



Final Report of Project

Project No. : EDB/QEF/2016/0112

Part A

Project Title: Effect of a motor skill program to enhance the learning and teaching of fundamental movement skills (FMS) in kindergarten

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

Project Period: From 1 May 2017 (month/year) to 31 August 2018 (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

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Name of Grantee*: Dr. MA WAI WING Ada

Signature: _____

Signature: _____

Date: 13/11/2018

Date: 13 NOV 2018

** 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.*

Guidelines to Completion of Final Report of Quality Education Fund Projects

Please elaborate the following items in your evaluation of the project. It is expected that the guide would provide a reference to the project leader/team in reflecting on the effectiveness of the project.

1. Attainment of Objectives

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	Reasons for not being able to achieve the objective, if applicable
Objective 1: To design and produce teaching resources of a motor skill program that aim to be implemented in kindergarten.	Design the “AEROFms” program content that is suitable for K3 children Production of the AEROFms teaching manual and a DVD to illustrate and demonstrate the teaching content	Fully achieved	The AEROFms program is designed which contains one exercise routine and 32 physical games. 500 pcs of teaching manual are produced. The teaching manual include textual description, graphic illustration and a DVD demonstration on the teaching content. It also includes sixteen 30-minutes lesson plans for teaching K3 classes.	NA
Objective 2: To enhance the professional development of kindergarten teachers in their knowledge, pedagogical skills and attitude in teaching FMS.	Two teacher training workshops were conducted. The workshops included lectures and practical session on the FMS teaching in kindergarten A FMS seminar was conducted, which include the sharing from teachers and the performance from children	Fully achieved	The two training workshops were successfully completed with 97% of responds reported that the workshop can enhance their understanding on FMS. The teachers taught the children with the AEROFms exercise routine and 241 children from five of the collaborating schools performed the routine during the FMS seminar	NA
Objective 3: To implement a motor skill program in kindergarten and examine the educational-related factors associated with its effectiveness in the improvement of children’s fundamental movement skills.	The eight-week motor-skill program was conducted in the eight collaborating schools, twice a week in a 30-minute session. Baseline and post-program measurement on children’s fundamental motor skill was conducted	Fully achieved	346 K3 children and 16 teachers participated in the program. Children in the eight collaborating schools recorded improvement in FMS as measured by the TGMD-2 scale (mean score from 68.2 - 76.4)	NA



2. Project Impact on

The project's effects on the learning effectiveness / professional development / school development should be evaluated, in evidence-based approach, with regard to:

1. broadening students'/teachers' horizons

In local pre-primary education curriculum, there is very limited resources available to support the teaching and learning of FMS in kindergarten. The AEROFms program provides teaching content and resources for teachers to teach, while children can learn the skills. Teachers expressed that there are resources for teaching "physical fitness" while the concept of FMS is new to them. The program make them can enrich their knowledge in this area

2. increasing students'/teachers' sense of achievement

The mastery of FMS is age-specified and the teaching content of the AEROFms program are designed according to the fundamental movement phase of the K3 children. During the training workshops, teachers are actively involved in the activities and expressed that the teaching contents are useful and can inspire their teaching. After received the training and the provision of the teaching manual, teachers are more confident in teaching the FMS. For the children, they are highly engaged in the learning of the FMS during the eight-week tryout program

3. fostering students' development in their potential and specific abilities

Children with low FMS competency are less likely to participate in and enjoy sports compared with their skilled peers. Hence, the learning and development of FMS serves as an important underlying mechanism promoting children's engagement in physical activity and leads them into performing more complicated skills, games and sports.

4. training students to better meet social demands

The development of FMS is a key learning objective under the children's physical development domain. The learning and practice of the program content, i.e., the exercise routine and the physical games can benefit the physical health of the children

5. increasing training opportunities for teachers and enhancing their professional development

The project has organized two one-day training workshops for the teachers to enhance their teaching of FMS. During the workshops, teachers learned the concept and pedagogy of teaching FMS. They also practice the exercise routine together and discussed how to play the physical games in kindergarten setting. Teachers without relevant background are inspired by the teaching materials. There was also sharing on their experience in teaching physical fitness. All teachers are highly involved in the workshops.

6. improving learning atmosphere

During the FMS seminars, teachers expressed that the children enjoyed the training of the FMS exercise routine and the physical games. Teachers are told by parents that their kid teach them the routine at home and the children are excited to perform the exercise routine in the FMS seminar. The AEROFms program, hence, provide opportunity for the teachers, children and parents to participate.

7. fostering team spirit and enhancing the overall image of the school

The collaborating schools are invited to have two classes of K3 children to tryout the AEROFms program,



hence it is expected that each school will have two teachers involved in the program. Despite the request, some collaborating schools involve more teachers to participate in the program, for example, some collaborating schools have all teachers attended the briefing session to show support on the program. During the two training workshops, teachers and principals took part in the activities with excellent team spirit. In addition, for the FMS seminar, there were 76 parents presence to watch the children's performance.

8. inducing collaboration with other schools / professional organizations.

The completion of the project demonstrated a good collaboration between university and the local kindergarten. Throughout the one-year program, all collaborating schools are very supportive, which include: teachers (attend workshops, try out the program, participated in the seminar), principals (consent on the class schedule and teachers arrangement), parents (consent on children participation) and children (actively participated in the AEROFms program). This collaboration can facilitate university to transfer the knowledge to the schools, which are beneficial to the stakeholders and should be continued.

3. Cost-effectiveness

The project's cost-effectiveness should be evaluated with regard to:

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

A full-time project assistant has been hired for the project. She handled the administrative duties with good communication between the collaborating kindergartens. As the research components of the project are conducted after the design of the teaching content, hence only part-time RA and student helpers are hired for the preparation and data collection of the intervention.

2. unit cost for the direct beneficiaries

There are 341 children and 50 teachers who are direct beneficiaries of the tryout of the program. The total expenditure is \$419,935. The proportions of expenditure spent on children and teachers are around 70 % and 30% respectively. The unit cost for children direct beneficiaries is \$862 and that for teacher direct beneficiaries is \$2,520

3. sustainability of the learning programme and materials developed

The project designed the AEROFms program, which include an exercise routine and 32 physical games. The activities designed are according to the physical development of K3 children. The program had been tried out by the K3 children of the eight collaborating schools. A teaching manual include a DVD demonstration on the teaching content has been produced. Hence, the program can be easily implemented by other kindergartens not involved in this project. There is a collaborating school indicated that they will adopt the AEROFms content to other K3 classes not selected in the tryout program.

4. 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)

The teaching manual and the DVD had been produced, which involve the production and printing cost. As the teaching manual also includes sixteen lesson plans to implement the program in kindergarten, hence, the project can be replicated by other schools using the teaching content without extra cost. The kindergarten can conduct the lessons in the original physical fitness session.



5. alternative approaches for equivalent benefits at less cost

As teaching training is one of the core component of the program. Teachers of the collaborating schools can share their experience to the colleagues in their schools. For other kindergarten not participate in the program before, training workshops can be conducted to other schools who are interested in the AEROFms program.

4. Deliverables and Modes of Dissemination

The following items should be included in the evaluation of each of the project deliverables and their value for dissemination (*the information may be presented in a table form in the format of Table 3 in this Annex*):

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	Is it worthwhile and feasible for the item to be widely disseminated by the QEF? If yes, please suggest the mode(s) of dissemination.
A teaching manual titled “健美動教學手冊” for kindergarten teachers (Teaching Manual and DVD, 500 copies)	This item provides useful information for teachers to conduct the AEROFms in their schools. The design, printing and video taking are in good quality. With the textual description and demonstration of the games by the K3 children, it will be easy to understand how to conduct the class in kindergarten	80 pcs have been delivered to the 8 collaborating schools. 100 pcs have been disseminated to the educators, including, FMS seminar participants, student teachers, and teacher training educators (4-6/2018). 300 pcs have been mailed to 150 local kindergartens (8/2018)	Yes, the manual can be a useful resource for educators who are interested in the teaching of FMS in kindergarten. Extra copies can be printed and distribute to local kindergartens.
A leaflet titled “幼兒基礎動作能力(家長篇)” for parents (1600 copies)	The leaflets use simple wordings to highlight the importance of FMS for children. It can be comprehensible by the parents.	All parent leaflets were distributed to parents through the collaborating schools (6/2018)	Yes, the leaflet can arouse the parents’ awareness on FMS. Extra copies can be printed and distribute to local kindergarten
Two teaching training workshops (two full-day sessions)	The teacher workshops were designed for teachers to enhance their knowledge and pedagogical skills on FMS teaching. The practical session is useful for the teachers to experience an exercise routine, which can be used in their teaching.	The 1 st workshop introduced the FMS knowledge and included a practical session of the AEROFms routine. (2 Sep, 2017 - 45 participants) The 2 nd workshop introduced the FMS assessment method, the implementation of the AEROFms program and the practical session of the physical games. (26 Sep, 2017- 51 participants)	Yes, the workshops can provide teacher with teaching materials and hands-on experience in teaching FMS, which is useful to inspire their teaching. The workshops can be conducted in a one day sharing format.



A FMS seminar was conducted (one half-day session)	The sharing session by the collaborating schools is valuable by making it clear on the experience in conducting the AEROFms program in kindergarten. The children performance can demonstrate the competency of the children in performing the exercise.	The FMS seminar included two parts: 1) a sharing session by teachers/ principals from two collaborating schools. 2) a performance of the AEROFms by the children from five of the collaborating schools. (20 June, 2018: total: 360) (Children – 241; Parents – 76 teachers – 32; other educators – 11)	NA
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Elements/experiences contributing to the success of the project

Although most kindergarten have 30-minutes school time for physical fitness daily, the teaching and assessment of fundamental movement skill (FMS) is not a compulsory teaching content. The major concern raised by the teacher is the lack of teaching resources. During the implementation of the project, it is observed that the kindergarten principals and teachers are willing to learn those concepts, which they perceived as beneficial to the children. The current project includes the design and implementation of a FMS program for kindergarten children. The planning and implementation of the program needs the involvement of the principals and the teachers while close communication is essential to the success of the program. In addition, advance planning in consideration on the needs of the school, such as the teaching schedule, also influence the participation rate. Overall, the collaborating schools are very supportive on the program

Feasibility of continuing the project

The teaching and learning of fundamental movement skill is age specific. The current teaching content is designed based on the physical development of children at age 5-6, hence, it is suitable for K3 children. By adopting the similar mode of delivery, the project is highly feasible to design another set of exercise and extend to the other age groups in the kindergarten, such as N1, K1 and K2.



5. Activity List

Particulars of activities conducted during the project period such as types of activities, brief descriptions of the activities, number of participants and feedback from participants should be reported (*the information may be presented in a table form in the format of Table 4 in this Annex or in short paragraphs*).

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)	
School Visits	Meeting with principals/teachers to brief the project details and observe the school environment July 13-19, and Sept 20, 2017	8	25	-	8 principals	Principals and teachers expressed that the visit can make them clear about the project content and make necessary class schedule arrangement in advance.
Teaching training workshop 1	Teacher training on the AEROFms program (Exercise routine) Sep 2, 2017	8	45	-	2 principals	Teachers are satisfied with the teaching content and they are actively involved in the practical session
Teacher training workshop 2	Teacher training on the AEROFms program (Physical games) Sep 23, 2017 The Education University of HK	8	51	-	2 principals	Teachers shared and discussed the implementation of the physical games.
Teaching manual video shooting	The video shooting of the teaching content included the instructors, kindergarten children and teachers Oct 7, 2017 The Education University of HK	-	2	8	2 Instructors	The teachers agreed that it is a good to involve the children in the video demonstration. The children are excited during the video shooting session
AEROFms Program implementation	Implementation of the AEROFms programs in the eight collaborating schools Oct 2017 – Apr 2018	8	20	341		Teachers conducted the program in their schools for 16 lessons. They expressed that they are confident in teaching the content and the children are actively involved.

Measurement of FMS of the children (Pre-test)	Base-line measurement of the FMS score of the children in the eight collaborating schools School 1: 17 Oct, 17 School 2: 23 Oct, 17 School 3: 24 Oct, 17 School 4: 26 Oct, 17 School 5: 27 Oct, 17 School 6: 02 Nov, 17 School 7: 17 Nov, 17 School 8: 27 Nov, 17	8	20	325	25 students helpers	Baseline data was collected within the pre-arranged schedule. Despite the measurement is collected by student helpers, teachers expressed that this session can give them some idea on FMS measurement
Measurement of FMS of the children (Post-test)	Follow-up measurement of the FMS score of the children in the eight collaborating schools School 1: 9 Jan 18 School 2: 19 Jan 18 School 3: 3 Jan 18 School 4: 16 Jan 18 School 5: 17 Jan 18 School 6: 18 Jan 18 School 7: 29 Jan 18 School 8: 3 Jan 18	8	20	341	25 student helpers	Follow-up data was collected within the pre-arranged schedule. Despite the measurement is collected by student helpers, teachers expressed that this session can give them some idea on FMS measurement
FMS Seminar cum showcase	A seminar with teachers and principals of the collaborating schools to share their experience in conducting the program 20 June, 18 The Education University of HK	5	32	241	76 Parents 11 educators	Parents and teachers are satisfied with the arrangement and enjoyed the children's performance

6. Difficulties Encountered and Solutions Adopted

The information here should explain why the actual project implementation (including the budget, schedule and process) differs from the original plan, if applicable.

Variation: Changes in the schedule of teaching manual printout

Difficulty: The teaching manual is planned to deliver to the teachers during the teaching workshops held in Sept 2017. As some feedbacks is collected from the teachers of the collaborating schools, the presentation of the manual need some editing and the final printout is post-phoned.

Solution: Since the content of the teaching manual had been confirmed and delivered to the teachers before the program implementation, the post-phone on the printing will not affect the overall program.



Variation : Budget item reallocation

Difficulty: It was not able to recruit a suitable project staff after the commencement of the project. Hence, the budget for the staff cost need to be adjusted.

Solution: The recruitment was handled by using a higher salary, i.e., from \$14200-\$17000 with a shorter employment period, i.e., from 15 to 12 months. A project officer can be successfully hired. The variation of salaries does not exceed 20% of the budgeted salary amount

Variation : Changes of the FMS seminar schedule

Difficulty: The FMS Seminar was original scheduled on 8 June, 2018. However, due to the typhoon signal hoisted, the seminar needed to be post-phoned. As the collaborating schools have different school activities and it is difficult to find a common timeslot for the seminar

Solution: After several rounds of communication, the FMS seminar was re-scheduled to a timeslot that most schools can attend. It was finally changed to 20 June 2018 with sharing session by two teacher/principals and a performance by children of 5 collaborating schools.

Appendix : Budget Checklist

Budget Items <i>(Based on Schedule II of Agreement)</i>	Approved Budget (a)	Actual Expense (b)	Change ((b)-(a) /(a)) +/- %
Staff Cost	\$308,150.00	\$293,561.21	-4.7%
Services	\$42,380.00	\$36,190.00	-14.6%
General Expenses	\$86,466.00	\$90,183.50	+4.3%
Contingency	\$4004	0	-100%