

Project Title: Let's play to be resilient
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Goals and objectives: The goal of this project is to empower early childhood educators (ECEs) with skills to develop a curriculum that not only cultivates resilience skills in kindergarteners, but also addresses the six learning areas, ultimately equipping these children with skills to face developmental challenges. The objectives of this project are: (a) to help ECEs understand resilience skills and the importance of play in nurturing related competences; (b) to illustrate how the resilience curriculum can be integrated into the KG curriculum; (c) to provide professional support to ECEs in designing their own curriculum; (d) to facilitate knowledge exchange for professional development through sharing sessions and online discussions; (e) to encourage the establishment of a professional community through the identification of “seed” schools to disseminate knowledge and share experiences with partner schools when program ends.

(2) Targets and Beneficiaries: The target recipients are ECEs from the kindergarten sector. It is expected that 5-10 kindergartens (approximately 100 ECEs and 1,000 K1-K13 children) will participate and benefit from the program.

(3) Implementation Plan: **(i) Duration:** March 2017 – December 2019. **(ii) Process:** (a) to design and prepare training materials, lesson plans, and teaching demonstrations to promote ECEs’ understanding on targeted skills; (b) to develop a comprehensive e-learning platform as a primary method to train ECEs; (c) to provide direct support to ECEs to enhance delivery competence; (d) to conduct sharing sessions for knowledge exchange; (e) to conduct pre-, process and post- evaluations; (f) to revise materials for publication of a training package; (g) to identify “seeds” and partner schools. **(iii) Collaboration with other parties:** Reaching IN...Reaching OUT Resiliency Training Program (RIRO) will collaborate by reviewing the training materials. A group of kindergartens from the Child Care Services of Sheng Kung Hui Welfare Council has indicated interest to participate in this program (see Appendix 3).

(4) Products: **(i) Deliverables/outcomes:** **(i) Deliverables:** (a) An online platform that includes learning materials to facilitate ECEs’ knowledge on resilience and techniques to transfer them to their students. The professional knowledge gained through the platform can be sustained across school years; (b) a training package will be distributed when program ends in order to sustain impact across years. **(ii) Dissemination of deliverables:** Invitation letters, leaflets, and a half-day workshop will be created to promote the program. Deliverables will be disseminated via the program's website and mail. **(iii) Commercialization potential of deliverables: ---.**

(5) Budget: The total will be HKD \$891,600, including (a) staff cost: \$554,400; (b) services: \$116,500; (c) works: \$81,500; (d) general expenses (including audit fee + CUHK overhead): \$139,200

(6) Evaluation: **(i) Performance indicators:** (a) K1-3 students’ resilience-related competences will be enhanced; (b) professional development among ECEs in curriculum design and pedagogical repertoire; (c) improved mental well-being and stress management among ECEs. **(ii) Outcome measurements:** Questionnaires will be used to assess students’ resilience prior and upon program implementation, and for process evaluation. Self-reflections will be provided for ECEs to reflect their learning and teaching. Sharing sessions will be held for ECEs to share their experiences.



Part C Project Details

Goals & Objectives

The project aims to provide early childhood educators (ECEs) with a professional development opportunity to become competent in developing a curriculum that can cultivate resilience skills in kindergarteners via the six learning areas, ultimately equipping these children with a set of competencies to confront developmental challenges ahead. As such, the objectives of the proposed program are:

- i. to equip ECEs with an understanding on the concepts of resilience and the importance of play in nurturing resilience skills in children
- ii. to highlight how resilience competences may be fostered via the current KG curriculum through the integration with the resilience curriculum
- iii. to provide continuous support to ECEs so as to enhance their competence in curriculum development that aims to enhance children's resiliency
- iv. to stimulate professional knowledge exchange among ECEs through sharing sessions and online discussions
- v. to promote the formation of a professional community, which is in line with the rationale and purposes of Collaborative Research and Development Projects, that sustainably encourages ECEs' competence in curriculum development and instructional practice by identifying "seed schools" to share their knowledge and experiences with partner schools at the end of the program

1. Needs Assessment

With the statement, "winning at the front line", engraved to their minds, many parents in Hong Kong are becoming overly zealous in equipping their children with a set of skills to excel in the competitive schooling environment. As a result, not only are youngsters enrolled in lessons that prepare them for nursery interviews, but they are also committed to a packed schedule of extracurricular activities that dramatically decreases their play time (Singtao Education, 2015; Unicef HK, 2014). According to psychiatrists from both public and private sectors, these exposures and pressure to succeed have significantly depressed the mental well-being of children, with some developing anxiety and externalizing behaviors such as self-harming (Mingpao, 2015). This trend is now becoming more common among young children, where approximately 100 of them (i.e. below 8 years of age) are seeking psychiatric help per year, which is a 10 times increase compared to 10 years ago (Oriental Daily, 2013). In fact, with respect to the current situation in Hong Kong, the United Nation has advised that "[measures need to be taken to] promote active learning capacities and the right of the child to play and leisure, including by training teachers [...]" (Constitutional and Mainland Affairs Bureau, 2013). Developmentally appropriate interventions therefore need to be developed and implemented urgently so that children can be shielded from negative effects that accompany the stressful environment. One way to achieve this goal is to train ECEs so that they may instill children with resilience skills within the schooling environment in a playful manner. Indeed, in order to establish a resilient climate that contributes to the resilience development among children, it is important to support the health of the caregivers and helpers by disseminating and facilitating resilience-related knowledge so that they may recognize their own resilience (Benard, 2010). These healthy individuals can then feedback into their



community by modeling resilience characteristics (Benard, 2010). Clearly, the inclusion of teachers in a resilience program is essential in helping children to build a foundation of resilience skills.

According to the statistics provided by the Education Bureau for the 2015-2016 academic year, more than 90% of the current ECE population is trained with a certificate in ECE and/or above qualifications. Nonetheless, the fact that less than 5% possess a Qualified Kindergarten Teacher [QKT] qualification suggests that some ECEs may need to be offered training opportunities so as to promote professional development. The proposed program thus aims to offer ECEs with an opportunity to engage in professional development and exchange through the broadening of their understanding on resiliency development and associated curriculum development. In other words, this program aims to satisfy the vision and mission of education to “tap [children’s] potential for whole person development and lay the foundation for lifelong learning” (2015 Education Bureau’s Policy Initiatives) by empowering ECEs with relevant knowledge to translate theories into practice (i.e. the development of student-centered curriculum).

2. Targets and Expected Number of Beneficiaries

ECEs from all kindergartens in Hong Kong are invited to participate in the program. It is expected that approximately 5-10 kindergartens will join; direct beneficiaries will hence include approximately 100 ECEs while indirect beneficiaries will include approximately 1,000 K1-K3 children. Tentatively, we have KGs from two school-sponsoring bodies showing initial interests in this project. Our team is confident that we can recruit more schools to join when we have additional details to be discussed with the school. Further, through the establishment of “seed” schools at the end of the program, it is expected that the number of direct and indirect beneficiaries will increase beyond the proposed approximation.

3. Conceptual Framework

Resilience is defined as a "positive adaption in the face of risk or adversity" and can be learned at any point in life (Masten, 2001; Wright, Masten, & Narayan, 2013). It is an adaptive outcome that results from a process called coping, where one purposely mobilizes one's competence or personal resources to successfully adapt to the unwanted situation (Compas, Connor-Smith, Saltzman, Thomsen, Wadsworth, 2001). The development of resilience is imperative because it is simply impossible to eliminate risk factors that contribute to negative development. To counter the negative consequences of adversities, it is essential to nurture resilience through the establishment of cognitive and socio-emotional competences (Gest & Davidson, 2011). Seven competences that contribute to resilience have been identified by Reivich and Shatté, (2002):

- I. Emotion awareness and control
 - the ability to recognize, understand and express emotions in adaptive ways
 - can influence attention and perception, subsequently affecting judgment (Phelps, 2006; Lench, Flores, & Bench, 2011)
 - also influenced by one's perception of the event and one's ability to engage in cognitive reconstrual that aims to promote self-control (Fujita, 2011)
- II. Impulse control

- the ability to stop oneself from acting on impulse
- without this ability, one would be prevented from considering the adversity from different perspectives and may demonstrate problematic behaviours that can worsen the whole situation

III. Realistic optimism

- the ability to view oneself and situation as optimistically as possible without denying the negative aspects of reality
- influences whether individuals will persevere or give up when confronted with adversity
- its absence might lead individuals to either overestimate his ability to solve the problem or fall into thinking traps (e.g. jumping to conclusions, magnifying or over-generalizing) that prevent him from coping with the situation effectively (Reivich, Gillham, Chaplin, & Seligman, 2013; Pearson & Hall, 2006)

IV. Flexible thinking

- the ability to view problems from different perspectives
- crucial to adaptive thoughts and well-being
- by being able to generate various realistic explanations for events or solutions to problems, one develops a sense of self-efficacy for making appropriate decisions to deal with similar situations in the future (Reivich et al., 2013)

V. Self-efficacy

- the belief that one is effective and can impact the world
- may affect one's ability to engage in flexible thinking (e.g. a child who believes that he is unable to exert change might fall into hopelessness, hence stopping him from thinking flexibly to solve the problem)
- individuals who are self-efficacious have higher expectations for success and will put more effort to persevere when confronted with adversity (Boyd, Johnson, & Bee, 2009)

VI. Empathy

- the ability to understand the feelings and needs of another
- facilitates healthy social relationships because of its association with prosocial behaviours and lower levels of aggression (Boyd et al., 2009); these social relations can buffer individuals from negative effects of stress

VII. Reaching out

- the willingness to take new opportunities
- reaching out to supportive relationships for help and support in face of adversity enables one to emerge from the stressor through emotional comfort and potential problem resolutions (Feeney & Collins, 2014).

Given the importance of the seven cognitive and socio-emotional competences in facilitating a positive development by buffering the individual against developmental risks, it is imperative to impart these skills to children at a young age.

3.1 Importance of play to cultivate resilience

The program will leverage playful activities, a learning approach that is adopted by KGs, because they have multiple cognitive and socio-cognitive benefits that underlie resilience, as illustrated in Table 1:

Table 1: Link between play and resilience

Examples of play	Relation to resilience
Non-directive plays	<ul style="list-style-type: none"> ● promote self-efficacy, self-confidence, and self-advocacy skills (Pearson, Russ & Spannagel, 2008; Ginsburg et al., 2007)
Symbolic play (i.e. make-believe play/pretend plays)	<ul style="list-style-type: none"> ● promote creativity, problem solving skills and diverging thinking because children can experiment with different behaviors using different objects, thereby enhancing their flexibility (Johnson, Christie, & Wardle, 2005; Ginsberg et al., 2007) ● allow children to develop a pool of affect-laden symbols and memories that can be manipulated to form a wider range of connotations to solve problems and to cope with stress (Russ, 1999, Johnson et al., 2005) ● enhance children's confidence and self-efficacy by allowing them to conquer their fears and learn of their impacts on the environment (Ginsburg et al., 2007)
Structured play (e.g. hide and seek/ games)	<ul style="list-style-type: none"> ● allow children to practice impulse control and regulation of emotions so as to continue play activities (e.g. children must restrain themselves from making noises in hide and seek) (Gray, 2011)
Peer play/ instances where rules are negotiated and established (e.g. games)	<ul style="list-style-type: none"> ● children gain mastery over their impulses as they learn to fine-tune their emotions and behaviors so as to facilitate play (Johnson et al., 2005) ● children learn how to empathize, share, turn-take, make decisions, negotiate and resolve conflicts (Johnson et al., 2005; Pearson et al., 2008; Milteer et al., 2012)

3.2 Teachers and play materials to model resilience: An exemplar & collaboration

An exemplar program that has successfully trained teachers to model resilience to young children is the Reaching In...Reaching Out Resiliency Skills Training Program (RIRO). Through (1) teaching ECEs about resilience skills and techniques to model them (e.g. ECEs or puppets as role-models) to young children, and (2) helping them to design developmentally appropriate activities that reflect desired skills, the RIRO pilot program effectively produced positive changes among the ECEs and children from 2 to 8 years old (Pearson & Hall, 2006). Follow-up surveys completed by ECEs indicated that, in addition to helping them personally (e.g. enhanced ability to put things into perspective and in problem solving), RIRO also promoted positive changes in children (e.g. increased willingness to try new things, enhanced problem solving skills and higher levels of empathy) (Pearson & Hall, 2006). The effectiveness of the RIRO pilot program thus suggests that role-modeling and developmentally appropriate activities can be used to enhance resiliency in children. In this project, the Investigators of RIRO will serve as oversea collaborators through reviewing the teaching materials (see Part D for further details).

4.3 Integration to the current KG curriculum

The program will cultivate resilience skills in children by fostering ECEs' capability to develop a curriculum that integrates resilience concepts into the six learning areas. Table 2 provides examples of activities that can promote the targeted skills via the six learning areas.

Table 2: Resilience skills and the six learning areas

Learning areas	Resilience skills that can be targeted	Examples of suggested tasks to cultivate resilience skills
Physical fitness	<ul style="list-style-type: none"> ● self-efficacy ● realistic optimism ● reaching out ● impulse control 	<ul style="list-style-type: none"> ● trying out different physical activities that may be challenging, but manageable (e.g. stepping on soft toy bricks and balancing oneself, touching different materials and/or hearing different sounds and guessing what they may be)
Language	<ul style="list-style-type: none"> ● flexible thinking ● empathy 	<ul style="list-style-type: none"> ● during story-telling, ECEs can use open-ended questions that stimulate children to explore different views and to express their opinions (e.g. raising questions about the story characters; ask students to infer characters' feelings) ● encouraging children to talk and listen to each after finishing an exploratory task
Science	<ul style="list-style-type: none"> ● flexible thinking ● reaching out ● realistic optimism 	<ul style="list-style-type: none"> ● planting flowers/ beans; students can also draw the growth of the plants ● open-discussions about technology used in the classroom (e.g. where does the water come from in the toilet?) ● open-discussions about nature when children are out on the playground (e.g. Why do leaves fall? Can you feel the wind? Do they fall because of the wind?)
Maths	<ul style="list-style-type: none"> ● flexible thinking 	<ul style="list-style-type: none"> ● children can use toy money and pretend to be a cashier at a supermarket ● use of playdoh to grasp mathematical concepts
Arts	<ul style="list-style-type: none"> ● emotion awareness and control ● impulse control ● empathy ● reaching out 	<ul style="list-style-type: none"> ● drawing (e.g. art therapy techniques such as requesting children to pretend that they are a tree and drawing themselves out can allow children to understand themselves) ● drama (e.g. children can be allowed to make their own costumes with simple objects such as cardboards)
Self & society	<ul style="list-style-type: none"> ● empathy ● emotion awareness and control ● reaching out 	<ul style="list-style-type: none"> ● putting a balloon under their shirt so that children can experience how it is like to be a mother ● mini "show and tell" when children share pictures of their family ● after providing children with an overview of the various festivals in Hong Kong, children can be asked to make relevant arts, etc.

4. Innovation

The proposed program is innovative in the sense that it aims to facilitate resilience in children by addressing the six learning areas pertinent to the KG curriculum through a playful approach; ultimately creating an integrated curriculum with a series of unique teaching units. In order to achieve this, an online learning platform that (a) allows ECEs to master a set of relevant knowledge and skills, (b) and provides suggested lesson plans and relevant pedagogical strategies to consider for each of the 3 grades (K1-K3) will be developed. These materials will be developed by local and overseas researchers (the PIs and collaborators described in Part D) as well as experienced play and/or expressive arts (i.e. arts, music, drama) therapists based on various contemporary pedagogical approaches and theories related to children development (e.g. Bandura's social learning theory, 1986), relevant research and therapies (e.g. Child Centered Play Therapy; Landreth, 1993), and materials from successful resilience programs (e.g. RIRO). Pedagogical strategies to consider so as to widen ECEs' pedagogical repertoire, such as the provision of feedback to students, will also be provided. The competence of ECEs in applying their newly acquired knowledge will be ensured through Q & A session that clarifies understanding prior to program implementation. Further, depending on the needs of each school, approximately 10 hours of professional advice and support from experienced therapists will be provided, in the forms of class observations followed by feedback discussion and guidance/co-planning of lesson plans so as to better integrate resilience concepts into the schools' curriculum. ECEs will also be encouraged to engage in self-reflections by making use of the provided self-reflection questions after carrying out each lesson. Knowledge exchange among ECEs will also be facilitated and acknowledged through the hosting of sharing sessions and the addition or revisions of program materials. For example, lesson plans designed by ECEs will be uploaded to the e-learning platform for sharing if consent is obtained. Through such support, the knowledge and competence of ECEs on resilience and curriculum planning will be enhanced. When the project ends, a training package that contains all revised materials and DVD rom (i.e. video demonstrations) will be published so that ECEs may continue to refer to them in subsequent years. Lastly, "seed" schools will be identified so that they can disseminate their knowledge to partner schools within the same district and/or School Sponsoring Bodies so as to broaden professional exchange and development on curriculum development that fosters resiliency. All in all, this program will cultivate resilience in children by providing a professional training opportunity to ECEs.

5. Teachers' and Principals' Involvement in the Project

The concerted efforts of principals and ECEs will be essential to program facilitation. ECEs will develop professionally through serving as the core members in the project. Their responsibilities are: (a) to understand key concepts of resilience and play; (b) to take part in delivering the given lesson plans and or/ designing their own set of curriculum; (c) to reflect their teaching and share their experience via self-reflections, online discussions and/or within and joint schools sharing sessions; (d) to take note of children's behavioral and social-emotional changes; (e) to participate in evaluations prior, during and after program delivery; (f) to share their learning with partner schools. On the one hand, principals' role is to encourage ECEs' participation and to supervise the progress. Their responsibilities are: (a) to support ECEs in understanding program materials and in securing relevant materials for program delivery; (b) to monitor and provide feedback on program delivery; (c) to arrange site visits from play and/or expressive arts therapist to provide support;(d) to encourage ECEs to engage in self-reflections

and share their experiences in online discussions, within and/or joint schools sharing sessions; (e) to facilitate evaluation of program effectiveness throughout program.

6. Implementation Plan with Timeline

In order to achieve the objectives, the program will offer three levels of training and support to ECEs so that they will become competent practitioners, as illustrated in Table 3. Overall, the program will allow ECEs to learn, think and reflect both independently and collaboratively.

Table 3: Three levels of training and support

Implementation support	ECE's training (Content learning & understanding)	Professional development
1. Video demonstrations on program delivery 2. Two to four teaching units that correspond to each learning area will be constructed for each grade (i.e. a minimum of 12 units for each grade) for ECEs to use as a sample; see Appendix I for a sample 3. Class observation on program delivery followed by feedback discussion 4. Guidance in/co-planning of lesson plans/ curriculum development by play and/or expressive arts therapists 5. Self-reflection questions to consider after each lesson	1. E-learning platform <ul style="list-style-type: none"> – teaching modules – reflective questions – teaching units/ lesson plans – video demonstrations – evaluations <i>(see section 7.1 for details)</i> 2. Focused group or Q&A workshop to address questions and clarify understanding	1. Online discussions via e-learning platform 2. Sharing and uploads of lesson plans 3. Sharing sessions to stimulate reflections, take note of feedback and monitor progress 4. Publication of training package, including revised training materials, lesson plans, and DVD of teaching demonstrations, at the end of program 5. Identification of “seed” schools so as to encourage a community for professional development and to sustain project outcomes

6.1 E-learning platform

The e-learning platform will be constructed based on a multi-perspective learning approach for online learning that incorporates knowledge from the schools of learning, cognitive and constructivist; as a result, the platform will address four levels of interaction (Ally, 2004) in order to facilitate and monitor ECEs' learning. An overview of the modules can be found in Table 4. Details for the four levels of interaction can be found in Table 5.

Table 4: Modules (Adapted from the 12 hours RIRO Skills Training Program)

Module(s)	Main objectives and details
1 & 2	To understand the seven cognitive and social competences that underlie resilience (Parts 1 and 2)
3	To acknowledge the importance of different forms of play in facilitating resilience as well as the roles of ECEs during play activities (e.g. as a participant or intervener)

4	To gain an overview of how resilience skills can be cultivated via the KG curriculum and the roles of ECEs
5	To offer ECEs a list of considerations to take note of when developing their own materials and to perform self-reflections

Table 5: E-learning platform: Levels of interaction to facilitate ECEs' learning and understanding

Levels of interaction	Details
Learner-interface	An e-learning platform will be developed so that ECEs can be autonomous in their learning (e.g. learning at their own pace and convenience).
Learner-content	<p>1. Teaching modules: Each module will include a brief review of the previous module, pre-instructional scenarios to activate prior knowledge, learning objectives, a content-map on module topics, appropriate examples (e.g. diagrams, pictures, videos) to facilitate understanding.</p> <p>2. Reflective questions Questions that encourage ECEs to apply, analyze, synthesize and evaluate the learned materials will be posted (e.g. Think about your students, which competences do they need to enhance? In which context(s) would you see resilience-related competences?)</p> <p>3. Teaching units: Sample lesson plans for each grade will be provided. See Appendix I for a sample.</p> <p>4. Video-demonstrations: Demonstrations of how to implement lesson plans.</p> <p>5. Evaluations: Questionnaires will be made available so that ECEs can simply fill them in for program evaluation purposes.</p>
Learner-support	Online discussion will be made available so that ECEs can work with their peers to construct knowledge. Lesson plans shared by ECEs will also be uploaded.
Learner-context	ECEs will have the opportunity to apply their knowledge when they actively exercise the given lesson plans and design their own curriculum.

7.3 Timeline

The project will span across nearly 3 years (33 months), starting from March, 2017 and ending on December, 2019.

Proposed Year/Month	Activities
March, 2017 – May 2017	<p>Administrative Work</p> <ol style="list-style-type: none"> 1. Staff recruitment and appropriate training 2. Liaise with a kindergarten for teaching demonstrations 3. Liaise with website development companies for e-learning platform production 4. Liaise with play and/or expressive arts therapists for consultation and on-going support 5. Follow up with the two school-sponsoring bodies that have showed initial interests for participation 6. Design invitational letters for half-day workshop to recruit additional participants
May, 2017 – May, 2018	<p>Phase 1 – Promotion and Program Materials Construction</p> <ol style="list-style-type: none"> 1. Hold workshop and secure participation agreements 2. Consult with play and expressive arts therapists for training materials and lesson plans 3. Design materials and submit to RIRO for review 4. Translation of materials 5. Conduct trial run of lesson plans for revisions (tentatively for 1-2 KGs) 6. Liaise with artists for relevant artworks 7. Prepare teaching demonstrations 8. Design relevant questionnaires for evaluation purposes 9. Set-up of e-learning platform for trail run
June, 2018 – Sept, 2018	<p>Phase II – ECEs Training</p> <ol style="list-style-type: none"> 1. Conduct pre-test evaluation 2. Launch of e-learning platform 3. Host focus group or Q & A workshop to ensure ECEs' understanding on materials
Oct, 2018 – July, 2019	<p>Phase III – Full Implementation</p> <ol style="list-style-type: none"> 1. Provide ongoing support to ECEs 2. Arrange play and/or expressive arts therapists to visit the school for class observation feedback discussions and curriculum design support 3. Conduct self-reported process evaluation 4. ECEs can download and upload evaluation questionnaires via program's website 5. Host sharing session for ECEs to share their experience and lesson plans 6. Revision and/or addition of program materials 7. Perform follow-ups with participating schools to monitor progress 8. Identification of "seed" schools to match with a partner school



Aug, 2019 – Dec, 2019	<p>Phase IV – Evaluation & Dissemination -</p> <ol style="list-style-type: none"> 1. Conduct post-evaluation 2. Analysis of pre- and post- data for program evaluation 3. Host sharing session for ECEs to share their experience and lesson plans 4. Dissemination of results of program evaluation 5. Revision and/or addition of program materials 6. Publication and distribution of training package via the e-platform 7. Follow-up with the collaboration of “seed” schools and partner schools 8. Possibility of scholarly publications
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7. Budget

Budget is calculated with the assumption that 10 kindergartens will participate.

Item	Description and justification	Sub-total
Staff		\$554,400
Research Assistant	<p>He/she will have a Bachelor’s degree in Psychology and/or Education with at least two years of research experience. He/she will preferably have at least one year of experience with working with children. He/she will be recruited through CUHK’s career page (i.e. open recruitment). His/her job functions are:</p> <ul style="list-style-type: none"> ● to assist in the design, translation and editing work of training/ teaching materials ● to assist in the development and dissemination of invitation letters, training package and evaluations ● to assist in the shooting and editing of teaching demonstrations ● to liaise with kindergartens/ECEs for video demonstrations, participation, evaluations, the provision of support ● to liaise with translators, designers, website service companies, and printing companies to facilitate the launch of e-learning platform and publication of training package ● to monitor e-learning platform ● to assist in Q&A workshop and sharing sessions ● to assist in data collection and analysis ● to receive appropriate training from the PIs so that he/she can assist in the provision of manpower support for ECEs 	<p>\$16,000 x 33 months x 1.05 MPF = \$ 554,400</p>
Services	Support given to ECEs	\$116,500

Play and expressive arts therapists	<p>He/she will be qualified /trained therapists experienced in working with young children using expressive arts/play-based approach. His/her job functions are:</p> <ul style="list-style-type: none"> ● to advise on the content of training/ teaching materials ● to lead classes for video demonstrations in terms of program delivery ● to provide support to ECEs in terms of curriculum design ● to monitor program delivery through class observations followed by a feedback discussion with the ECEs. ● each participating school will receive approximately 10 hours of support depending on their needs 	<p>Hourly rate at \$ 800/hour</p> <p>20 hours of consultation for materials development and video demonstrations = \$16,000</p> <p>10 hours of support per school = \$8000 per school</p> <p>\$16,000 + (\$8000 x 10 schools) = \$96,000</p>
Materials for program delivery	<ul style="list-style-type: none"> ● Each school will be provided with a lump sum for printing (e.g. story cards) and purchasing relevant materials (e.g. art materials) needed for implementing the lesson plans 	<p>\$ 2000 x 10 schools = \$20,000</p>
Workshops, and sharing sessions	<ul style="list-style-type: none"> ● To attract participants, to clarify ECEs' understanding, to evaluate training materials and to allow professional knowledge exchange ● 	<p>\$500</p>
Works	Production of teaching materials	\$81,500
Artists/ Designers	<ul style="list-style-type: none"> ● to design relevant drawings to be included in teaching materials so as to stimulate ECEs' interests and understanding ● to design relevant drawings for materials associated with lesson plans (e.g. story cards) 	<p>\$20,000</p>
Website/e-learning production	<ul style="list-style-type: none"> ● design and maintenance ● a Homepage and pages (i.e. lecture notes, videos, evaluations, lesson plans, sharing sessions, discussion board) with restricted access ● hosting for 2 years ● to allow ECEs to learn materials and share their experiences at their convenience ● to allow ECEs to evaluate program effectiveness through the downloads of evaluation questionnaires ● primary method of the delivery of training materials 	<p>\$50,000</p>
Translations	<ul style="list-style-type: none"> ● to translate learning materials adapted from RIRO and other relevant materials in English in order to facilitate ECEs' learning ● he or she will be CUHK students (as helper) 	<p>\$55/hour x 100 hours = \$5,500</p>
Training package (resilience materials and lesson plans & DVD of teaching demonstrations)	<ul style="list-style-type: none"> ● to provide ECEs with a finalized version of all materials so that they can use it in future years ● each school will receive 2 copies (2 copies x 10 schools = 20 copies) ● for dissemination and sustainability purposes 	<p>\$6000</p>



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General Expenses		\$139,200
Printing & sundry	<ul style="list-style-type: none"> ● Printing and distribution of invitation letters and program leaflets for half-day workshop, relevant notes for sharing sessions ● Method to attract potential kindergartens for participation, and dissemination of program deliverables 	\$4400
Miscellaneous	<ul style="list-style-type: none"> ● stationary, storybooks, etc. for program materials development ● travelling expenses for play and/or expressive therapists and research assistant for school support 	\$5,000
Audit	<ul style="list-style-type: none"> ● Auditing fee for grant sought exceeding \$150,000, as advised by QEF 	\$ 5,000
Contingency fee	<ul style="list-style-type: none"> ● Less than 3% of total budget exclusive of staff cost 	\$8499
CUHK Overhead	<ul style="list-style-type: none"> ● a standard requirement from CUHK for externally funded projects with staff as Principal Investigator ● 15% of total budget 	\$116301
TOTAL		\$891,600

8. Report Submission Schedule

My university commits to submit proper reports in strict accordance with the following schedule:

Project Management		Financial Management	
Type of Report and covering period	Report due day	Type of Report and covering period	Report due day
Progress Report 1/3/2017 - 31/8/2017	30/9/2017	Interim Financial Report 1/3/2017 - 31/8/2017	30/9/2017
Progress Report 1/9/2017- 28/2/2018	31/3/2018	Interim Financial Report 1/9/2017 - 28/2/2018	31/3/2018
Progress Report 1/3/2018 - 31/8/2018	30/9/2018	Interim Financial Report 1/3/2018 - 31/8/2018	30/9/2018
Progress Report 1/9/2018 – 28/2/2019	31/3/2019	Interim Financial Report 1/9/2018 – 28/2/2019	31/3/2019

Final Report 1/3/2017 – 31/12/2019	31/3/2020	Final Financial Report 1/3/2017 – 31/12/2019	31/3/2020
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9. Expected Project Outcomes

A comprehensive e-learning platform and relevant support that equip and enhance ECEs' understanding and competence on resilience skills and ways to transfer them to children will be offered. Further, the sharing of lesson plans and summaries of sharing sessions will be included in the e-learning platform. Lastly, teaching demonstrations (DVD rom), revised materials and lesson plans will be compiled and distributed to participating schools when the program ends so that they can be used across years. Collaborative work between "seed" and partner schools will also be encouraged.

As resilience skills will be transferred to children through the KG curriculum, it is expected that children will not only improve their resilience, but also their physical, cognitive and language, affective and social, and aesthetic development (i.e. the four KG developmental objectives). ECEs will also be able to develop professionally through their experiences, self-reflections and knowledge exchange. Positive side effects may also be present, whereby ECEs may, through learning and modeling, also strengthen their resilience skills.

10. Project Evaluation

Several measures will be taken to evaluate the proposed program. First, relevant questionnaires will be used to measure children's resilience skills at baseline and upon program completion to see if the benchmarks (i.e. intangible expected outcomes) have been achieved. Second, self-reflection questions will be developed to allow ECEs to evaluate their instructional efficacy (Bandura, 1986). Third, self-reported questionnaires will be developed for process evaluation so as to determine whether program materials need to be modified to better match the needs of ECEs. Fourth, sharing sessions will be held during and at the end of the program for ECEs to share their experiences, opinions on program materials and/or effects on the kindergarteners and on themselves.

11. Sustainability of Project Outcomes

The effects of the program will be sustained in the following ways: 1) because the proposed program builds on KG curriculum, trained ECEs can sustain the program on a whole school level and across academic years by referring to the training package ; 2) principals can also sustain the program by encouraging ECEs to share their ideas as well as to train new staff members; 3) identification of "seed" schools to transfer knowledge to partner schools ; 4) by instilling children with a set of resilient skills in a fun and experiential way, the benefits of the program will be sustained throughout their development. Additional funding will be discussed with community organizations in order to (a) facilitate knowledge exchange among ECEs; (b) provide additional support for "seed" and partner schools; and (c) introduce the program to other kindergartens, allowing more kindergarteners and ECEs to benefit from the program.

12. Dissemination/ Promotion of Project Outcomes

In Phase I, invitational letters will be sent to School Sponsoring Bodies to invite them to attend a half-day workshop that introduces the program to them. In Phases II and III, program materials will be disseminated through a e-learning platform. Summaries of sharing sessions will also be posted online. In Phase IV, a sharing session will be held so that ECEs can share their experiences and lesson plans. Further, each school will receive a training package. Overall, project outcomes will be disseminated through the program's website (and/or via the website of the Faculty of the University where the PI is in).and mailed to schools. In addition, findings from the program may be disseminated at international conferences and published in international journals.

13. Applicants' Capability

The Principal Investigator (PI) is a university professor who is a registered clinical psychologist under the Hong Kong Psychological Society. In addition to being a certified play therapist and a play therapy supervisor, she also has a track record of publishing articles and research papers in the field of play therapy. She has conducted numerous talks and seminars on play therapy for children, and also provides consultancy services for non-government organizations on working with needy children in the preschool sector.

The Co-PI is a PhD candidate from McGill University, specializing in Educational Psychology in Human Development. She has extensive research experience on children and adolescent development. She is also experienced in teaching kindergarteners and primary school students. She will assist the PI in overseeing the whole project and in liaising with overseas collaborators in Canada.

Appendix 1: Sample lesson plan**Where are all my cupcakes?**

Targeted group: K3 students

Targeted resilience skills: flexible thinking, empathy, reaching out

Objectives: to stimulate children to think from different perspectives; to encourage children to think from the perspectives of others

Corresponding learning areas: language and arts

Methods of teaching: story-telling, art and crafts

Major roles of ECEs: storyteller, and an inspirer by asking open-ended questions

Materials: a printed version of story-cards, materials for art and crafts (e.g.

Play-doh, paper, colored pencils, glue-sticks)

<p>Preparation to stimulate interests</p> <p>(2 minutes)*</p>	<ol style="list-style-type: none"> 1) Invite children to reflect back to their daily experience, "Has anyone taken your things without asking before?" "How did you feel?" "Did they explain why?" "Did you accept their explanation?" 2) Tell students that they will read a story about a girl who has her things taken away without permission.
<p>Reading</p> <p>Materials needed: printed version of story-cards</p> <p>→ Discussion questions help to stimulate children's ability to think flexibly and to demonstrate empathy</p> <p>(10 minutes)*</p>	<p><i>"One day, Tammy, brought a large plate of yummy cupcakes to school. Each cake says "Happy Birthday" on it. All of her friends smiled brightly when they saw it. Tammy was very happy too."</i></p> <p>→ Ask children to infer, "Why are they all so happy after seeing the cakes?" "Who do you think the cakes are for?"</p> <p><i>"Right after she put the plate on her desk, the teacher asked all the children to go to the playground for their morning exercises. All of the children joined, except for Johnny, who was nowhere to be seen. A few minutes later, Johnny, entered the empty classroom. Johnny was out of breath and looked very tired. His hair was messy. He forgot to button his shirt too. Suddenly, a huge sound came out from his stomach. Johnny was very very hungry."</i></p> <p>→ Discuss with children why Johnny might have looked very tired and hungry.</p>

	<p><i>“Johnny glanced around the classroom and noticed the plate of yummy cupcakes.</i></p> <p><i>Fifteen minutes later, all the children returned to the classroom from their morning exercise. Tammy gasped, “Where did all my cupcakes go?”. Her friends and her searched everywhere, but they could not find it.”</i></p> <p>➔ Discussion with children, “Where do you think the cupcakes went?” “How do you think Tammy feel?”</p> <p><i>“Johnny looked down at the empty plate that he hid under his desk. He got up and said, “I am very sorry, Tammy. I ate all of your cupcakes...” Suddenly, another “kooo kooo” noise came from his tummy. Tammy looked at Johnny in his messy hair and his unbuttoned shirt. She smiled at him and said, “Did you get up late this morning and so, you didn’t eat your breakfast?” Johnny blushed and nodded.”</i></p> <p>➔ Invite the children to discuss alternative ways for Johnny to satisfy his hunger</p> <p>➔ Point out to children that Tammy reasoned Johnny’s actions by considering his situation</p>
<p>After reading:</p> <p>Materials: arts & crafts</p> <p>➔Arts & crafts can encourage children to reach out to new experiences</p> <p>(15 minutes)*</p>	<p>1) Show the picture of Tammy looking very confused, with a question mark next to her hand, to the children, <i>“Johnny ate Tammy’s cupcakes, and so, Tammy now needs to bake a new plate to share with her friends. She doesn’t know what to put on her cupcakes, can you please give her some ideas?”</i></p> <p>2) Children can then be given a choice to either draw or make the cupcakes from available materials. After this task, ECEs can encourage children to show and talk about their cupcakes.</p> <p>** If permitted by the KG, alternative tasks could be having children to decorate a plain cupcake with icing and chocolate chips, etc.</p>
<p>Conclusion:</p> <p>(3 minutes)*</p>	<p>1) When we are trying to understand the actions of others, we need to “think in their shoes” (i.e. take their perspective) <i>[remind children how Tammy thought in Johnny’s shoes].</i></p> <p>2) When we face a problem, there are usually more than one way to solve it <i>[remind children of what they have come up with in terms of what Johnny could do to satisfy his hunger].</i> If one solution does not work, we can keep trying. Asking</p>

	others for advice will also help <i>[remind children how Tammy asked them for advice when making a new tray of cupcakes].</i>
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*Suggested time for each session. ECEs are free to change as appropriate

Pedagogical strategies to consider:

- There is no right or wrong answer to the open-ended questions, getting the children to think, reflect and express their opinions is the most important.
- If children are unable to provide a suggestion, ECEs could provide them with examples and see if children agree or disagree.
- Try to help children to articulate their thoughts if they are simply gesturing.
- Rephrasing children's speech (e.g. one word answer) in a more complete/ complex way could help them with their language skills; however, avoid forcing or expecting children to immediately imitate your sentences.
- When a child offers an answer that ECEs are uncertain how to reply, ECEs may simply acknowledge the child's question ("*XXX is thinking about ...*") so that the child knows that his opinion is heard.
- ECEs may comment on children's work in the role of Tammy so as to stimulate students' reflection: "*You used lots of glue when making the cupcake, is that to stick the "ingredients" together?*" Regardless of the child's answer, ECEs may still acknowledge the work and praise the child (e.g. "*You used lots of glue, I think that it will not fall off the cupcake*").
- If the child demonstrates a false thinking style (e.g. "*I just don't know how to make the cupcake*"), ECEs may first acknowledge his feelings, and then remind him of instances when he did manage to complete a similar task (e.g. "*You are feeling frustrated because you cannot seem to make the cupcake you want, but remember how you created a robot last time with the legos? If you keep trying, you may be able to make a pretty cupcake too.*")
- Providing children with a sample cupcake could stimulate children's interests in the arts & craft session.

Appendix II – Revisions made based on comments from the committee

In response to the comments for our previous submission, all sections of the proposal have been revised. Major changes are as followed:

1. Integration of program to the KG curriculum: A table that detail how resilience skills can be transmitted through the 6 learning areas are provided (see Table 2, pg. 5-6). Learning modules have been revised to include an additional module that addresses how resilience skills can be transmitted through the KG curriculum (see Table 4, pg. 8).
2. Need for support for ECEs to facilitate understanding: Q & A workshop or focused group will be conducted after ECEs' training to clarify understanding. Teaching demonstrations, sample lesson plans and associated pedagogical strategies to consider for K1-K3 (see Appendix I) will be created and uploaded to program's website for ECEs' perusal. Ongoing support, in the forms of class observation feedback and curriculum design, will be provided to each participating school. A training package, including all revised materials and DVD for teaching demonstrations will be developed and distributed when program ends to sustain its impacts over future years. Further, a coalition between "seed" school and partner schools will be formed to sustain project outcomes and to create a professional community. Overview of ECEs' training and support can be found in Tables 3-5 (pg. 7-9).
3. Length of program: The program is now extended to 33 months, allowing sufficient time for program construction and program evaluation (see revised Section 7: Implementation plan with timeline).

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Part D Details of Collaborating/ Participating Organizations

Project No. 2015/0544 (Revised)

Reaching In...Reaching Out (RIRO) will be the collaborating organization. As some of the materials from the proposed program will be designed with references to RIRO's Guidebook and its online resources, they will be reviewed by RIRO prior to use so as to ensure their suitability. The developers of the RIRO, Dr. Darlene Hall and Jennifer Pearson, will collaborate with us in preparing for the teaching materials. Dr. Hall was a faculty member in the School of Nursing at York University and several universities in the United States. She is a recognized trainer and one of her expertise is in children's resiliency. Ms. Pearson is a registered psychotherapist and is a notable program developer, trainer and consultant in education, mental health and community-based settings. She is experienced in leading clinical staff trainings, such as in the practical application of resilience theory with children and families.

The Child Care Service under Sheng Kung Hui Welfare Council, with 8 kindergartens under their service unit, has expressed interests to work as a collaborator for this project (see Appendix III).