

Final Report of Project

Project No. : 2008/0323

Part A

Project Title: "Developing an Early Childhood Classroom Observation Scale (ECCOS) to Assess the Quality of Education in Hong Kong Kindergartens"

Name of Organization/School: Faculty of Education, the University of Hong Kong

Project Period: From September, 2009 (month/year) to October, 2010 (month/year)

Part B

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

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

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

** Final Report of Project prior to the 8th call should be signed 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.*

** Final Report of Project under the 8th and subsequent calls 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.*

1. Attainment of Objectives

The *Performance Indicators (Pre-primary institutions)* (PIs) were first introduced into the Hong Kong early childhood education (ECE) system in the hope of providing a measurement tool for the pre-primary institutions in Hong Kong to perform self- as well as external evaluations. However, in the course of evaluating and reflecting on the quality of their own teaching and the performance of their students' learning and achievement against the PIs, early childhood practitioners very often encounter a number of difficulties. Such problems are mainly due to the vagueness of the evaluation criteria within the PIs, the abundant amount of details to be examined under each assessment aspect, and the failure to incorporate the *Guide to Pre-primary Curriculum* (GPC), published by the Hong Kong government in 2006, into the PIs in order to develop a revised version of the PIs, which should be more comprehensive and contextually appropriate.

As a response to tackle the difficulties faced by the early childhood practitioners and to enhance the quality of ECE in Hong Kong, the Early Childhood Classroom Observation Scale (ECCOS) was developed. To facilitate frontline ECE practitioners to easily accommodate themselves to the style of ECCOS, it retains the design structure of the Learning and Teaching domain of the PIs. The following paragraphs describe the objectives of our research, subsequent actions that our research team adopted to attain the objectives, as well as the evidence and effectiveness of such actions.

Objective 1

To construct an authentic and practical classroom observation instrument that can be easily adopted by early childhood institutions in Hong Kong to enhance the quality of kindergarten learning and teaching programmes.

1. Activities related to the objective: Extensive literature review and analyses were carried out on existing Western and Chinese ECE assessment scales, such as the *Early Childhood Environment Rating Scale (Revised edition)*, as well as the PIs and the recently published GPC (2006) in Hong Kong, in order to extract the essential assessment items and incorporate them into ECCOS.

Extent of attainment: Fully achieved.

Evidence of attainment: Construction of the content of the assessment criteria of ECCOS was achieved, with specific, concrete and quantitative measures given to variables and items that were previously hard to operationalize within the PIs.

2. Activities related to the objective: In-depth consultations with ECE experts, experienced principals and practitioners were carried out to collect their feedbacks on the content of ECCOS, the sufficiency of its assessment criteria, its layout etc. The consultations allowed our research team to identify possible elements or items that might have been previously inconspicuous and to better define the evaluating categories and quantifiers in order to suit the Hong Kong pre-primary education system.

Extent of attainment: Fully achieved.

Evidence of attainment: ECCOS has undergone numerous modifications throughout the consultation period and the resulting version comprises the consolidation of the advices and suggestions given by ECE experts, principals and practitioners. To ease ECE practitioners' usage of ECCOS, only one variable is under examination

within each 'what to look for' category. Statements, as opposed to questions in the PIs, are also used to address the assessment criteria instead. Detailed descriptions are given to each assessment criterion, with clearly laid out examples and scenarios for exceptional cases where possible. Furthermore, effort was made to quantify and operationalize as many evaluating determiners as possible. A record sheet was also produced for users to document their ratings for convenient and systematic calculation of their ratings later on. An instructional manual was also produced to guide users whilst applying ECCOS in their evaluation process.

Objective 2

To develop a reliable, valid and useful observation tool through empirical research for ECE programme evaluation and future research purposes.

1. Activities related to the objective: A conference was held on 28th September, 2010 at the University of Hong Kong (HKU) to introduce the purposes, content, usage etc of ECCOS to principals and supervisors of Hong Kong's pre-primary institutions. Participants from the 44 pre-primary institutions that attended were asked to use ECCOS to rate the quality of learning and teaching by viewing video clips which showed the real non-Hong Kong kindergarten classroom teaching. Their record sheets were then collected and analyzed using SPSS18.

Extent of attainment: Fully achieved.

Evidence of attainment: Statistic analyses have indicated a set of satisfactory reliabilities and validities.

2. Activities related to the objective: School-based workshops were carried out in various kindergartens for ECE practitioners to try to rate the quality of teaching and learning of their classrooms. Their record sheets were then collected and analyzed using SPSS 18.

Extent of attainment: Fully achieved.

Evidence of attainment: analyses have indicated a set of satisfactory reliabilities and validities.

Objective 3

To support pre-primary institutions on using ECCOS to assess the quality of their teaching and learning against the PIs, and subsequently, to facilitate the construction and implementation of appropriate school-based action plans.

1. Activities related to the objective: A conference was held on 28th September, 2010 at the University of Hong Kong (HKU) to introduce the purposes, content, usage etc of ECCOS to principals and supervisors of Hong Kong's pre-primary institutions. Participants from the 44 pre-primary institutions that attended were asked to try-out ECCOS and to express their feedbacks and recommendations for improvement. All their responses were recorded and studied for further refinement of ECCOS.

Extent of attainment: Fully achieved.

Evidence of attainment: The construction of ECCOS had undergone a lot of modifications through which different advices and suggestions had been carefully analyzed and refined before incorporating them into ECCOS, and the final masterpiece is now ready to be introduced into our Hong Kong ECE system.

2. Activities related to the objective: School-based teacher training workshops were held at 8 pre-primary institutions located across Kowloon and the New Territories. Altogether 121 principals and teachers attended the workshops to try to use ECCOS to assess the quality of learning and teaching of their own institution using

pre-recorded video clips of their own classroom situation.

Extent of attainment: Fully achieved.

Evidence of attainment: Ratings of the ECE practitioners were collected, entered onto the computer and analyzed using SPSS 18.

2. Project Impact

In the light of the vague and inadequate quantifiers that the PIs provide the ECE sector with, frontline practitioners have found the introduction of ECCOS exceptionally helpful and effective in assisting them through their routine assessments of the quality of their teaching curriculum and children's performance. ECCOS provides pre-primary institutions with a reliable, valid and contextually-appropriate assessment tool to measure the various aspects of their learning and teaching domains. Efforts were made to quantify and operationalize items that were previously difficult to assess and to incorporate observable items in order to provide an all-round assessment of ECE quality. For example, the performance of the adequacy of the daily free-choice activities is measured against the proportion of time allocated in relation to the daily curriculum, and not merely stating 'adequate time' should be allocated to a certain activity without further explaining the true meaning of 'adequate'. Frontline practitioners also found the inclusion of real-life cases and examples useful in letting them know what particular circumstances are to be expected in response to a particular assessment item. Moreover, the extensive coverage of descriptions across all performance levels also allows practitioners to identify the exact requirement to be achieved for an item to reach a certain performance level. This not only limits the extent of uncertainty during the course of evaluation, but also helps increase the clarity of how different practitioner rates and thus, further converge their discrepancies to achieve unanimity and enhance team spirit. Practitioners also benefit from having the opportunity to reflect on the strengths and weaknesses of their own, as well as their co-workers', practices and habits. This greatly helps them in refining their teaching methods and skills and modifying those that are yet to be improved, and hence, quality teaching can be targeted at and maintained. This helps strengthen their professional growth and sense of accomplishment, especially when they could better meet the increasing demands of today's children.

Taking into account that the content of ECCOS embraces the ECERS, the GPC as well as overseas research findings, and that mode of how the teacher-training workshops were carried out, practitioners have been exposed to an in-depth amount of facts, scales and information. Their views on the changes taking place within the ECE sector, both locally and abroad, were heightened. Such workshops also facilitate effective in-service training and the exchange of ideas, teaching strategies, skills etc among frontline practitioners.

On the preschoolers' learning facet, practitioners' subsequent reflections on and evaluations of their teaching inevitably help improve the learning atmosphere and environment that is enriched with various teaching materials, resources, preschoolers' own creative artwork etc. Greater involvement in their learning environment helps stimulate and foster the young minds' creativity and potential/specific abilities, their desire to learn and to participate in daily activities. Preschoolers' higher involvement in decorating their classroom and activity corners, assessing of their own performance levels etc also fosters their attachment to their school and hence long-lasting positive attitudes

within and outside the classroom are believed to be achievable.

On the whole, feedbacks from principals and frontline practitioners of the pre-primary institutions which attended our conference and/or workshops claimed that ECCOS was easy to apply and follow. They were very generous in contributing to the growing ECE spectrum of Hong Kong and future research collaborations with them are promising.

3. Cost-effectiveness

As ECCOS is primarily an observation tool designed to be used in an ECE setting, if any pre-primary institution or interested party wishes to adopt it to evaluate the effectiveness and quality of their learning and teaching aspects, materials that they need are – a copy of ECCOS (hard or electronic version), the GPC, layout of the daily curriculum of the particular class to be assessed, portfolios of preschoolers' and the highest ECE qualifications of all the frontline practitioners of the particular pre-primary institution and lastly, a pen. The setup cost of the assessment is very minimal for pre-primary institutions to use ECCOS as a self-assessment tool as the documents could either be found online, such as the GPC and ECCOS that will be uploaded onto the QEF website soon, or are already in hand, such as the preschoolers' portfolios and practitioners' qualification information.

Throughout the pilot study phase, our team printed out copies of ECCOS for participating kindergartens using a computer, printers and a photocopier which were all located at the HKU. However, prior to the conference held on 28th September, 2010 and the teacher-training workshops that followed, copies of ECCOS, instructional manuals and record sheets were produced at a professional printing shop. For details, please refer to table 3. The total printing cost was \$5,650 but only \$1,226.21 could be deducted from the QEF grant, as listed out in our final financial report, and the remaining \$4,423.79 had to be deducted from another research grant of mine. The reason for not having enough funding to cover the printing cost was due to the rising costs of computer software, accessories and the ink cartridges of my Samsung colour laser printer, all of which had not been anticipated beforehand.

As table 3 suggests, the grand total amount of the two printings is \$5,700, but as a token of appreciation for thanking my research team for approaching them for the second time, the printing company agreed to cut the printing fee by \$50, thus \$2,550 was reduced to \$2,500, and the grand amount was hence \$5,650, as listed in table 4.

Table 2: Budget Checklist

Budget Items <i>(Based on Schedule II of Agreement)</i>	Approved Budget (a)	Actual Expense (b)	Change [(b)-(a)]/(a) +/- %
Staff Cost	\$159,300.00	\$154,048.80	-0.033%
Equipment	\$9,500.00	\$9,380.00	-0.013%
General Expenses	10,000.00	\$10,000.00	0

Table 3: Printed Documents and Their Costs

Event	Documents	Copies	Unit Cost	Sub-total
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Conference	ECCOS	100	\$17	\$1,700
	Instructional Manual	100	\$13	\$1,300
	Record Sheet	150	\$1	\$150
				Total: \$3,150
Workshops	ECCOS	85	\$17	\$1,445
	Instructional Manual	85	\$13	\$1,105
	Record Sheet	/	/	/
				Total: *\$2,550
				Grand total: \$5,700

*Preliminary price which was reduced to \$2,500 ultimately.

Table 4: Actual Printing Costs

Event	Total amount (HKD)
Conference	\$3,150
Workshops	\$2,500
Total	<u>\$5,650</u>

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.
ECCOS, instructional manual and record sheets	Every person who attended the conference received a copy of ECCOS (\$17/copy), instructional manual (\$13/copy) and record sheet (\$1/copy).	Distributed to 77 participants at the conference on 28 th September, 2010. All practitioners indicated that they would use the materials as try-out.	Yes. QEF is very welcome to disseminate ECCOS to any interested pre-primary institutions who wish to carry out self- and external quality of teaching and learning evaluations, via electronic means or in the form of hard copies.
ECCOS, instructional manual and record sheets	Each participated kindergarten received 3 copies of ECCOS (\$17/copy), instructional manual (\$13/copy) and record sheet (\$1/copy).	Materials were distributed after each workshop to the principal of each participated kindergarten that took part towards the end of this project.	Yes. QEF is very welcome to disseminate ECCOS to any interested pre-primary institutions who wish to carry out self- and external quality of teaching and learning evaluations, via electronic means or in the form of hard copies.

Conference papers and academic journals are under construction in the meantime and will be sent off for publication once they are ready.

5. Activity List

With free copies of ECCOS and the instructional manual in hand, ECE principals, supervisors and frontline practitioners attended the first ECCOS conference on 28th September, 2010 at the Hui Oi Chow Building at the HKU to get to know the content, usage, benefits and potential impact of ECCOS. Videos capturing scenes of classroom teaching and outdoor play were shown to participants who then underwent their first practice of using ECCOS. Ideas or suggestions to further the modification of ECCOS were gathered and feedbacks obtained were very constructive in the subsequent refinement of ECCOS .

Table 4: Activity List

Study Phase	Brief description	Pre-primary Institution Involved	Number of Participants	Feedback from participants
Preparations and Consultations	Consultations were carried out with experienced ECE principals, supervisors and frontline teachers in order to collect their impression and feedbacks on the first draft of ECCOS, including the possible inclusion of unnecessary assessment items, the identification and incorporation of previously neglected evaluating items, the appropriateness of the use of assessment wordings and layout etc.	Buddhist Kam Lai Kindergarten	3	The first impression that most ECE experts felt was a massive amount of words. Suggestions were made to separate different points by bullet points. The introduction of scenarios and examples, observable and quantifiable evaluating criteria as well as the use of statements instead of questions was found exceptionally helpful. However, different interviewees had different opinions regarding wordings to illustrate and quantify the evaluating measures (e.g. 大部份 vs 百分比), hence, both views were incorporated into ECCOS wherever possible.
		Tsung Tsin Mission Graceful Kindergarten And Nursery (Ma On Shan)	1	
		Christian Alliance Chen Lee Wing Tsing Memorial Kindergarten	3	
		St. Stephen's Girls' College Kindergarten	1	
		Tung Wah Group of Hospitals Tin Wan Kindergarten	1	
		Total	9	
Pilot	Empirical observations of the practice of local kindergartens were carried out. Two different grades of children were chosen randomly and their real classroom teaching was recorded by the research team who also used ECCOS to evaluate their education quality. Unobservable items, such as practitioners' ambition, their educational	Buddhist Kam Lai Kindergarten	2	Practitioners found the content of the first draft of ECCOS too packed with words and they all reckoned the introduction of bullet points useful. Some of them found the rating of some non-observable items, e.g. teacher- /student- oriented and teacher's aspiration etc, difficult to rate. However, the ratings of such items are inevitable if an all-round assessment of the quality of
		Tsung Tsin Mission Graceful Kindergarten And Nursery (Ma On Shan)	2	
		Christian Alliance Chen Lee Wing Tsing Memorial Kindergarten	2	

	qualifications etc, were later asked about by the research team. Recorded videos were later viewed by another party of the research team to test the preliminary reliability of ECCOS.			teaching and learning is to be achieved.
		Total	6	
Conference	Held in the afternoon on 28 th September, 2010 at the Hui Oi Chow Building located at the main campus of the HKU. Video clips capturing some of the real classroom scenarios obtained were shown to participants who could then rate the clips against ECCOS as a trial practice.	44 pre-primary institutions which accounted for 77 participates attended the conference. For details, please refer to the acknowledgement list (Appendix 2).	77	A great amount of details and information was the most common feedback. Suggestions were made to separate the extensive amount of information within ECCOS by bullet points to facilitate easy reading.
Teacher-training Workshops	School-based workshops were carried out at 8 pre-primary institutions located across Kowloon and the New Territories to introduce ECCOS to principals and teachers and to allow them to try using ECCOS to assess the quality of learning and teaching of their own institution using video clips of their own classroom situation. 2 classes of different grades were randomly selected at each pre-primary institution except Academy Kindergarten of which classes from all the 3 grades were rated; a total of 4 classes of the grades: K1, K2 and K3 were rated. Video clips were either recorded by them or by the Research Assistant prior to the workshop. Each workshop lasted around 2-3 hours.	<p>HK & KLN K/F W A Sun Fong Chung Kindergarten</p> <p>Christian Alliance Chen Lee Wing Tsing Memorial Kindergarten</p> <p>Hong Kong Sheng Kung Hui St. Nicholas' Nursery School</p> <p>Hong Kong Sheng Kung Hui Kei Oi Nursery School</p> <p>CUHK FAA Chan Chun Ha Kindergarten</p> <p>Ho Shui Kindergarten (Sponsored by Sik Sik Yuen)</p> <p>W.F.B. Mantra Institute Nursery School</p> <p>Academy Kindergarten</p>	<p>16</p> <p>30</p> <p>8</p> <p>7</p> <p>17</p> <p>8</p> <p>7</p> <p>28</p>	Practitioners found the content of ECCOS comprehensive and the instructions of ECCOS easy to follow. Some of them had problems with the calculation of ratings but such problems were dismissed after further clarification of the instructions.
		Total	121	

6. Difficulties Encountered and Solutions Adopted

At the beginning of this project, due to the hindrance brought about by the Ethics Committee of the HKU, the research project could not take place until two months later in November, as opposed to September stated in the proposal. This delay in obtaining ethical clearance had inevitably postponed the commencement of the research and the whole schedule as listed in the proposal. Consultations with ECE experts and other research-related work, such as data collection, could not take place until November when permission was finally granted by the Committee. A letter of request for a 2-month extension hence, had to be sent to the QEF in August, 2010 and thankfully, permission was given to have the end of my research postponed until 30th October, 2010.

During the course of our project, there was also a change of Research Assistant (RA). The former RA resigned from her job in early March and the subsequent RA started off on 16th March, 2010. There was thus a split in the salary allocation in March, i.e. \$ 1,716.58 for the first RA and \$6,866.32 for the subsequent RA.

As for the budget for my General Expenses, coverage for computer software and accessories had to be extracted from another research grant of mine due to a lack of anticipation of the rising prices at the submitting of my proposal.

Appendix 1

Pre-primary institutions (5) that took part in the preparations and consultations study phase:

崇真會美善幼稚園(馬鞍山)

宣道會陳李詠貞紀念幼稚園

佛教金麗幼稚園

東華三院田灣幼稚園

聖士提反女子中學附屬幼稚園

Appendix 2

Pre-primary institutions (44) that attended the conference on 28th September, 2010

翰林幼稚園 (天水圍)	聖公會青山聖彼得堂山景邨幼稚園
浸信會培理學校	欣苗幼稚園
寶寶幼兒學校	聖公會青山聖彼得堂山兆麟苑幼稚園
佛教金麗幼稚園	崇真會美善幼稚園 (馬鞍山)
中華基督教會屯門堂幼稚園	慈正邨菩提幼稚園
卓思英文學校暨幼稚園 (青怡分校)	東華三院呂馮鳳紀念幼稚園
宣道會陳李詠貞紀念幼稚園	世佛會觀自在幼兒學校
香港中文大學校友會聯會陳震夏幼稚園	西太平洋幼稚園
嘉言中英文幼稚園	禮賢會元朗幼兒園
佳寶幼稚園	栢基海韻幼稚園
香港聖公會基愛幼兒學校	元朗信義會生命幼稚園
香港聖公會聖尼哥拉幼兒學校	民生書院幼稚園
中華基督教會屯門堂何福堂幼稚園	
香港創價幼稚園	
嘉福浸信會幼稚園	
葵盛禮賢會幼稚園	
粵南信義會腓力堂馬頭圍幼兒學園	
保良局朱李月華幼稚園/幼兒園	
天純幼稚園	
麗晶幼稚園學校	
救世軍陳昆棟幼稚園	
救世軍學前教育	
救世軍北角幼兒園 - 北角育嬰園	
救世軍三聖幼兒園	
救世軍天平幼兒園	
救世軍荃灣幼兒園	
救世軍華富幼兒園	
禮賢會新蒲崗幼兒園	
上水禮賢會幼稚園	
上水惠州幼稚園 (分校)	
嗇色園(學前)	
聖公會深水埗基愛堂幼稚園	

Appendix 3

Pre-primary institutions (8) that took part in the teacher-training workshops

港九街坊婦女會孫方中幼稚園

宣道會陳李詠貞紀念幼稚園

香港聖公會聖尼哥拉幼兒學校

香港聖公會基愛幼兒學校

香港中文大學校友會聯會陳震夏幼稚園

薈色園主辦可瑞幼稚園

世佛會真言宗幼兒學校

翰林幼稚園 (天水圍)