Final Report of Project	**Project No. :** 2012/0048

Part A

Project Title: KidMatters, a web and school-based approach to mental health promotion and wellbeing of

children in primary school

Name of Organization/School: The Hong Kong Jockey Club Centre for Suicide Research and Prevention, The

University of Hong Kong

Project Period: From __Nov 2014__ *(month/year)* to __July 2015__ *(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

Name of Project Leader: _____   Name of Grantee*: _____

Signature: _____   Signature: _____

Date: ___29 Nov 2015_____   Date: __29 Nov 2015_____

* 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.

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1. Attainment of Objectives

The major goal is to develop a web and school-based mental health prevention programme to strengthen children's social abilities, problem-solving skills and enhance emotional health. The overall goals are to reduce the symptoms of anxiety and depression in children, to facilitate psychological functioning and coping skills, and to create a healthy and supportive learning environment.

Objectives are:

(i) To teach school children to recognize signs of anxiety and reduce the symptoms of anxiety and depression in children;

(ii) To enhance school children's interpersonal relationships with parents and peers; and

(iii) To improve school children's emotional competence and problem-solving skills.

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
Major goal	- A school-based and web-based mental health programme, "The Adventures of DoReMiFa" was developed by multidisciplinary professionals and the content was tailor-made for primary school students based on Cognitive-behavioural approach and Positive Psychology. - The programme was implemented in 11 schools and an evaluation study was conducted to assess programme effectiveness.	Fully achieved	- The school-based and web-based programme "The Adventures of DoReMiFa" was developed and implemented in 11 schools in the school year 2014-15. The programme consisted of 8 classroom teachings and 11 e-lessons. - The official website (www.doremifa.edu.hk), programme manuals for students and teachers, teaching materials and a parents booklet were produced. - An evaluation study was conducted to assess the programme effectiveness and both quantitative and qualitative data were collected from participating schools, by questionnaires, focus groups with students and review meetings with teachers and school social workers.
Objectives 1, 2, 3	The school-based and web-based programme both covered mental health issues and developmental issues and the content were tailor-made based on student's age: 1. Emotional Competence 2. Cognitive-behavioural model	Fully achieved	- The curriculum for this programme was designed to meet the objectives. - Topics 1-3: emotional competence, cognitive-behavioural model and ABC theory targeted to achieve Objective 1. They were about

	3. ABC Theory 4. Problem-solving skills 5. Social Skills 6. Communication Skills 7. Empathy 8. Gratitude 9. Review		understanding and identifying one's positive and negative emotions, the symptoms of anxiety, managing one's emotion in appropriate ways, and how to identify and rectify one's thinking errors in order to have proper evaluation of oneself. - Topics 5-6: social skills and communication skills targeted to achieve <u>Objective 2</u>, which taught about effective skills to develop good interpersonal relationship. Topics 7-8: empathy and gratitude could help students to understand other people's feelings and perspective, to show empathetic response and to show appreciation to oneself, others and the environment. These two topics could achieved <u>Objective 2</u> as well. - Topic 4: problem-solving skills was in particular aimed at enhancing students' problem- solving skills, that was <u>Objective 3</u>. - Topic 9: review was to facilitate students to apply the knowledge and skills learned in their daily life situations. - In sum, the whole programme was designed for enhancing the emotional competence, social skills and problem-solving skills of students, and promoting their mental wellbeing. - In order to facilitate and consolidate the learning of students, 11 e-lessons were developed and launched prior to school-based lesson for students to access. School-based classes were arranged after corresponding e-lesson(s) had been completed. Interactive activities were designed and conducted during school-based lessons to further enhance student's knowledge and understanding of the topics and to practice the skills.

2. Project Impact on

i.   Learning effectiveness

This project has provided an opportunity for local primary students to learn about different areas in mental health wellbeing through web-based game and interactive school-based activities. To assess the effectiveness of the programme, students participating in the programme were asked to complete a questionnaire before and after the programme (the intervention group) while students who did not participate in the programme but was studying in the same school as the intervention group students were also invited to completed the same set of questionnaire, as the control group. The questionnaire consisted of 5 parts measuring different outcomes of the programme: 1) knowledge, 2) anxiety, 3) positive and negative automatic thoughts, 4) perspective taking, and 5) self-esteem. The data obtained from intervention and control group were analyzed and compared to evaluate the effectiveness of the programme. Apart from the quantitative data collected from questionnaire, the project team conducted 8 focus group with students and 7 review meetings with school teachers to obtain their feedback about the programme. In this report, the results of intervention group students and the feedback from students and teachers were reported. Details of the research design and results of the whole evaluation study could be found from the research report as appendix.

In Table 2, it shows the mean scores of different outcome measures of intervention group students. Among those 718 students who had completed the questionnaire at pre-intervention and post-intervention, all outcome measures except anxiety showed mild improvement after completing the programme. The knowledge and self-esteem of students achieved statistically significant increased ($p<.05$) while negative automatic thought had significantly decreased ($p=.10$). The results indicated that after joining the "The Adventures of DoReMiFa" programme, students had improvement in their knowledge of different aspects of mental health, less negative automatic thoughts, more positive automatic thoughts, more able to engage in perspective taking and enhanced self-esteem. Although the anxiety level had slightly increased at post-intervention, it was not a statistically significant change.

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Table 2 Mean scores of different outcome measures of intervention group students (N=718)

		Intervention Group				
		Number of respondents		Mean score (SD)		Difference in mean (p-value)
Outcome Measure	Range	N	%	Pre-test	Post-test	Post minus Pre
Knowledge	0-11	689	96.0	7.29	7.87	+0.58*
				(1.22)	(1.42)	(< 0.01)
Anxiety	0-18	697	97.1	5.86	6.08	+0.21
				(4.81)	(4.42)	(0.27)
Auto. Thoughts						
Negative	0-40	663	92.3	12.25	11.58	-0.68#
				(9.28)	(8.43)	(0.10)
Positive	0-40	647	90.1	21.33	21.87	+0.54
				(10.24)	(8.49)	(0.21)
Perspective Taking	0-24	687	95.7	15.14	15.21	+0.07
				(6.15)	(5.09)	(0.79)
Self-esteem	10-40	659	91.8	27.79	28.27	+0.48*
				(4.48)	(4.95)	(0.01)

*p < 0.05 #p < 0.1; SD = standard deviation

Based on the qualitative data collected from student focus groups, it showed that students were attracted by the illustration of the programme. Many students first activated their user accounts because of the school requirements, however, were motivated to continue because of the attractive storyline and mini-games of the web-based programme. Most students pointed out that the class period was too short. It was suggested that the number of modules and class period could both be extended in order to increase the time for class activities and facilitations. Among all the modules, most students liked Module 1, Emotional Competence, Module 5, Communication and Social skills, and Module 6, Empathy. These topics were new to them; some students described the techniques were useful. Some students reported having tried to apply the taught skills in their daily life and some techniques such as empathy and cognitive restructuring were particularly helpful.

It was highlighted that the story of the web-based programme was attractive; the illustration and game design had motivated students to start and continue the programme. However, it was also reported that technical problem was one of the major limitations they had encountered while participating in the web-based programme. It was reported that it took a long time to load the programme or some could not login to the programme because of incompatible browsers were installed in their home computer. Probably these issues were about the performance and setting of the computer, and the Internet speed. Nevertheless, students could complete the e-lessons at school during short breaks if they did not have computer or Internet access at home or encountered technical problems. In terms of enhancing students' motivation

in participating the school-based lesson, some students suggested that the use of short video clips, incentives, competitions, and interactive activities could have positive impact on engaging students to participate in school-based lessons.

Review meetings with teachers and school social workers were also conducted in six participating schools. In general, it was reported that the programme content was suitable for P.4 and P.5 students, as it could foster appropriate attitudes and concepts in students in everyday life. Some school suggested integrating sex education in the program, as the topic seemed to be suitable for this population. Empathy was reported to be the most difficult topic in the programme, as some children at the developmental stage might not have the capacity to fully understand the concept fully. Some schools reported feeling satisfied with the activity design, while some schools suggested that the variety of in-class activities can be increased. It was suggested that games other than role-play could be used to arouse student's interest.

In terms of class arrangement, it was hoped that the programme could extend from 8 sessions to 16 sessions, and the duration of each class could be increased to 50 minutes/lesson so that students could gain better understanding about the concept through facilitation. It was also suggested to start the lesson with activities first and then teach the concepts instead of teaching the concepts first and then the activities. Teachers believed learning through experience might be more suitable for the students. As some schools had also created similar activities and curriculum for their students, so it was difficult to determine whether the change of students was purely due to the current programme.

As for the web-based programme, the website was described to be user-friendly, except that the loading time of the programme was sometimes long due to the animation. However, for some students who did not have computer or internet access at home, it could be challenging for them to complete the e-lessons. Another challenge reported was the long and complicated online assessment that every student needed to complete before and after the programme. The difficulties to access the website and the complicated online assessment were considered to be the two major factors that affected students to stay on track with the online programme. It was suggested that paper form assessment might be easier for students to complete.

All in all, both the quantitative and qualitative data suggested that the current programme has a positive impact on students' mental health wellbeing. Student's knowledge on mental health and self-esteem were found to have significant increase. Base on the interviews, students reported positive experience in participating in the current programme in general, some were able to apply and practice the skills learnt in their daily life. More results from the quantitative study and focus groups will be presented in the research report.

ii.   **Professional development**

There is a growing concern in our society as increasing number of children experience psychological distress from the highly stressful and demanding learning environment. The current project was a holistic programme which comprised of school-based and web-based learning about mental health wellbeing. It is believed that the

programme did not only benefit students but also the school teachers and social workers who sit-in classes and assisted in monitoring the progress of the programme. During the implementation of the programme, teachers, mostly the class teachers of the participating classes, would attend each school-based lesson of the programme to observe how the content was being taught by CSRP instructors and at the same time facilitated the activities. This provided an opportunity for teachers to understand different knowledge, skills and activities for promoting emotional management, problem-solving skills, communication and social skills, empathy and gratitude of students. They could also observe the responses of their students and understand more about their thoughts and feelings through varies activities. This could broaden their knowledge and skills as a teacher and enhance their awareness on the importance of mental wellbeing of students.

After the programme has been completed, two teacher's trainings were organized in July and Aug 2015 for participating schools so that more teachers and school social workers, other than the teachers who participated the programme with the CSRP instructors, could receive the trainings and be the instructors of the programme. The concepts and activities for each module were delivered in the training and participants had the opportunities to have first-hand experience of the activities. All teaching materials, including the powerpoint files, teachers' manual and activity cards were provided. This could facilitate the teachers to be the instructors of a mental health programme for students, in addition to the subjects they were trained to teach.

iii.   **School development**

Altogether there were 11 schools joined the programme in 2014-15 school year and at least 3 participating schools would like to continue implementing the programme in new school year 2015-16, this showed the positive feedback from schools and the appropriateness of the programme to students and schools. As the school-based lessons, web-based programme and the teaching materials were readily made, the current programme is highly adoptable for local primary schools who are interested in promoting mental wellbeing of students. It is believed that more students and teachers could benefit from the programme. The use of e-learning might also inform the school to adopt similar approach on teaching and learning of their school subjects or areas of concern. It is a good way of engaging students and to promote self-directed learning.

3. Cost-effectiveness

- The project can be completed within the budget approved.
- Unit cost for the direct beneficiaries = HK$2,715,700/(1026 students + 40 teachers) = HK$2547.56
- Sustainability: All teaching materials including the powerpoint files for school-based programmes, the web-based programme, teacher and student's manuals and activity cards are produced and readily available for schools. Besides, two teachers' training workshops had been provided by CSRP to participating schools. Therefore, the programme can be sustained in schools with trained teachers to be the instructors and teaching materials provided. In school year 2015-16, three partner schools have continued implementing the programme.

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- If new schools want to join the programme, they are required to attend the training provided by CSRP. The teaching materials will be provided to them free of charge after the training. If the teaching materials such as the teacher and student's manuals and activity cards are out of stock, schools may need additional resources to reproduce the materials.

Table 3: Budget Checklist

Budget Items *(Based on Schedule II of Agreement)*	Approved Budget (a)	Actual Expense (b)	Change [(b)-(a)]/(a) +/- %
Staff Cost	$1,099,082.38	$1,097,086.50	-0.18%
General expenses	$224,800.00	$304,495.71	+35.45%
Equipment	$21,000.00	$20,847.00	-0.73%
Services	$1,320,517.62	$1,289,089.19	-2.38%
Contingency	$50,300.00	$0*	-100%

*The approved budget for contingency had been used to cover the expenses of other budget items.

4. Deliverables and Modes of Dissemination

Table 4: 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.
e-learning programme "The Adventures of DoReMiFa" www.doremifa.edu.hk (11 e-lessons)	High quality	- Two training workshops for teachers of participating schools were held on 10 July 2015 and 27 Aug 2015. The concepts of each module, the activities of each lesson and the monitoring system were delivered. Altogether, 16 teachers from 6 schools attended the workshops.	Yes, any feasible mode of dissemination.
School-based programme "The Adventures of DoReMiFa" (8 sessions)	High quality	- A dissemination seminar was held on 29 Oct 2015 to introduce the programme to interested schools and non-government organizations. The background and content of the programme were mentioned with	Yes, any feasible mode of dissemination.

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		demonstration of the web-based programme and school-based activities. Preliminary results of the evaluation study were also presented. 13 participants from 10 schools or organizations joined the seminar. Some participants showed interest to the programme and had explored the opportunity to implement the programme in their schools. - Another training workshop would be held in March 2016 if adequate number of enrollment is received so that the programme can be disseminated to more schools and more students, teachers and parents can be benefitted.	
Activity cards box set (300 sets)	High quality	Distributed to the responsible teachers of participating schools who will teach the programme.	Yes, printed
Teacher's manual (300 copies)	High quality	Distributed to the teachers of participating schools who had either joined the programme in 2014-15 or received training to teach the programme.	Yes, printed
Student's manual (2,000 copies)	High quality	Distributed to each students of the 11 participating schools in 2014-15 and those who will join the programme in 2015-16.	Yes, printed
Parent's booklet (3,000 copies)	High quality	Distributed to the parents of each participating students whom had either joined the programme in 2014-15 or will join the programme in 2015-16.	Yes, printed

5. Activity List

Table 5: 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)	
CSRP instructors teaching in participating schools	May – July 2015	11		~1026		The students were engaged in the school-based lessons and web-based programme. They showed understanding of the knowledge and skills being taught.
Parents talk	30 May 2015	1			Parents ~100	Participants were interested in the topic on children's mental health and positive feedback was received.
Focus group with students	6, 8, 9, 13, 14 July 2015	8		~50		Students shared their feedback about the school-based and web-based programme. They were attracted by the illustration and storyline of the programme and found the content relevant to them. Some skills were particularly useful such as empathy and cognitive restructuring skills. However, some encountered technical problems so might not have completed the web-based programme.
Review meetings with teachers	6, 7, 8, 9, 13, 14 July 2015	6	~30			Teachers believed that the programme was suitable to the students. The topics were relevant to students' developmental stage. However, some topics like empathy and cognitive model might be more difficult for the students. They found the programme was appealing to students and the activities were engaging. They suggested more activities could be held and allowed more time for discussion. They appreciated the work by CSRP instructors and the quality of the teaching materials.

Training workshop for teachers/school social workers	10 July 2015 27 Aug 2015	6	16			Teachers and school social worker were attentive and showed understanding of various concepts of the progrmame. They actively participated in the programme activities in order to deliver the programme to students effectively in the future.
Parents talk	19, 20 Aug 2015	1			Parents ~50	Participants were interested in the topic on children's mental health and positive feedback was received.
Dissemination seminar	29 Oct 2015	10	13			Participants found the programme appealing and were interested to implement the programme in their schools in new school year. They enquired about the training arrangement and the availability of the teaching materials. Some participants from non-government organizations said would inform their colleagues of other unit about the programme.
Parents talk	28 Nov 2015	1			Parents ~150	Participants were interested in the topic on children's mental health and positive feedback was received.

Project activities from 1 Nov 2013 to 30 Apr 2015 have been reported in previous progress reports.

6. Difficulties Encountered and Solutions Adopted

i.   Prolonged development time for the official website

It took a much longer time to develop the official website because of the complexity to transform the content to a children-friendly story and to develop both front-end and back-end of the website. The project team solved the problem by keeping frequent contact with the production house and to monitor the progress closely. The production house had reallocated their human resources in order to meet the production schedule.

ii. Technical problems encountered by students

Some students reported having difficulties getting access to the web-based programme. Some was due to the lack of computer at home, while some had not installed the required version of browsers. Problem was solved by communicating with the social worker and class teachers at school, who would bring the students to the computer room during recess and lunch hour for lesson completion. IT officer of CSRP had also given direct advice to students who encountered technical problems.

iii. Use of professional language in the current project

Based on the comments from school teachers, some of the terms (such as thinking error and cognitive restructuring) were considered as too difficult for students of this age group. The content and class activities

were adjusted back and forth based on the observation of the project team as well as the feedback from students and teachers. To further enhance student's understanding about the course content and to arouse their interest in learning, voice over will be added to the web-based programme.

iv.   Class arrangement in different schools

Although each participating school had given 8 lessons to the project team to conduct the programme, the duration of each lesson varied from 25 minutes to 60 minutes. It would be rather difficult to carry out all activities designed for all participating schools. Therefore, adjustment on the activities was required. For example, for those schools with shorter period, only one activity would be carried out instead of two. Besides, some schools arranged the lessons during the time for extra-curricular activities. This had affected the engagement of students to the programme because they needed to attend the programme instead of joining the extra-curricular activities, which they considered to be fun and enjoyable. The CSRP instructors tried to engage students with reinforcement and school social workers also helped to motivate students to participate in the programme.

7. Conclusion and future directions

This school-based and web-based mental health promotion programme for primary school students had shown to have positive impact on students at postintervention from the preliminary results of the quantitative study. The positive feedback from students and teachers provided additional support to the effects and relevancy of the programme. Further study is required to assess the long term effects of the programme. With the availability of different programme and teaching materials for teachers and students, more dissemination activities may be conducted so that more students can be benefitted.