to make publications in referred journals possible and to provide community services as an academics. This project also provided authentic experiential learning experiences to our student-health educators.

As the health education intervention programs were evidence-based ones and it would be feasible, useful and meaningful to continue the project, replicating the studies in other schools, identifying the useful practices which could form part of the school policy and curriculum development and innovation to promote health education. For example, the

intervention program with exergaming had been conducted in two new schools after the project completion, i.e. exergaming to improve balance, eye-hand coordination and exercise enjoyment in both normal and special education schools.

5. Activity list

Particulars of activities conducted during the project period are summarized in Table 4.

Table 4: Activity List

Types of activities (e.g. seminar, performance, etc.)	Brief description (e.g. date, theme, venue, etc.)	No. of participants				Feedback from participants
		schools	teachers	students	others (Please specify)	
Recruitment of primary schools as collaborators briefing session	12 Aug 2014 Tai Po Campus, EdUHK To recruit participating schools	16	20			The feedback was good and some schools applied for the participation on-site.
Experience sharing session	18 June 2015 EDB Kowloon Tong Education Services Centre To share experience on Professional training; Devising health education program Proposal; Support from HKIED academics, professionals, students and elite athletes and Self-evaluation/r eflection on project effectiveness	15	16			The teachers reflected that the sharing was very useful and stimulating. Most of them indicated that they would like joining our QEF project in 2015-16.

Recruitment of primary schools as collaborators briefing session	23 Aug and 28 Sept 2015 Tai Po Campus EdUHK To recruit participating schools	16	16			The feedback was good and some schools applied for the participation on-site.
Mental Health Education Carnival	23 Jan 2016 Tai Po Campus EdUHK To promote mental health education in schools and the community through talks, games, yoga and mindfulness practices	4	8	55	32 parents, 2 principals, 30 student-health educators, 15 elite athletes and 3 renowned guest speakers	The event was well received by the participants and was covered by the media. Most of participants commented that the carnival was meaningful, useful and joyful to participate and the school partners were highly motivated to run the school-based mental health education programs in their schools with commitment and support of the principals and parents.
Project sharing in QEF Briefing Session	5 May 2016 EDB Kowloon Tong Education Services Centre To share good practices of the project				More than two hundred participants from the tertiary sectors	The feedback was encouraging.

6. Difficulties encountered and solutions adopted

Overall, the project could be conducted smoothly. However, the management of the QEF funding was found to be a bit rigid. The funding did not cover expenses such as the salary increment to project personnel, medical insurance, gratuity, severance payment, untaken leave of staff employed and so on as indicated in QEF guidelines but which were necessary in the EdUHK employment; and audit fee & audit outlay shortfall in case actual audit fee exceeded the amount allowed by the QEF. Luckily, the problems were solved eventually with the unflinching support of the department and the University.