優質教育基金
Quality Education Fund

M:FR/E

Final Report of Project	**Project No. : 2004 / 0926**

Part A

Project Title: **GLOBAL LEARNING COMMUNITY AMONG PRIMARY EDUCATION THROUGH 3-I PROJECT LEARNING**

Name of Organization/School: **Global Chinese Society of Computers in Education – Hong Kong**

Project Period: From **09/2005** *(month/year)* to **08/2006** *(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:

Signature: _____

Date: _____

Name of Grantee*:

Signature: _____

Date: _____

**The report 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.*

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Part B

1. Attainment of Objectives

(1) Introduction

The project "Global Learning Community among Primary Education through 3-I Project Learning" (abbreviated as "3-I Project" hereafter), was activated on 1st of September, 2005. Since then, activities has been successfully held (refer to section 5 and table 1 for activities conducted) and the original schedule was followed.

The 3-I project is to promote interdisciplinary, active learning culture & higher order thinking skills through interdisciplinary project learning and cross-facilitation. "3-I" stands for "Interdisciplinary", "Inter-school" and "International". The original proposal was to achieve the following goal and objectives:

(2) Goals

To promote interdisciplinary, active learning culture & higher order thinking skills through interdisciplinary project learning and cross-facilitation.

(3) Objectives

(a) To develop facilitation skills among teachers in project learning

(a) To enrich our project work culture & national identity though collaboration with schools from China.

(b) To foster greater national identity through China-Hong Kong collaboration.

(c) To use Formative assessment method to evaluate the effect of project learning.

(d) To integrate Information Technology to facilitate the entire project work and assessment.

(4) Activities related to the objective

About 10,000 students from 81 primary schools in Hong Kong and the Mainland China were involved in this project, forming a large scale learning community for project learning. Two to five schools from Hong Kong and the Mainland China, were grouped to form one community, totally 37 communities formed. The activities held under this project include project launch, teacher training, first China trip, web-based learning, second China trip and Summary Conference. An outline of the activities held can be found in Table 1.

Table 1: Project Activities Conducted

Activities	Date	Time	Venue	No. of Participants	Remarks
Project briefing	16 Jun 2005	2:30pm – 4:30pm	LT3 Wong Foo Yuan Bldg, Chung Chi College, CUHK	~40	
Teacher training (4 sessions)	25 Aug 2005	1:30pm – 4:30pm	Kowloon Bay St. John the Baptist Catholic Primary School	52	
	26 Aug 2005	9:00am – 12:00pm	St. Francis of Assisi's English Primary School	35	
		1:30pm – 4:30pm	St. Francis of Assisi's Caritas School	46	
	27 Aug 2005	9:00am – 12:00pm	Tsuen Wan Catholic Primary School	42	
1st China Trip					
to Shunde	8-9 Sep 2005		Shunde	44 (principals and teachers from 13 schools, staff-in-charge)	
to Beijing	12-14 Sep 2005		Beijing	11 (principals and teachers from 4 schools, staff-in-charge)	
to Tianjin	14-17 Sep 2005		Tianjin	10 (principals and teachers from 6 schools, staff-in-charge)	
to Qingdao	27-30 Sep 2005		Qingdao	24 (principals and teachers from 9 schools, staff-in-charge)	
to Suzhou	9-11 Nov 2005		Suzhou	7 (principals and teachers from 2 schools, staff-in-charge)	Not sponsored by QEF
Project launch	8 Oct 2005		Chung Chi Church, the Chinese University of Hong Kong	~900	
Web-based project learning	Nov 2005 to Apr 2006			~10,000 students from Hong Kong and the Mainland China	

Activities	Date	Time	Venue	No. of Participants	Remarks
2nd China Trip					
‧ to Shunde	12-13 May 2006		Shunde	~300 (principals and teachers from 13 schools, staff-in-charge)	
‧ to Beijing	17-21 May 2006		Beijing	~80 (principals and teachers from 4 schools, staff-in-charge)	
‧ to Tianjin	16-19 May 2006		Tianjin	~90 (principals and teachers from 6 schools, staff-in-charge)	
‧ to Qingdao	14-17 May 2006		Qingdao	~80 (principals and teachers from 9 schools, staff-in-charge)	
Summary Conference	28 May 2006	9:00am – 01:00pm	香海正觉莲社佛教黄藻森学校	~1500	

(5) Extent of attainment of the objectives

The objectives listed above were fully achieved. Table 2 summarized the indicators for attainment of the objectives (refer to appendix 3 for complete test data):

Table 2 Summary of Indicators for Attainment of the Objectives

Objectives	Indicators	Interview data
A. To develop facilitation skills among teachers in project learning. (Activities related to the objective: Teacher training, School visits, Summary Conference.)		Extracted from teacher interviews: ✧ Teachers from 11 (out of 16) schools agreed that they took the role "facilitators" in the project. ✧ Teachers from 13 (out of 16) schools agreed that the teacher training course was useful to their participation in the project. ✧ During the project, teachers from 13 (out of 16) schools facilitated their students in

		data-searching process. ✧ Teachers from 12 (out of 16) schools agreed that the "2-level scaffolds" was helpful in knowledge acquisition of students.
B. To allow students to work on collaborative way in project construction (Activities related to the objective: School visits, web-based project learning.)	Students worked collaboratively during the school visits and the web-based project learning on the Knowledge Community Platform (abbreviated as "KC platform" hereafter). From the results in the "他人關係的管理方面" section of "generic skills test (實踐機會)", all averages in the section are over 2.3 (out of 3). In terms of percentages, over 50% of the students agrees that they would "執行群體共同協議的任務", "尊重他人的意見及價值觀" and "在合作的環境中貢獻個人的力量" frequently. From the results in the "他人關係的管理方面" section of "generic skills test (能力增長)", all averages in the section are over 3.7 (out of 5). This shows that most students had improvements working on collaborative way.	Extracted from teacher interviews: ✧ Teachers from 13 (out of 16) schools agreed that the project brought improvements to student's collaboration skills. Extracted from student interviews: ✧ Most students from 17(out of 17) schools stateed that they had a clear work plan for the project. ✧ Students from 15 (out of 17) schools stated that group members knew their roles and mission well.
C. To use Formative assessment method to evaluate the effect of project learning.	Students' problem solving behaviors in the KC platform were observed and their messages posted were recorded.	
D. To collaborate with teachers and students from China in project learning. (Activities related to the objective: School visits, web-based project learning.	Teachers and students from most schools took part in the school visits and web-based project learning. Teachers and students from schools in Hong Kong collaborated with those from China during project works.	Extracted from teacher interviews: ✧ Teachers from 13 (out of 17) schools agreed that they learnt from the partner-school sharing sessions. . Extracted from student

)		interviews: ✧ Students from 12(out of 16) schools stated that they learnt from the partner-school sharing sessions.
E. To integrate Information Technology to facilitate the entire project work and assessment. (Activities related to the objective: Web-based project learning.)	Knowledge Community (www.globalkc.net), an advanced pedagogical-based platform designed for project learning, was the platform used in the web-based project learning. This web-based computer collaborative learning platform captured process information on how a student learns or performs during the process of constructing project. Information technology was successfully integrated to facilitate project work and assessment through the KC Platform.	Extracted from teacher interviews: ✧ Teachers from 14 (out of 16) schools leveraged I.T. skills during the project. ✧ Teachers from 16 (out of 16) schools agrees that students is required to leverage their I.T. skills in order to complete the project. Extracted from student interviews: ✧ Students from 17 (out of 17) schools stated that the project required I.T. skills to complete. ✧ Students from 15 (out of 17) schools agreed that they learnt new I.T. skills in the project.
F. To foster national identity through direct collaboration with China primary schools. (Activities related to the objective: School visits to China)	Students visited the Mainland had the chances to recognize their relationship with the Mainland people. Besides, some students had developed friendship with students in the mainland schools. Through continuous communications, they will develop a sense of nation.	

2. Project impact on learning effectiveness, professional development and school development

Please refer to Appendix 3 for the complete test results of "Generic skills test" and "Project learning pre-test and post-test".

(1) Learning effectiveness

We can evaluate the outcomes of students by analyzing the data from "Generic skills test", "Project learning pre-test and post-test", online data from KC Platform and interviews:

Outcomes	Indication
A. Development of higher-order thinking skills among students through scaffolds designed by teachers	Over 70000 times of thinking skills and over 19000 times of scaffolds have been used among 33 discussion groups in the KC Platform. This indicates that students adopted to use different thinking skills and scaffolds during discussion.
B. Activeness in discussion : improved	From the results in "Project learning pre-test and post-test", Students evaluated that they agreed more on questions "我主動提出建議或解決方案。"(Q.14) and "我經常向老師及同學主動提出問題。"(Q.9) From the results in "Generic skills test", 54.4% of the students agree that they "主動而有目標地聆聽別人的意見" (Q4) frequently. 32.9% and 37.6% of the students agree that their skills concerning Q4 "improved a lot" and "improved".
C. Use of thinking skills: adopted	Over 70000 times of thinking skills have been used among 33 discussion groups in the KC Platform. This indicates that students adopted to use different thinking skills during discussion.
D. Use of keywords, scaffolds in project work :adopted	Over 4000 times of keywords and over 19000 times of scaffolds have been used among 33 discussion groups in the KC Platform. This indicates that students adopted to use scaffolds and keywords during discussion.
E. Communication skills: improved	From the results in "Project learning pre-test and post-test", Students evaluated that they agreed more on questions "我能以協商的方法，與他人達成共識。"(Q.16), "我能清晰、有條理地表達自己的看法。"(Q.5) and "我能以淺顯易懂的語言向別人解釋抽象的觀點。"(Q.6) after working with the project.
F. Independent learning skills: improved	From the results in the "個人管理" section in the "Generic skills test" (which includes these questions: "有效地管理時間", "訂立目標，將工作排好先後次序，與及訂立預期達致的標準", "爲自己的學習進度負責", "主動而有目標地聆聽別人的意見", "使用一系列的學習技能，例如搜尋資訊(信息)、整合資料等", "建立個人的學習策略，並於需要時能夠作出適當的改變", "在陌生的情境下仍能堅持學習", "計劃長遠的目標並爲達到這目標而工作", "反思個人的學習過程是否適合", "應付壓力"), the average score of all questions are over 3.6, which indicates that most students agrees that they have improved/improved a lot in these skills.
G. Ability to summarize discussion: students	From the student interviews, students from 16 (out of 16) schools are able to describe the way they summarize the

shows confidence	discussion on the KC Platform.
H. Self reflection: experienced	From the student interviews, students from 16 (out of 17) schools have reflected their thinking types and the way they do in the project..
I. IT skills learnt: improved	From the student interviews, students from 16 (out of 16) schools agrees that they got one or more than one IT skills improved after the project.
J. Attitude and value change: attitude changed	From the results in the questions "爲自己的學習進度負責", "在陌生的情境下仍能堅持學習" and "應付壓力" of "generic skills test (能力增長)", all averages in these questions are over 3.6 (out of 5). This shows that most students had their attitude changed after the project.
K. Fostering of national identity	Students visited the Mainland had the chances to recognize their relationship with the Mainland people. Besides, some students had developed friendship with students in the mainland schools. Through continuous communications, they will develop a sense of nation.
L. International collaboration in project learning: achieved	Students from Hong Kong, Beijing, Shunde, Tianjin, Qingdao and Suzhou collaborates face-to-face and through the KC Platform on the Internet.

(2) Professional Development

We can evaluate the outcomes of teachers below:

Outcomes	Indication
A. Effectiveness of training sessions: good	From the teacher interviews, teachers from 12 (out of 17) schools agrees that the training sessions are helpful to their project work.
B. Key lessons learnt from training sessions	Teacher interviews show that the ability of teachers varies. Teacher prefers a more comprehensive training which can help them more on training their students in the project.
C. Project design and planning: experiences gained	The project acts as a practical example for teachers to acquire experience in project design and planning. From the teacher interviews, teachers from 16 (out of 17) schools were able tell how they design the project contents.
D. Development of Formative assessment for project learning	A set of formative assessment is developed for the project, which serves as a practical example for the teachers. From the teacher interviews, teachers from 9 (out of 17) schools agrees that it is essential to use formative assessment in the project and 7 of them agrees that the formative assessment made them clearly recognize the progress of the project and the learning condition of the students.
E. IT skills learnt for project learning: KC Platform	Teachers learnt to use the KC Platform on the Internet for the discussions in the project. Most of the exercises their existing IT skills in the project, too.

F. Issues faced in project implementation in schools	From the teacher interviews, teachers prefers more training sessions on the project. They would need training on the practical skills to train their student, more comprehensive training materials and more training on professional knowledge (for instance, knowledge on environmental protection). Improvements could be made in the next run of the project.
G. International collaboration in project learning: achieved	Teachers are required to arrange face-to-face collaboration for students from Hong Kong, Beijing, Shunde, Tianjin, Qingdao and Suzhou. They are also required to facilitate the student to collaborate through the KC Platform on the Internet.
H. Exchange of project learning experience with schools in China: achieved	With visits to schools in China, project learning experiences were exchanged during the project activities among teachers and students in different regions.
I. Exchange of project learning experience with internationally renounced speakers: achieved	Exchange of project learning experience with internationally renounced speakers is achieved by taking part in various conferences. Examples are: Hong Kong International IT in Education Conference 2006 and 第二届粤港澳信息技术教育应用研讨会.

(3) School Development

We can evaluate the outcomes about school development below:

Outcomes	Indication
A. Broadening the learning perspectives of teachers and students through international collaboration: achieved	Learning perspectives of teachers and students is successfully broadened by various school visits among schools in different regions(Hong Kong, Beijing, Shunde, Tianjin, Qingdao and Suzhou) and discussions between students in different regions on the KC Platform.
B. Valuable experience for school leadership in leading school for international collaboration.	Teachers gained valuable experience for school leadership by leading the school to various school visits in different regions (Hong Kong, Beijing, Shunde, Tianjin, Qingdao and Suzhou).

3. Cost Effectiveness

Please refer to the Final Financial Report of the project for information on cost effectiveness.

4. Deliverables and Modes of Dissemination

(1) Deliverables

- ✧ Final report of the project (this document)
- ✧ Booklet distributed to schools (please find them in rm 709)
- ✧ Ou, Y., Tse, W. C., Pun, S. W., Lee, F. L. (2006). Global Learning Community among Primary Education through 3-I Project Learning. Paper presented at the Hong Kong International IT in Education Conference 2006. (refer to Appendix 4)
- ✧ Tse, W. C., Lee, F. L., Ou, Y. (2006)Model of Evaluating the Roles of Teachers in Computer-supported Collaborative Learning. Paper presented at the Hong Kong International IT in Education Conference 2006. (refer to Appendix 5)
- ✧ Tan, Y. G. (2005).「跨科、跨校、跨地」專題研習 2005 之北京、青島、天津、順德及香港小學協作交流 教師培訓手冊

(2) Dissemination activities conducted

- ✧ 3-I Project Summary Conference (27 May 2006).(Please refer to "Project Activities" section for details.)
- ✧ Project Website :

  http://caite.fed.cuhk.edu.hk/projects/3i/

- ✧ Official news and reports through China Education Department and Province/City Education Authority.
  - ■ 中小學訊息技術教育網
    http://www.nrcce.com/project/3i/inform/kt_sz.htm
  - ■ 城區小學
    http://www.sdcqxx.com/ReadNews.asp?NewsID=959
  - ■ 國際在線
    http://gb.cri.cn/1321/2005/10/09/1568@729236.htm

- ✧ Participation in the Hong Kong International IT in Education Conference 2006 (06-08/02/2006)

The 3-I Project has created a practical learning model with integration of IT. The Global Chinese Society for Computers in Education, host organization of this project, successfully gained an opportunity to have the 3-I project presented at the Hong Kong International IT in

Education Conference 2006, so as to promote this learning model to a larger scale and to an international level. The representatives from the Chinese University of Hong Kong contributed paper presentations on 7th and 8th of February, 2006, respectively. A two-hour experience sharing session was conducted on 8th of February, 2006. Representatives from 7 schools in Hong Kong and the Mainland China shared their valuable experience with the conference attendants.

Conference papers and programme of the experience sharing session could be found in Appendix 4, 5, 6 respectively.

✧ Participation in 第二届粤港澳信息技术教育应用研讨会 (GHM Conference2006, 23 – 24/09/2006)

The conference, hosted by 广东省电化教育馆 and 华南师范大学教育技术研究所, aims to facilitate the collaboration between the educational researchers and teachers from GoungZhou, Hong Kong and Macau. The hosts gained the opportunity to have 3-I project presented at GHM Conference 2006. Presenters from 大埔舊墟官立學校 (寶湖道), one of the participating schools, contributed paper presentation on 24th of September, 2006 to promote the practical learning model created by 3-I to teachers and educational researchers from GoungZhau, Hong Kong and Macau.

✧ Educational Visits to China and Hong Kong

Two series of educational visits (from China to Hong Kong and from Hong Kong to China) was organized during the project period. Please refer to "Project Activities" section for details.

(3) Feasibility of sustaining the project outcomes

✧ The proper project learning culture can continue to be used in schools.
✧ Schools, having their teachers training, can continue to practice project learning with funds from their own school.
✧ Schools can continue to collaborate with schools in China on their own.
✧ The outcomes of the project and its methodologies can be shared to interested schools.
✧ Participating schools can lead more schools to collaborate with schools in China.

5. Project Activities

(1) Project Activities

Please refer to table 1 for an outline of activities conducted, and Appendix 7 for the details of the project activities. The project schedule us tabulated below:

(2) Conclusion

The 3-I project comes to the end successfully on 27th May 2006.

The project activities have been conducted according to the original plan specified in the officially qualified proposal successfully. All items are conducted on schedule.

6. Project Variations

Recruitment of Suzhou schools

The Suzhou Education department had keen interests in the 3I Project and had a strong wish to be involved in this project. Therefore, 12 Suzhou schools were additionally recruited to the 3I Project. These schools were grouped with three Hong Kong schools and one Shunde school, forming five learning communities. Principals and teachers from the Hong Kong schools and staff-in-charge of the project had a visit to Suzhou during 9th to 11th November, 2006, participating in the project launch ceremony and visiting their partner schools. The web-based project learning is ongoing at the moment. All expenses incurred by these Suzhou schools would be financed by themselves, not sponsored by the Quality Education Fund.

Appendix 1 Project Schedule

『由"跨科、跨校、跨地"專題研習建立全球小學學習社群』計劃進程表

日期	項目				備註
	北京組	青島組	天津組	順德組	
16/6/2005 (四)	計劃介紹 (地點: 香港中文大學 崇基學院 王福元樓 LT3, 2:30 – 4: 30 pm)				香港校長及主任
25/8/2005 (四)	計劃介紹、香港老師培訓 (一場 : 1:30 – 4:30)				每場 50 人
26/8/2005 (五)	計劃介紹、香港老師培訓 (兩場 : 9:00-12:00, 1:30 – 4:30)				每場 50 人
27/8/2005 (六)	計劃介紹、香港老師培訓 (一場 : 9:00-12:00)				每場 50 人
7/9/2005 (三)				計劃介紹 (地點: 順德) 順德老師培訓	2:00 – 5:00, 40 人
8/9 (四) – 9/9 (五)				探訪順德學校、商討主題及交流方式 順德學校、教研室接待	NRCCE、順德市教研室主辦 順德組校長及主任
12/9 (一) -14/9 (三)	探訪北京學校、 北京老師培訓、 商討主題及交流方式				NRCCE、北京組主辦 北京組校長及主任
14/9(三) -17/9 (六)			探訪天津學校、 天津老師培訓、 商討主題及交流方式		NRCCE、天津市教研室主辦 天津組校長及主任
27/9 (二) - 30/9 (五)		探訪青島學校、 青島老師培訓、 商討主題及交流方式			NRCCE、青島電教館主辦 青島組校長及主任
8/10/2005 (六)	計劃開展會, 地點 (香港中文大學 崇基教堂) 9:00 am– 12:00 noon (最多 1,000 人)				香港校長、老師及學生
10/2005	老師培訓學生、設立網上戶口				
1/11/05 – 30/4/06	五地師生網上交流、老師促進				
14/4 – 11/5	五地師生總結成果				
12/5 (五) – 13/5 (六)				探訪順德學校、參加順德總結分享會	NRCCE、順德市教研室主辦 順德組校長、師生及家長
14/5 (日) – 17/5 (三)		探訪青島學校、參加青島總結分享會			NRCCE、青島電教館主辦 青島組校長、師生及家長
16/5 (二) – 19/5 (五)			探訪天津學校、參加天津總結分享會		NRCCE、天津市教研室主辦 天津組校長、師生及家長

日期	項目				備註
	北京組	青島組	天津組	順德組	
17/5 (三) – 21/5 (五)	探訪北京學校、 參加北京總結分享會				NRCCE、北京組主辦 北京組校長、師生及家長
25/5 (二) – 26/5 (日)	探訪香港學校 (香港學校接待)				五地校長及師生
27/5 (六)	參加香港总结分享会, 地點 (佛教黃藻森學校)				五地校長、師生及家長

Appendix 2 Participating Schools

	香港學校	北京學校
1	聖方濟各英文小學	北京市東四九條小學
		北京市雍和宮小學
2	佛教黃藻森學校	黑芝麻胡同小學
3	嘉諾撒小學 (新蒲崗)	北京市東城區回民小學
	香港學校	青島學校
1	天水圍天主教小學	青島永和路小學
2	中華傳道會呂明才小學	青島嘉裕關學校
3	獻主會小學	青島同安路小學
4	聖若瑟英文小學	青島四方實驗小學
5	寶血會伍季明紀念學校上午校	青島台東六路小學
6	聖羅撒學校	青島集美學校
7	天主教佑華小學	青島市實驗小學
8	荃灣天主教小學	青島春雨小學
9	秀茂坪天主教小學	青島平安路第二小學
	香港學校	天津學校
1	嘉諾撒小學	天津市實驗小學
		天津市河西區閩候路小學
2	港澳信義會小學	天津市河西區同望寄宿小學
		天津市河西區馬場道小學
3	高主教書院小學部	天津市和平區昆朋小學
4	大埔舊墟公立學校（寶湖道）	天津師範大學第二附屬小學
		天津市河西區中心小學
5	基督教璨美黃乾亨小學暨初中學校	天津市和平區萬全道小學
6	周氏宗親總會學校	天津市和平區岳陽道小學
7	保良局蕭漢森小學	天津市河西區上海道小學

	香港學校	順德學校
1	嗇色園主辦可信學校	順德樂從岑松江小學
2	九龍禮賢學校	順德陳村鎮中心小學
3	元朗公立中學校友會小學	順德大良桂畔小學
4	九龍灣聖若翰天主教小學	順德北滘鎮城區小學
5	喇沙小學	廣東碧桂園(IB 國際)學校
6	聖方濟愛德小學	順德大良試驗小學
7	東華三院王余家潔紀念小學	順德大良西山小學
8	北角循道學校 (AM)	順德一中附屬小學
9	北角循道學校 (PM)	順德嘉信西山小學
10	荔枝角天主教小學	順德本原小學
11	沙田循道衛理小學	順德環城小學
12	東華三院鶴山學校	順德杏壇中心小學
13	胡素貞博士紀念學校 (上午校)	順德容桂容山小學
	配對學校	蘇州學校
1	聖方濟各英文小學	蘇州工業園區星海學校
		江蘇省蘇州國際外語學校
		江蘇省蘇州工業園區新城花園小學
		江蘇省蘇州市平江實驗學校
2	周氏宗親總會學校	江蘇省吳江市鱸鄉實驗小學
	順德容桂容山小學	蘇州新區實驗小學
3	周氏宗親總會學校	江蘇省吳江市實驗小學
	順德容桂容山小學	江蘇省蘇州市新蘇師範附屬小學
4	嘉諾撒小學	江蘇省常熟市義莊中心小學
		江蘇省張家港市萬紅小學
5	嘉諾撒小學	江蘇省昆山開發區實驗小學
		蘇州市吳中區碧波實驗小學

Appendix 3 Test data

1. Generic Skills Test (共通能力測驗)

我們讓所有參與計劃的同學於完成任務後回答這份問卷。參與的同學有1921 位，時間是在二零零六年四月至六月間。該問卷分爲兩部份：第一部份請同學反映是次活動讓他們實踐不同的共通能力的機會；第二部份則是讓同學反省自己在這次活動中，個人能力的成長。下面就同學的回答作了簡單的分析。

第一部份: 實踐機會

同學在每一題目回應的百分率如表一。表一並列出每一項的平均分數。計算方法是回答「經常」的給予三分，「有時」的得二分，「沒有」的則得一分。

個人管理方面					
		經常(%)	有時(%)	沒有(%)	平均
1	有效地管理時間	48.3	49.2	2.6	2.46
2	訂立目標，將工作排好先後次序，與及訂立預期達致的標準	47.2	48.1	4.7	2.42
3	爲自己的學習進度負責	56.0	40.0	3.9	2.52
4	主動而有目標地聆聽別人的意見	54.4	42.2	3.4	2.51
5	使用一系列的學習技能，例如搜尋資訊(信息)、整合資料等	49.0	46.4	4.6	2.44
6	建立個人的學習策略，並於需要時能夠作出適當的改變	43.0	50.5	6.5	2.37
7	彈性處理事情	41.0	51.0	8.0	2.33
8	在陌生的情境下仍能堅持學習	42.9	50.6	6.5	2.36
9	計劃長遠的目標並爲達到這目標而工作.	45.4	48.4	6.2	2.39
10	反思個人的學習過程是否適合.	42.4	50.1	7.5	2.35
11	以建設性的態度澄清他人向個人的批評	41.5	51.7	6.8	2.35
12	應付壓力	41.1	48.2	10.7	2.30

資訊管理方面					
		經常(%)	有時(%)	沒有(%)	平均
13	使用來自適當來源的資訊	55.0	41.9	3.1	2.52
14	使用適當科技以獲取資訊	57.9	38.2	3.9	2.54
15	使用適當媒介來表達資訊	46.8	44.4	8.9	2.38
16	處理大量資訊	39.0	51.5	9.5	2.29
17	使用適當的語言及形式來表達自己的意見	52.7	42.3	5.0	2.48
18	闡釋不同形式的資訊	37.7	54.6	7.7	2.30
19	流暢地表達資訊	43.0	50.3	6.7	2.36
20	爲不同的目的/在不同的情境/對不同的對象都能作出適當的回應	42.8	50.1	7.1	2.36

21	以批判的態度使用資訊	36.4	50.2	13.5	2.23
22	以創新或創意的方式使用資訊	43.0	48.5	8.6	2.34

他人關係的管理方面					
		經常(%)	有時(%)	沒有(%)	平均
23	執行群體共同協議的任務	51.3	45.2	3.4	2.48
24	尊重他人的意見及價值觀	58.8	38.3	2.9	2.56
25	在合作的環境中貢獻個人的力量	54.2	42.3	3.5	2.51
26	適當改變自己以遷就群體需要	47.8	47.2	5.1	2.43
27	爲自己的意見或行爲舉証或辯護	43.7	49.4	6.9	2.37
28	主動推行某種行動而且帶領他人去完成	40.3	50.7	9.0	2.31

任務管理方面					
		經常(%)	有時(%)	沒有(%)	平均
29	找出任務的重要特性	48.9	45.7	5.4	2.43
30	對任務有基本的意念及解決方案	45.2	49.9	4.9	2.40
31	訂立先後次序而且執行	47.5	46.3	6.2	2.41
32	找出各種可能完成任務的策畧	47.4	47.3	5.3	2.42
33	計劃行動的過程並且執行	47.6	47.4	5.0	2.43
34	將任務細分成爲可執行的分任務	41.9	51.0	7.1	2.35
35	使用適當的策畧，必要時設計新的策畧	41.7	50.8	7.6	2.34

表一： 參與同學認爲共通能力實踐機會的百分率及平均值

整體來說，同學的反應都十分正面。除三個項目外，有百份之四十至六十的同學認爲這次活動經常讓他們實踐各種共通能力。

第二部份： 能力增長

同學在每一題目回應的百分率如表二。表二並列出每一項的平均分數。計算方法是回答「最多」的給予五分，「較多」的得四分，餘此類推。

個人管理方面							
		極多(%)	較多(%)	一般(%)	少許(%)	沒有(%)	平均值
1	有效地管理時間	30.2	38.0	28.3	2.7	0.7	3.84
2	訂立目標，將工作排好先後次序，與及訂立預期達致的標準	26.1	38.0	29.9	4.9	1.0	3.83
3	爲自己的學習進度負責	31.7	36.4	27.1	4.0	0.7	3.94
4	主動而有目標地聆聽別人的意見	32.9	37.6	24.4	4.2	1.0	3.97
5	使用一系列的學習技能，例如搜尋資訊(信息)、整合資料等	30.6	32.8	29.7	5.2	1.6	3.86
6	建立個人的學習策略，並於需要時能	27.1	34.2	31.6	5.7	1.5	3.80

	夠作出適當的改變						
7	彈性處理事情	26.0	30.8	32.7	7.7	2.8	3.69
8	在陌生的情境下仍能堅持學習	27.3	33.4	30.1	7.4	1.8	3.77
9	計劃長遠的目標並爲達到這目標而工作.	26.8	33.8	32.0	5.8	1.7	3.78
10	反思個人的學習過程是否適合.	26.4	35.2	30.3	6.1	1.9	3.78
11	以建設性的態度澄清他人向個人的批評	25.2	32.8	32.4	7.0	2.6	3.71
12	應付壓力	26.7	29.5	31.5	8.8	3.6	3.67

資訊管理方面							
		極多(%)	較多(%)	一般(%)	少許(%)	沒有(%)	平均值
13	使用來自適當來源的資訊	33.4	33.4	28.6	3.4	1.3	3.94
14	使用適當科技以獲取資訊	32.7	34.6	27.1	4.7	0.9	3.93
15	使用適當媒介來表達資訊	29.0	32.3	30.7	5.8	2.3	3.80
16	處理大量資訊	27.8	30.5	31.7	7.6	2.5	3.74
17	使用適當的語言及形式來表達自己的意見	30.5	33.4	29.2	5.7	1.3	3.86
18	闡釋不同形式的資訊	25.9	32.4	32.9	7.0	1.8	3.73
19	流暢地表達資訊	28.0	31.1	32.4	6.8	1.6	3.77
20	爲不同的目的/在不同的情境/對不同的對象都能作出適當的回應	25.4	32.5	33.9	6.6	1.6	3.73
21	以批判的態度使用資訊	23.6	28.2	35.1	8.6	4.5	3.58
22	以創新或創意的方式使用資訊	26.4	31.9	31.5	7.8	2.4	3.72

他人關係的管理方面							
		極多(%)	較多(%)	一般(%)	少許(%)	沒有(%)	平均值
23	執行群體共同協議的任務	32.8	34.1	27.4	4.3	1.4	3.93
24	尊重他人的意見及價值觀	34.6	34.3	25.6	4.3	1.2	3.97
25	在合作的環境中貢獻個人的力量	32.3	33.1	28.5	5.0	1.0	3.91
26	適當改變自己以遷就群體需要	29.9	34.3	28.3	5.7	1.8	3.85
27	爲自己的意見或行爲舉証或辯護	29.0	32.7	30.9	5.8	1.6	3.82
28	主動推行某種行動而且帶領他人去完成	27.5	31.9	29.3	8.4	2.9	3.73

任務管理方面							
		極多(%)	較多(%)	一般(%)	少許(%)	沒有(%)	平均值
29	找出任務的重要特性	30.0	34.3	29.9	3.9	1.9	3.86
30	對任務有基本的意念及解決方案	27.1	34.9	31.3	5.5	1.3	3.81

31	訂立先後次序而且執行	27.7	34.3	30.0	6.1	1.8	3.80
32	找出各種可能完成任務的策畧	28.3	32.7	31.0	6.4	1.6	3.80
33	計劃行動的過程並且執行	28.4	32.4	31.7	5.9	1.7	3.80
34	將任務細分成爲可執行的分任務	26.9	33.5	29.8	7.7	2.2	3.75
35	使用適當的策畧，必要時設計新的策畧	28.4	31.8	30.4	7.2	2.1	3.77

表二： 參與同學認爲共通能力增長的百分率及平均值

2. Pre-test and Post-test of project learning (專題研究問卷)

我們讓所有參與計劃的同學於在開始任務前及完成任務後回答這份問卷。成功參與、並先後完成了 Pre-test 和 Post-test 的同學有 869 位。下面就同學的回答作了簡單的分析。

Pre-test (Fig.3)

		1(非常同意)	2(同意)	3(不確定)	4(不同意)	5(極不同意)	平均
12	我樂意與別人合作工作。	50.81%	39.98%	6.57%	1.84%	0.69%	1.61
11	我樂意分擔小組的責任。	45.97%	42.17%	9.68%	1.61%	0.58%	1.69
13	我積極參與小組討論。	39.75%	45.16%	12.21%	2.19%	0.58%	1.79
15	我能耐心聆聽別人的意見。	36.06%	48.96%	12.33%	1.84%	0.58%	1.82
8	我對別人的意見，保持開放態度。	35.14%	49.31%	12.56%	1.73%	1.04%	1.84
20	我能注意到別人的需求，並隨時提供援助。	32.95%	47.47%	16.59%	1.84%	0.81%	1.9
18	我參與的小組中，各成員都有明確的角色和責任。	33.53%	45.62%	14.63%	3.80%	1.84%	1.94
3	我積極回應別人的問題和看法。	29.26%	49.65%	16.01%	4.49%	0.46%	1.97
17	我參與的小組有明確一致的行動目標及計劃。	31.57%	44.82%	18.32%	3.46%	1.50%	1.98
16	我能以協商的方法，與他人達成共識。	26.27%	51.38%	18.32%	2.30%	1.15%	2
14	我主動提出建議或解決方案。	28.11%	47.70%	19.82%	3.57%	0.81%	2.01
4	我能圍繞中心議題展開討論。	26.61%	47.47%	21.77%	3.00%	0.69%	2.03
5	我能清晰、有條理地表達自己的看	27.76%	44.82%	22.58%	3.69%	0.92%	2.05

	法。						
7	我擅於運用網上的輔助工具進行分析討論。	30.07%	42.17%	20.85%	5.53%	1.04%	2.05
19	爲團隊著想, 我願意做自己本來不喜歡做的事情。	30.53%	39.40%	20.85%	6.11%	3.00%	2.12
2	我經常向老師及同學主動提出問題。	26.73%	40.55%	24.88%	6.22%	1.38%	2.15
9	我擅用論據說服別人接受自己的觀點。	24.19%	44.82%	23.16%	6.57%	1.27%	2.16
6	我能以淺顯易懂的語言向別人解釋抽象的觀點。	22.00%	44.93%	25.81%	5.41%	1.15%	2.18
10	我能啓發別人思考及回應。	22.12%	41.36%	27.53%	7.03%	1.84%	2.25
1	我經常主動與陌生同學展開交談。	23.27%	39.75%	24.31%	6.57%	6.11%	2.32

Fig.3

Post-test (Fig.4)

		1(非常同意)	2(同意)	3(不確定)	4(不同意)	5(極不同意)	平均
12	我樂意與別人合作工作。	42.05%	42.17%	12.67%	1.27%	0.92%	1.76
11	我樂意分擔小組的責任。	39.40%	44.01%	12.56%	2.19%	1.15%	1.81
13	我積極參與小組討論。	38.13%	43.20%	14.75%	1.96%	1.04%	1.83
15	我能耐心聆聽別人的意見。	36.18%	46.08%	13.82%	2.07%	1.15%	1.85
8	我對別人的意見，保持開放態度。	33.06%	47.47%	15.78%	1.96%	1.15%	1.9
20	我能注意到別人的需求, 並隨時提供援助。	32.60%	47.58%	15.55%	2.53%	1.04%	1.91
18	我參與的小組中，各成員都有明確的角色和責任。	32.60%	46.66%	15.21%	3.11%	1.61%	1.94
17	我參與的小組有明確一致的行動目標及計劃。	30.41%	47.47%	17.51%	2.65%	1.38%	1.97
16	我能以協商的方法，與他人達成共識。	26.27%	50.81%	19.70%	1.50%	0.58%	1.98

3	我積極回應別人的問題和看法。	29.03%	48.50%	17.74%	3.11%	1.27%	1.99
14	我主動提出建議或解決方案。	29.72%	44.82%	21.77%	2.19%	0.81%	1.99
7	我擅於運用網上的輔助工具進行分析討論。	30.30%	44.12%	20.62%	3.23%	1.15%	2
5	我能清晰、有條理地表達自己的看法。	29.15%	46.43%	19.24%	3.34%	1.38%	2.01
4	我能圍繞中心議題展開討論。	27.07%	48.16%	19.93%	3.34%	0.92%	2.02
9	我擅用論據說服別人接受自己的觀點。	26.84%	48.04%	19.35%	4.03%	1.15%	2.04
2	我經常向老師及同學主動提出問題。	25.92%	48.16%	20.39%	4.15%	1.04%	2.06
6	我能以淺顯易懂的語言向別人解釋抽象的觀點。	25.92%	45.05%	23.62%	4.26%	0.81%	2.09
10	我能啓發別人思考及回應。	25.81%	44.59%	23.96%	3.34%	1.73%	2.1
19	爲團隊著想, 我願意做自己本來不喜歡做的事情。	29.03%	40.55%	22.47%	4.26%	3.00%	2.11
1	我經常主動與陌生同學展開交談。	27.88%	41.13%	22.35%	5.30%	2.65%	2.13

Fig.4

Appendix 4 Paper 1 Presented at the HKITEC2006

Global Learning Community among Primary Education through 3-I Project Learning

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Abstract. The 3-I project, which is currently being conducted, is to promote interdisciplinary, active learning culture & higher order thinking skills through interdisciplinary project learning and cross-facilitation. "3-I" stands for Interdisciplinary, Inter-school and International. About 10,000 students from 81 primary schools in Hong Kong and the Mainland China are involved in the project, forming a large scale learning community for project learning. Participants share common objectives, investigate issues and share what they have learnt with others in the community, thus advancing both their individual knowledge and knowledge of the community. In this project, students are encouraged to construct knowledge using the skills and knowledge from more than one subject such as General Studies, Mathematics, Languages and Art. Successful integration of IT with project learning by the use of Knowledge Community platform accomplishes inter-school collaboration. It also facilitates students' higher-order thinking and knowledge construction with 2-level scaffolds built in. The most significant outcome of this project will be that the students develop their life-long learning skills and those preparing them for the demands of workplace. This project has created a new learning model which is a good example of IT in education. It is expected to further build up a global learning community so as to promote this learning model to a larger scale and up to international level.

Keywords: 3-I Project, project learning, learning community, knowledge construction, scaffolds

Introduction

Learner-centred, lifelong learning is essential to people who nowadays live in a rapidly changing society supported by knowledge-based economy. Learning to learn becomes more important than learning knowledge at schools. Project learning is a powerful learning and teaching strategy to help students acquire and construct knowledge, and develop various important generic skills through a variety of learning experience. It is an authentic form of learning which cultivates students' self-learning ability and prepares them for the demands of the workplace (Education and Manpower Bureau[2], 2000). Integration of IT facilitates interactive learning and collaboration for project learning and formation of learning community (Tan, 2004). The two aspects, project learning and application of IT for interactive learning, have been determined to be two of the four key tasks as tools to promote learning to learn by the government of HKSAR(Hong Kong Special Administration Region) (Education and Manpower Bureau[2], 2000).

The 3-I project, which is currently being conducted, is to promote interdisciplinary, active learning culture & higher order thinking skills through interdisciplinary project learning and cross-facilitation and finally accomplish to develop students' life-long skills and some other skills, such as collaboration skills, communication skills and so on, which prepare them for their working life and future advancement. It exactly meets the needs of education in the new era and it also corresponds to the curriculum development strategies of the HK government. Details of the project proposal will be presented in the following.

1. What is for "3-I"?

This project is characterized by "3-I" which stands for Interdisciplinary, Inter-school and International.

2. A large scale inter-school learning community

The concept of distributed cognition claims that development and growth of cognitions of individuals should not be isolated events; rather the changes should be a reciprocal process (Lin-Hsiao, n.d.). It emphasizes the interaction among individual, environment, and cultural artifacts (Lin-Hsiao, n.d.). This indicates the value of learning communities for cognition development. A learning community is the clustering of similar areas of interest that allows for interaction, sharing, dialoguing and thinking together (Simens, 2003). It is predicted that a distributed learning and knowledge-building community will be the new paradigm of 21st century education (Dede, 1996).

The 3-I project is actually practicing this new paradigm of education. In this project, about 10,000 students from 32 Hong Kong primary schools and 49 primary schools in the Mainland China participate in the project, forming a large scale learning communities for project learning. Two schools from Hong Kong and the Mainland China, respectively, are paired each other or 3~5 schools are grouped, totally forming 37 communities. Participants share common objectives, investigate issues and share what they have learnt with others in the community, thus advancing both their individual knowledge and knowledge of the community.

3. Interdisciplinary learning culture

The theme of the project is on environmental protection which is a complex topic. A number of sub-topics were developed by participant schools. Figure 1 shows a series of sub-topics created by a pair of schools. The theme design is exactly consistent with that project learning emphasizes on a broad, interdisciplinary focus rather than a narrow, disciplinary-based focus (Newell, 2003). Therefore, students are encouraged to construct knowledge using the skills and knowledge from more than one subject such as General Studies, Mathematics, Languages and Art in this project.

Figure 1: Sub-topics in Environmental Protection developed by Participating Schools

4. Project learning culture

Project learning is the core event which is ongoing through the whole procedure of the project. Students of each participant school are assigned in groups. Two groups of students from paired schools work together on one sub-topic as mentioned in **2.3**. In order to achievement their common goals through project process, students need to develop

- people skills – tolerance, willing to help (collaboration), communication, negotiation, acceptance, persuasion (Atkinson, 2001)
- time-linked skills – the ability to set realistic deadlines and to work to those deadlines to maximize the use of time (Atkinson, 2001)
- creativity – the ability to come up with ideas (Atkinson, 2001)

Development of those skills prepares students for the demands of real life, especially working. It is consistent with enhancement of the nine generic skills included in the curriculum framework of Hong Kong curriculum development, which are collaboration skills, communication skills, creativity, critical thinking skills, information skills, etc. (Education and Manpower Bureau[1], 2000)

5. Knowledge construction and scaffolds

According to Vygotsky's theory of "Zone of Proximal Development(ZDP)", scaffolding is an important way to facilitate individual cognitive growth and knowledge acquisition (Lin-Hsiao, n.d.). Two-level scaffolds are applied in the project learning to facilitate students in knowledge construction. The scaffolds were designed by teachers based on the Bloom's taxonomy. Table 1 shows some examples. The first level is called Thinking Type, while the second level called Scaffold (Tan, 2004). Labeling Messages with think type, students have to clarify thinking of their own and this also helps them to understand others thinking. It facilitates to develop students' high-order thinking skills. Moreover, the two-level scaffolds help students to measure progress of knowledge construction and project learning. It further makes implementation of the project more effective.

Table 1: Thinking Types and Scaffolds Employed in the 3-I Project

Thinking Type (First level)	Scaffold (Second level)
What if... 如果...	New assumption 新假設 Creative idea 創意
Somebody said.. 據別人說...	Very credible 可信性極高 Somewhat credible 可信性一般 Little credible 可信性極低
My estimation is 我估計是這樣的...	My theory 我的理論 Logic thinking 邏輯推理
My opinion is 我的意見是...	My experience 我的經驗 My observation 我的觀察
My design 我的設計	New creation 創新 Ordinary 普通 Practical 實用
Let me conclude 我的結論	Elementary 簡單的 Intermediate 中級的 Advanced 高級的

6. IT facilitation

"Technology is an enabler of learning and of creating connections" (Simens, 2003). Integration of IT creates a working environment for the project learning. The Knowledge Community (KC), a web-based computer collaborative learning platform, provides students with a multimedia notepad to input their findings to participate in forum discussion. With the two-level scaffolds built in, KC facilitates knowledge construction and it further develops students' higher-order thinking skills. As a web-based system, KC accomplishes to form a large scale of learning community. In this project, the participant schools are from six cities. Inter-school collaboration is implemented over the KC platform.

Conclusion

The 3-I Project aims to build up a global learning community by web-based project learning so as to develop students' life-long learning skills and to prepare them for the demands of workplace and future advancement. It commenced in September of 2005 and it is now in progress. It is expected that it will be proved as a successful example of IT in education. Vygotsky's sociocultural theory of learning tells that human intelligence originates in our society or culture (Lin-Hsiao, n.d.). The more complex the learning needs, and the more quickly the field of knowledge evolve, the more valuable a learning community becomes (Simens, 2003). Hence, it is worth promoting this learning model, which has been created by the 3-I Project, to a larger scale and upgrading it to international level.

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Appendix 5 Paper 2 Presented at the HKITEC2006

Model of Evaluating the Roles of Teachers in Computer-supported Collaborative Learning

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Abstract. With the help of modern Information and Communications Technologies (ICT), Computer-supported Collaborative Learning (CSCL) becomes one of the promising innovations to enhance quality of teaching and learning. During recent years, there has been a zoomed growth in the field of CSCL. Even though many teachers are not well experienced in such kind of emerging pedagogy, many schools have attempted to implement CSCL. The purpose of the study is to evaluate the roles of teachers in implementing CSCL. The participants in the study are the teachers instructing Primary 5 and 6 students (11-12 years old) in Hong Kong. The schools are participating an ICT project funded by Quality Education Fund: Global learning community among primary education through interdisciplinary, interschool and international project learning. The students conducted their project learning with their partners, the students from other schools in Mainland China through a web-based CSCL platform. In this research, the data collection tools are mainly based on an OISI model. OISI refers to Organizational, Intellectual, Social and Information moderator. It is a synthesis of numerous professional and research literature about roles of teachers in implementing CSCL. The model forms a practical and useful evaluation tool of assessing the effectiveness of teachers' roles in implementing emerging pedagogy of CSCL. This study hopes that the effectiveness of implementing CSCL can be improved by empowering the roles of teachers.
Keywords: Computer-supported Collaborative Learning, Teachers' roles, evaluation model

Introduction

Computer-supported Collaborative Learning (CSCL) recently becomes one of the emerging initiatives of Information and Communications Technologies in Education (ICTE). Many schools of various levels attempt to implement CSCL as an approach to enhance quality of teaching and learning. The development of CSCL grows very fast in the past five years. For instance, Quality Education Fund (QEF), one of the important education grants promoting ICTE initiatives in Hong Kong, approved none of the schools to implement project of CSCL. However, QEF supported more than 50 schools to implement CSCL in various ICTE projects in 2004. Meanwhile, various kinds of CSCL platform emerged.

Though many schools have attempted to implement CSCL, it is really a question that is teacher ready to adopt such kind of emerging approach. As Järvelä, Niemivirta and Hakkarainen (2000) state, one of the major challenges for teachers is that they need to guide their students to adapt themselves to learn in progressive-inquiry context. Students, in many cases, are used to engage in a teacher-centre learning process. Moreover, it is demanding for teachers that to cope with the open and complex inquiry-based learning environment of CSCL. Researchers, like Ahern, Peck & Laycock (1992), have argued that the roles of teacher are widely acknowledged as a key factor that affecting the success of CSCL. Nevertheless, researches of this topic are quite inadequate. Such situation makes the topic really worth to investigate.

Since CSCL is a growing trend, more participation of schools is expected. Meanwhile, there is high demand for enhancing the roles of teachers in implementing CSCL. Therefore, the purpose of this study is to provide a model to evaluate the roles of teachers in implementing CSCL. The model, on the contrary, can act as guidelines for teachers to implement CSCL effectively. The significance of this study is revealed. To explore the model of good practice, the schools of conducting case study were carefully selected.

1. Computer-supported Collaborative Learning (CSCL)

As its name reflects, CSCL generally refers to a web-based or network-based platform in which students conduct online discussion collaboratively over a period of time. CSCL can be particularly useful to facilitate collaborative knowledge building or construction among students. With its content-free nature, CSCL provides a wide variety of features suiting the various instructional needs of specific context. It makes use of CSCL becomes more and more popular. (McGrath, 2001; Järvelä et al., 2000)

2. Model of evaluating the roles of teachers in implementing CSCL

2.1 Formulation of OISI Model

Many scholars have suggested various models to evaluate the roles of teachers in implementing CSCL. (Siegel & Kirkley, 1998; Harasim, 1989; Zhu, 1998; Järvelä et al., 2000; Bereiter & Scardamalia, 1987; Kirkley et al., 1998; Ahern et al.; Berge, 2000; Hew & Cheung, 2003; Rahikainen, Lallimo, & Hakkarainen, 2001; Mason, 1992; Waggoner, 1992) One of the valuable models is suggested by Paulsen (1995). Though the model is not comprehensive enough to assess the roles of teachers, the model clearly highlights three major roles of teachers in implementing CSCL, namely *Organizational Moderator, Intellectual Moderator and Social Moderator*. Using the model of Paulsen as a foundation and also referring to the above models, this study aims at constructing a model with three major characteristics. Firstly, it should be comprehensive enough to evaluate the issues. Secondly, the model should include the updated technologies and features of CSCL environment. Thirdly, the model should not overemphasize on particular aspect of CSCL. Fourthly, the model should be practical enough as an evaluation tool. Basing on these principles and the above literatures, an *OISI Model* is constructed. The last character "I" stands for a new dimension, Information *Moderator*. The detail of the model is listed in appendix.

2.2 Structure of OISI Model

Similar to other workable models of evaluating educational issues, *OISI Model* adopts a 3-layer-structure: dimensions, elements (See Table 1) and guiding questions. (Yuen & So, 1999; Tse, 2006) (See appendix).

Organizational moderator	Intellectual moderator	Social moderator	Information moderator
■ Project designer	■ Scaffoldingsza	■ Appropriate style of discourse	■ Learning platform
■ Stage manager	■ Cognitive structuring	■ Learning culture builder	■ Information literacy
■ Stakeholder mobilizer	■ Knowledge and skills pointer	■ Performance evaluator	■ Educational technology

Table 1: The various dimensions and elements of OISI Model

3. Cases Study by adopting OISI Model

The foci of this study are the teachers instructing Primary 5 or 6 students (11-12 years old) in 5 primary schools in Hong Kong. The schools are participating an ICTE project funded by Quality Education Fund: Global learning community among primary education through interdisciplinary, interschool and international project learning. It is called *3I Project* below. The students conducted their project learning with their partners, the students from other schools in Mainland China through a web-based CSCL platform. In this research, the data are mainly collected by teacher semi-structural interviews, CSCL platform observation and documentary survey. These tailor-made data collection tools are mainly based on *OISI Model*.

3.1 Selection of schools and teachers of study

This study adopted the method of purposive sampling because it matched with the objectives of this research (Bogdan & Biklen, 1992; Krathwohl, 1998). To explore models of good practice, rigid criteria were adopted for selection of schools. Five primary schools were selected for this study. They all fulfilled the above criteria and represented models of good practice.

Regarding the teachers of study, the teachers involved were all committed to the project. They were not only the teacher leader of the *3I Project* at school level, but also directly implement the project in the classroom. Therefore, most of them played a wide variety of roles in implementing *3I Project*. Their heavy involvement in the project made them as very suitable targets of study.

3.2 Instruments, research procedures and data collection

To guarantee the validity and reliability of data, the process of designing instruments, research procedure and the data collection were implemented carefully and systematically. To sharply address the research questions, tailor-made data collection instruments were constructed and designed according to *OISI Model*. Table 2 outlines the overall research design of this study.

Instrument	Research approach	Subjects in 5 primary schools	Type of data
Semi-structured interviews	Qualitative	■ Teacher leaders in primary school heavily involved in *3I project*	■ Transcripts of interviews
Documentary survey	Qualitative	■ 5 primary schools	■ *3I Project* plan ■ Teacher training materials ■ School annual plan ■ Logs of 3I activities at school level ■ Steering committee meeting agenda and minutes
Observations	Qualitative	■ 5 school principals ■ Teachers leaders of 5 schools ■ Student representatives of five schools ■ Trainers of CSCL platform	■ CSCL platform observation ■ CSCL platform teacher training seminar ■ Steering committee meetings ■ Project Launch

Table 2: Instruments and related information of this study

All the schools, principals and teachers involved were coded to protect their privacy. Table 3 shows the codes of each subject. These codes were used for the whole study.

Code	Representation	Example	Range of code
P	Principal of primary school	"P1" stands for a school principal of primary school one	From P1 to P5
S	School (Primary level)	"S1" stands for primary school one	From S1 to S5
T	Teacher leader of primary school	"T1"stands for a teacher leader of primary school one	From T1 to T5
ST	Student of primary school	"ST1"stands for a student of primary school one	From ST1 to ST5

Table 3: The codes of subject

4. Evaluating the teachers' roles in five schools implementing CSCL by *OISI Model*

Appropriate guiding question of *OISI Model* are used for evaluation. Table 4 is the summary of evaluation result by *OISI Model.*

	Excellent	Satisfactory	Fair	Unsatisfactory	Poor	Not Applicable
Organizational Moderator (Overall)			✓			
Project Designer		✓				
Stage Manager			✓			
Stakeholder Mobilizer				✓		
Intellectual Moderator (Overall)	✓					
Scaffolding		✓				
Cognitive Structuring	✓					
Knowledge and Skills Pointer	✓					
Social Moderator (Overall)			✓			
Appropriate style of discourse			✓			
Performance evaluator				✓		
Learning Culture Builder			✓			
Information Moderator (Overall)		✓				
Platform Instructor				✓		
Information Literacy		✓				
Educational Technology	✓					

Table 4: The summary of evaluation result by OISI Model

4.1 Evaluating the roles of the teachers as the Organizational moderators

As the *Organizational Moderators,* it was found that most of the teachers tried to widen students' perspective in planning the project, schools and students from Mainland China were selected as the counterparts for students' learning. A T5 stated that "Students found it interesting and challenging that they could directly learn and discuss with the students far away from them…these cultural difference undoubtedly increased the learning motivations of students." However, not all the teachers could group the students for learning effectiveness. A T4 reflected that it was omitted and should be improved in such a long process of online collaboration. Besides, many teachers ignored to assess what students should learn in each key stage. Moreover, teachers generally expressed that it was difficult for them to keep students' learning on the right track throughout long, complex and open learning tasks of CSCL. Above all, beside students and teachers, nearly no other stakeholders could be found in the online discussion. It might explain why many teachers found themshelves were overloaded. A T4 expressed that "I found it difficult to be a mentor of so many group simultaneously." Therefore, there was chamber of improvement.

4.2 Evaluating the roles of the teachers as the Intellectual moderators

As the *Intellectual Moderators*, the teachers tried to scaffold their students. They tried to be the guides on the side instead of sage on the stage throughout the learning process. However, some teachers

expressed that it was difficult to make a balance between teacher-controlled and student-controlled aspects of inquiry. The difficulty of using scaffolding features of adopted CSCL was an example. Many teachers seemed to in the adaptation process of transition from teacher-centre instruction to student-centre inquiry. Regarding the high order thinking, a T1 and a T2 confessed that it was not easy to nurture students with skills, like problem solving, metacognitive. Therefore, improvements are recommended.

4.3 Evaluating the roles of the teachers as the *Social Moderators*

As the *Social Moderators*, many teachers also contributed much in stimulating and provoking thinking of students. They tended to adopt a conversational style of discourse instead of questions only and statements only. However, many teachers' feedbacks to students were not direct and quick enough. A T1 pointed out that "though I knew that my participation in the online discussion was important for students' learning, I found it difficult to join it frequently. I thought that such setting was really too demanding for the teachers. To be convenient, I usually made feedback on whole class or whole group instead of discussing with individual students." The issue undoubtedly affected effectiveness of online discussion. The problem not yet ended at this point. The adopted CSCL platform of *3I Project* provided somewhat user-friendly features of data tracking. It facilitated teachers to monitor learning path of students. These features were also useful for teachers to spur the online participation when it was lagging. However, did the teachers well used the features was a question. A T5 even honestly confessed that she never used the features of data tracking to monitor students' progress. In this regard, the teachers generally underestimate the workload of participating CSCL platform.

4.4 Evaluating the roles of the teachers as the Information moderators

As the *Information Moderators*, the teachers should select suitable platform for learning. In fact, when teachers and principals decided to join this *3I project*, majority of them had no idea about the CSCL platform. They joined the project as it was a sort of university-school collaboration activities and they have confidence on the selection of university. From the angle of *Information Literacy*, it was rare for the teachers to guide their students to reflect on the practices on processing information regularly and their social responsibility in processing information. Therefore, there was chamber of improvement.

Conclusion: CSCL is just taking off in many schools

As shown in Table 4, the evaluation result for the teachers' performance may not be so satisfactory as expected. Reader of this study should not be so disappointed. The *OISI Model* is an exhaustive integration of good practice. It is unfair to expect that teachers of single school possessed the all the properties of good practice. CSCL is just taking off in many schools. This study hopes that *OISI Model* can help schools and teachers to fly and navigate on the right track. As Aristotle said, "Well begun is half done."

Appendix: The dimension, elements and the guiding questions of OISI Model

Organizational moderator

- Project designer

Do teachers select suitable schools, students as the counterparts for students' learning? Are there cultural difference? Do teachers expect that the collaboration with such counterpart can widen students' perspective? (McConnell, 2000)

Do teachers clearly explain the overall expectations, requirements and learning milestones of students' classroom and online participation? (Bereiter & Scardamalia, 1987)

Do teachers group students with particular purposes and directions beneficial for learning? (Siegel et al., 1998)

Do teachers effectively plan to implement various pedagogical strategies, like multidisciplinary learning, authentic learning, collaborative learning, problem-solving, self-regulated learning, metacognition etc., to facilitate students' learning? (Siegel et al., 1998)

- Stage manager

Do teachers divide the overall plan into several key stages, such as formulating research questions, erecting concept map, looking for deepening knowledge, participating discussion, generating data collection instruments, analyzing data, summarizing learning and discussion, preparing artifact, conducting peer evaluation etc.? (Rahikainen et al, , 2001)

Do teachers help their students to assess what they have learned in each key stage? (Bereiter & Scardamalia, 1987)

Do teacher successfully keeps students' learning on the right track corresponding to the key learning objectives of the project throughout complex and open learning tasks? (Järvelä et al., 2000; Siegel et al., 1998)

Do teachers clearly brief students the specific goals in each key stage? (Rahikainen et al, , 2001)

- Stakeholder mobilizer

Do teachers skillfully guide, motivate and mobilize other stakeholders like, parents, mentors or "knowledgeable peers" and advisors to participate such a learning community of CSCL to facilitate students' learning process? (Hew et al., 2003; Harasim, 1989; Siegel et al., 1998)

Are contributions from stakeholders adequate? Are there over interventions from the stakeholders? (Hew et al, 2003; Harasim, 1989; Siegel et al., 1998)

Intellectual moderator

- Scaffording

Do teacher act as guide on the side instead of sage on the stage throughout learning process? (Zhu, 1998)

If it is necessary, do teachers guide students to adapt themselves to learn in progressive-inquiry context especially if students are used to engage in a teacher-centre learning process? (Järvelä et al., 2000)

Do teachers help students to perform the roles of problem solver, collaborative learner and learning process monitor? (Siegel et al., 1998)

Do teacher attend to students' needs & guide them to achieve their own learning goals? (Zhu, 1998)

Do teachers facilitate encourage students to take their responsibility for cognitive (e.g., questioning, explaining) and metacognitive (e.g., goal-setting, monitoring, and evaluating) aspects of inquiry? (Bereiter & Scardamalia, 1987)

Do teachers try to manipulate their instruction to make a balance between teacher-controlled and student-controlled aspects of inquiry? (Järvelä et al., 2000)

Do teachers provide inadequate help, guidance, assistance, suggestions, recommendations, advice, opinions and comments to students? Are these assistances helpful to students for mastering key concepts or even lead them to a higher level of understanding? (Bereiter & Scardamalia, 1987)

Do teachers guide students' learning systematically, like stating questions, suggesting reading, relating

students to prior learning, linking learning with current learning etc?(Zhu, 1998)

- Cognitive structuring

Do teachers help students to synthesize their learning throughout complex and open learning tasks? (McConnell, 2000)
Do teachers help students to structure the learning content, especially when students encounter difficulty? (Kirkley et al., 1998)
Do teachers inspire students to structure the "raw" thinking, knowledge, prolonged discussion, findings and the key concepts easy to mix up? (Kirkley et al. , Savery et al., 1998)

- Knowledge and skills pointer

Do teachers help students to identify the sources of knowledge and necessary skills, especially when students encounter difficulty? (McConnell, 2000)
Do teachers bring up the issues that students have missed? (Paulsen, 1995)
Do teachers help students to highlight important issues and points for further investigation? (Paulsen, 1995)
Do teachers try respond to students' information-seeking question by inquiry approach? (Zhu, 1998)

Social moderator

- Appropriate style of discourse

Do teachers' comment generates higher levels of student participation and more complex interaction pattern among students? Will it promote a higher frequency of peer-peer interaction? (Zhu, 1998; Ahern et al., 1992; Oshima, & Oshima, 2002)
Are teachers' feedbacks to students positive, direct and quick, spontaneous and informal? (Berge, 2000; Ahern et al., 1992)
Do teachers adopt a conversational style of discourse instead of questions only and statements only? (Ahern et al., 1992)
Do teacher encourage students to defend their opinions? (Zhu, 1998)
Do teachers try to build up student-centred environments? (Ahern et al., 1992)
Are the questions posed by teachers stimulate and provoke thinking of students? (Kirkley et al., 1998; Ahern et al, 1992)
Do teacher avoid of interacting formally with students by making statements to the class or group as a whole? (Ahern et al, 1992)

- Learning culture builder

Do teachers use praise or encouragement to reward desirable behaviours? (Kirkley et al. 1998)
Do teachers value students' contributions? (Paulsen, 1995)
Do teachers provide effective control when undesirable behaviours arise? (Kirkley et al. 1998)
Do teachers offers behaviour for imitation for effective learning? (Kirkley et al. 1998)
Do the presences of teachers make students comfortable in an online environment? (Paulsen, 1995)

- Performance evaluator

Do teachers provide positive and fair feedback on performance of students on specific acts, ideas, performance or situations? (Kirkley et al. 1998)
Do teachers acknowledge students' contribution in reference to a given standard or set of criteria? (Hew & Cheung, 2003)
If it is available, do teachers make use the data tracking features to monitor learning path of students?
Do teachers spur the online participation when it is lagging? (Paulsen, 1995)

Information moderator

- Platform instructor

Do teachers seriously select suitable CSCL platform beneficial for students' learning? Are the platform well designed with the properties, like features facilitate collaborative knowledge construction or

building, effective collaborative and discussion environment, high versatility, user-friendly interface, high reliability, reasonable system requirement, well instructional design, powerful data tracking features, reasonable price, effective user support? (Newman, 1995; Soloway, Krajcik, Blumenfeld, Marx, 1996)
Are teachers familiar with the important features of the CSCL platform? (McConnell, 2000)
Do teachers instruct students with standard mode of communication so that other students and stakeholders can follow and contribute into it easily? (Siegel et al., 1998)

- Information literacy

Do teachers equip students with necessary knowledge, skills and attitudes to process information? They include the competence of comprehend, searching, analyze, evaluate, apply and synthesize information? Based on the found information, do teachers guide students to make right decision? (McConnell, 2000; Newman, 1995)
Do teachers guide students to reflect on the practices on processing information regularly?
Do teachers graduately nurture students with self-learning ability?
Do teachers guide to ethnical issues and social responsibility in processing information?

- Educational technology

Do teachers help their students to remove the limitations of accessing and using the CSCL platform? (McConnell, 2000)
Do teachers help students to tackle of various tools of educational technology?
Do teachers provide adequate and suitable resources to students so that they can make use various tools of educational technology?

A. Project briefing (16/06/2005)

Dr Christopher Tan, lecturer and researcher at the South Australia University, provided a comprehensive introduction to the Hong Kong schools participating in this project, which included introduction to the project, activities and schedule, organization, implementation, etc. About 40 principals and teachers from 32 schools attended this meeting.

B. Teacher training (4 sessions, 25-27/08/2005).

In this project, successful integration of IT with project learning by the use of the KC platform accomplishes inter-school collaboration. It also facilitates students' higher-order thinking and knowledge construction with 2-level scaffolds built in. In order to facilitate the implementation of web-based project learning, 4 training sessions on using the KC platform were arranged for 175 teachers from the 32 Hong Kong schools. The training aimed at familiarising the teachers with the KC platform and enable them to guide their students to apply the platform in their project learning. The content of the training sessions include:

- 簡介「知識研習群」
- 專題研習中的學習理論和問題
- 如何以網上協作方式建構知識？
- 如何運用各種協助思考的工具，建立學生的共通能力？
- 如何設計一個網上協作式專題研習？
- 甚麼是「鷹架」？如何以布林姆分類法及思維技巧模型設計「鷹架」？
- 實例分享 (3-I 專題研習計劃等)
- 如何促進學生學習？
- 家長、專家如何參與?
- 如何評估學生的學習 (進展性評估和總結性評估)？
- 如何決定學習成果的型式?
- 如何規劃與內地學校交流？
- 學生如何在網上交流? (提問、找資料、回應、驗證、總結、反思等階段)
- 學生、老師、校長的經驗分享

The lectures and workshops were delivered by Dr Christopher Tan at four of the participating schools. The training content included an introduction to the project, how to apply the KC platform in project learning, facilitation to the learners' learning process and knowledge building, pedagogies behind the KC platform, etc. Apart from lectures, the teachers also had hands-on experience at the workshop. Please refer to the training materials submitted with the hard copy of this report (《「跨科、跨校、跨地」專題研習 2005 之北京、青島、天津、順德及香港小學協作交流 教師培訓手冊》).

C. 1st China Trip

5 trips to Shunde, Beijing, Tianjin, Qingdao and Suzhou were arranged for the participating schools in Hong Kong. During these trips, principals and teachers from Hong Kong schools attended the project launch ceremonies organized by the local education departments. Participants also visited their partner schools in the Mainland China. This helped them to know much more about the schools and their culture. They also made discussions on topics of project learning and collaboration details with their partner schools. The participants of this visit included principals and teachers-in-charge (2-3 teachers from each school).

Details of those trips are as followed:

Visit to Shunde (08-09/09/2005)

44 principals and teachers from 13 Hong Kong schools had a two-day trip to Shunde during 8th and 9th of September, 2005. During the trip, the participants visited their partner schools in Shunde to know more about these schools and discussed with them the implementation plan of their web-based project learning. On the second day, the education department of Shunde organized a grand launching ceremony for the 3-I Project.

Beijing(12-14/09/2005)

Principals and teachers from four Hong Kong schools and staff-in-charge of the 3-I Project, totally 11 people joined this trip. They had a symposium with the Staff at the National Research Centre for Computer Education (Beijing). Then they visited three participating schools (i.e. 北京市東四九條小學, 黑芝麻胡同小學, 北京市東城區回民小學) which are renowned for their integration of IT in education. The participants had meaningful discussion on topics and collaboration details of the 3-I Project.

Tianjin(14-17/09/2005)

10 participants, including principals, teachers and staff-in-charge of the 3-I Project took part in this trip. They visited the Educational and Research Network Centre of Tianjin and their partner schools. They were very interested in the equipment and job of the Educational Information Centre, the Research Section of Pedagogy of Tianjin and also learned a lot from the class observations.

Qingdao(27-30/09/2005)

Principals and teachers from 9 Hong Kong schools and staff-in-charge of the 3-I Project, totally 24 people went to Qingdao on 27th of September, 2005 and carried out a series of exchange activities with their partner schools in Qingdao. They had visits to two outstanding primary schools in Qingdao (i.e. 青島四方實驗小學及青島同安路小學). They tried to know about their school management and operation, and shared teaching experience each other. Then they visited their partner schools and had detailed discussion with the schools on project planning, school facilities and human resources, etc. This greatly helped them to prepare for the implementation of the project.

D. The 3-I Project launch Ceremony

On 8th of October, 2005, a grand project launch ceremony was organized for the 3-I Project at the Chung Chi Church , the Chinese University of Hong Kong (abbreviated as "CUHK" hereafter). There were around 900 attendants, including education department officials from the Mainland China and HK, principals, teachers, students from 27 participating schools, and parents. Honored guests were invited to host the project launch ceremony. They were Mr. She Mang, Acting Principal Assistant Secretary of the Education and Manpower Bureau, Mr. Gary Wong, Project Officer of Quality Education Fund, Professor Wong Hin-wah, Chairman of Department of Curriculum and Instruction, CUHK, Professor Lee Fong Lok, Chairman of HK-Macau Chapter, Global Chinese Society on Computers in Education & Director of the Advancement of Information Technology in Education, CUHK, Mr. Ng Hok Ling , Member of the Executive Committee of HK-Macau Chapter, Global Chinese Society on Computers in Education, Mr. Pun Sai Wing, Associate Director of the Centre for the Advancement of Information Technology in Education, CUHK, Mr. Yi Zhongping, Deputy Director of the Suzhou Education Technology Centre, Mr. Huo Xiaohong, Officer of the Teaching and Research Section of the Tianjin Education Bureau, etc. Professor Lee Fong Lok made a welcome speech at the start of the ceremony, then representatives from particiting schools shared their impressions and experience during their visit to their partner schools in the Mainland China. Dr Christopher Tan also offered strategies in implementing project learning at

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After well preparation, the web-based project learning has been being carried out from November 2005 to April 2006. Students from partner schools got to know each other over the KC platform and further carried out online discussions on a number of topics which focus on the theme of environmental protection. Figure 5 shows a series of topics and sub-topics being discussed by students from partner schools in Hong Kong and the Mainland China. Figure 6 is an excerpt of the discussion.

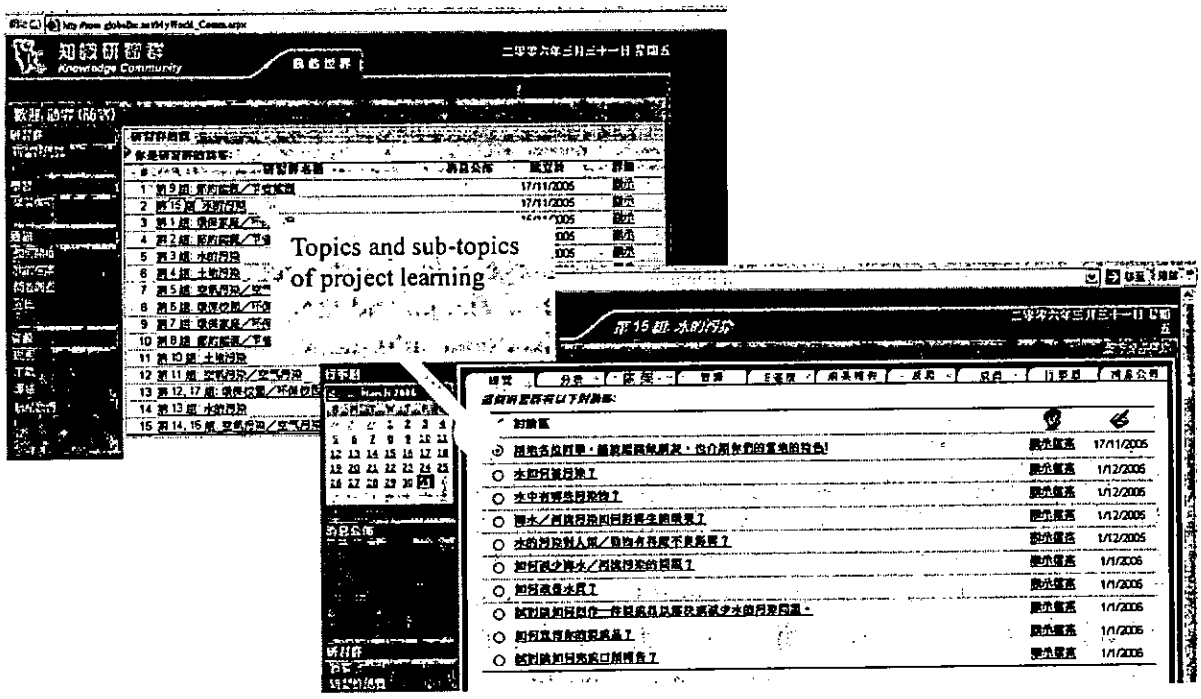

Figure 5: Topics and sub-topics in Environmental Protection developed by Participating Schools

Figure 6 Discussions among students from partner schools in Hong Kong and the Mainland China

F. 2nd China Trip and local summary ceremonies

To facilitate better collaboration between the partner schools in Hong Kong and in Mainland China, 4 second trips to Shunde, Beijing, Tianjin and Qingdao were arranged for the participating schools in Hong Kong. Apart from principals and teachers, students and parents are included in some of the trips. During these trips, principals and teachers from Hong Kong schools attended the project summary ceremonies organized by the local education departments.

Some participants visited their partner schools again. This helped them to further discuss the project details and prepare for the coming summary conference in Hong Kong.

Details of those trips are as followed:

2nd Visit to Shunde (12-13/05/2006) and Summary ceremony in Shunde (13/05/2006)

Over 300 participants including principals, teachers, students and parents from 13 Hong Kong schools had a two-day trip to Shunde during 12th and 13th of May, 2006. In the trip, the students visited their partner schools in Shunde and meet their "teammates" in web-based project learning in person for the first time. They know more about their partner schools and discussed about the arrangements in the coming project summary conference in Hong Kong.

In the summary ceremony held in 順德第一中學附屬小學, teachers and students from both Hong Kong and China shared their outcomes in the project on the second day of the trip.

2nd Visit to Beijing (17-21/05/2006) and Summary ceremony in Beijing (18/05/2006)

Over 80 participants, including principals, teachers, students and parents from Hong Kong schools and staff-in-charge of the 3-I Project, joined the 2nd visit to Beijing.

In the summary ceremony held in 北京市東四九條小學 on 18th May 2006, the participants shared their outcomes in the project and had a meaningful discussion.

2nd Visit to Tianjin (16-19/09/2005) and Summary ceremony in Tianjin (17/05/2006)

Principals, teachers, students, parents and staff-in-charge of the 3-I Project traveled to Tianjin on 16th to 19th May 2006 for a second visit. The number of participants was over 90. The participants visited their partner school in Tianjin and joined the summary ceremony on 17th May.

In the summary ceremony held in 天津市第二南開中學, we are honored to have speeches from the officials and educational professionals in Tianjin. The ceremony gave valuable opportunities for the participating schools to exchange ideas and experiences through the sharing sessions and presentations.

2nd Visit to Qingdao (14-17/09/2005) and Summary ceremony in Qingdao (16/05/2006)

Principals, teachers, students and parents from Hong Kong schools in Qingdao group and staff-in-charge of the 3-I Project, totally over 80 people went to Qingdao on 14th to 17th September 2006 for their second visit to Qingdao. They joined the Qingdao summary ceremony and visited their partner schools. Students showed passion in meeting their online "teammates" in the project.

G. Hong Kong Visit by Schools in Mainland China

The participating schools in mainland China visited Hong Kong in 25th to 26th May 2006. They visited partner schools in Hong Kong and attended the summary conference in 27th May.

H. Summary Conference of 3-I Project (27/05/2006)

To summarise the whole project, a grand summary conference was organized in 香港正覺蓮社佛教黃藻森學校 on 27th May 2006. Over 1500 attendants from 81 participating schools, including representatives from Beijing, Tianjin, Qingdao, Shunde, Suzhou and Hong Kong, attended the

conference. Honored guests were invited to host the project launch ceremony. They were 香港教育統籌局資訊科技教育組高級課程發展主任李志榮先生、全球華人計算機教育應用學會香港分會主席暨香港中文大學資訊科技教育促進中心主任李芳樂教授、全國中小學計算機教育應用研究中心項目主管張有寧先生、蘇州市電化教育館宋杏元書記、天津市教育研究室徐家吉書記、廣東省佛山市順德區電化教育中心黃兆超主任、張家港市電化教育館邱宏斌副館長、蘇州市電化教育部網絡建設部汪磊主任、吳江市教研室余家友副主任、蘇州市平江區教研室巫茂華書記、廣東省佛山市順德區信息中心張英華主管、青島市市北區教研電教室曲宏濤副站長、吳中區教技中心沈秋明主任. At the start of the conference, 香海正覺蓮社佛教黃藻森學校鍾振文校長 made a welcome speech. After that, 張有寧先生 expressed "「三跨」研習項目對兩地學習交流的促進作用". 國立南澳大學陳有義博士 gave a speech about "「三跨」項目的反思". Moreover, sharing sessions by three students from Hong Kong participating schools were held, which is about their impression and experience when collobrating with the students from mainland China. Finally, we had Professor Lee Fong Lok to summarise the project.

To further display the outcome in the project, we organised sharing sessions between the partner schools on the day. All schools had 10~ 15 minutes to present their works. In addition, exhibitions were held in the same venue with the ceremony. Participating schools could display their project works in the exhibitions.

The 3-I project comes to the end successfully on 27th May 2006.

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Appendix 6 Programme of Experience Sharing at HKITEC2006

Experience Sharing of the 3-I Project

Title: Global Learning Community among Primary Education through 3-I Project Learning

Date & Time: 10:00 am ~ 12:30 pm

8th of February，2006

Venue: Room 202 & 203，Hong Kong Convention and Exhibition Centre，1 Expo Drive，Wanchai，Hong Kong，China (enter: Expo Drive Entrance)

Chair: Ou Yong (區詠)

Program:

	Time	Topic	Name of Speaker	Organizaition
1.	10:00 – 10:10	Introduction to the 3-I Project (“三跨”项目简介)	Ou Yong (區詠)	The Chinese University of Hong Kong (香港中文大學)
2.	10:10 – 10:25	“跨學科、跨地域、跨學校”網絡條	Zhang Youning (張	National Research Center for Computer

	Time	Topic	Name of Speaker	Organizaition
		件下研究性學習在中國內地開展的概況	有寧)	Education (教育部全國中小學計算機教育研究中心)
3.	10:25 – 10:45	資訊科技帶動跨地學習的蛻變	Ting Chi Wai & Lee Kim Bo (丁智偉及李劍寶)	The Chow Clansmen Association School (周氏宗親總會學校)
4.	10:45 – 11:00	"三跨"課題在我校的階段性匯報及下一步的工作計畫	Li Beifang (李北方)	北京市東四九條小學
	11:00 – 11:30	Tea break (茶點時間)		
5.	11:30 – 11:45	網上協作平臺如何提升教學及學習效能	Chan Wing Chung (陳穎聰)	The Tin Shui Wai Catholic Primary School (天水圍天主教小學)
6.	11:45 – 12:00	3-I 專題研習對學生學習的影響	Chan Ka Pik (陳嘉碧)	St. Francis of Assisi's English Primary School (聖方濟各英文小學)
7.	12:00 – 12:15	3-I 與各科的整合	Ching Chi Cheung (程志祥)	The Hong Kong and Macau Lutheran Church Primary School (港澳信義會小學)
8.	12:15 – 12:30	Using Webquest in Project Learning (運用 Webquest 於專題研習)	Tse Chun Kit (謝俊杰)	Tung Wah Group of Hospitals Wong Yee Jar Jat Memorial Primary School (東華三院王余家潔紀念小學)

Note:

1. Experience sharing can be presented in multiple styles, such as PowerPoint, drama, etc.
2. Presentation language: English, Cantonese and Putonghua.

Appendix 7 Details of Project Activities

A. Project briefing (16/06/2005)

Dr Christopher Tan, lecturer and researcher at the South Australia University, provided a comprehensive introduction to the Hong Kong schools participating in this project, which included introduction to the project, activities and schedule, organization, implementation, etc. About 40 principals and teachers from 32 schools attended this meeting.

B. Teacher training (4 sessions, 25-27/08/2005).

In this project, successful integration of IT with project learning by the use of the KC platform accomplishes inter-school collaboration. It also facilitates students' higher-order thinking and knowledge construction with 2-level scaffolds built in. In order to facilitate the implementation of web-based project learning, 4 training sessions on using the KC platform were arranged for 175 teachers from the 32 Hong Kong schools. The training aimed at familiarising the teachers with the KC platform and enable them to guide their students to apply the platform in their project learning. The content of the training sessions include:

- 簡介「知識研習群」
- 專題研習中的學習理論和問題
- 如何以網上協作方式建構知識？
- 如何運用各種協助思考的工具，建立學生的共通能力？
- 如何設計一個網上協作式專題研習？
- 甚麼是「鷹架」？如何以布林姆分類法及思維技巧模型設計「鷹架」？
- 實例分享 (3-I 專題研習計劃等)
- 如何促進學生學習？

- 家長、專家如何參與?
- 如何評估學生的學習 (進展性評估和總結性評估)?
- 如何決定學習成果的型式?
- 如何規劃與內地學校交流?
- 學生如何在網上交流? (提問、找資料、回應、驗證、總結、反思等階段)
- 學生、老師、校長的經驗分享

The lectures and workshops were delivered by Dr Christopher Tan at four of the participating schools. The training content included an introduction to the project, how to apply the KC platform in project learning, facilitation to the learners' learning process and knowledge building, pedagogies behind the KC platform, etc. Apart from lectures, the teachers also had hands-on experience at the workshop. Please refer to the training materials submitted with the hard copy of this report (《「跨科、跨校、跨地」專題研習 2005 之北京、青島、天津、順德及香港小學協作交流 教師培訓手冊》).

C. 1st China Trip

5 trips to Shunde, Beijing, Tianjin, Qingdao and Suzhou were arranged for the participating schools in Hong Kong. During these trips, principals and teachers from Hong Kong schools attended the project launch ceremonies organized by the local education departments. Participants also visited their partner schools in the Mainland China. This helped them to know much more about the schools and their culture. They also made discussions on topics of project learning and collaboration details with their partner schools. The participants of this visit included principals and teachers-in-charge (2-3 teachers from each school).

Details of those trips are as followed:

- **Visit to Shunde (08-09/09/2005)**

  44 principals and teachers from 13 Hong Kong schools had a two-day trip to Shunde during 8th and 9th of September, 2005. During the trip, the participants visited their partner schools in Shunde to know more about these schools and discussed with them the implementation plan of

their web-based project learning. On the second day, the education department of Shunde organized a grand launching ceremony for the 3-I Project.

- **Beijing(12-14/09/2005)**

Principals and teachers from four Hong Kong schools and staff-in-charge of the 3-I Project, totally 11 people joined this trip. They had a symposium with the Staff at the National Research Centre for Computer Education (Beijing). Then they visited three participating schools (i.e. 北京市東四九條小學, 黑芝麻胡同小學, 北京市東城區回民小學) which are renowned for their integration of IT in education. The participants had meaningful discussion on topics and collaboration details of the 3-I Project.

- **Tianjin(14-17/09/2005)**

10 participants, including principals, teachers and staff-in-charge of the 3-I Project took part in this trip. They visited the Educational and Research Network Centre of Tianjin and their partner schools. They were very interested in the equipment and job of the Educational Information Centre, the Research Section of Pedagogy of Tianjin and also learned a lot from the class observations.

- **Qingdao(27-30/09/2005)**

Principals and teachers from 9 Hong Kong schools and staff-in-charge of the 3-I Project, totally 24 people went to Qingdao on 27th of September, 2005 and carried out a series of exchange activities with their partner schools in Qingdao. They had visits to two outstanding primary schools in Qingdao (i.e. 青島四方實驗小學及青島同安路小學). They tried to know about their school management and operation, and shared teaching experience each other. Then they visited their partner schools and had detailed discussion with the schools on project planning, school facilities and human resources, etc. This greatly helped them to prepare for the implementation of the project.

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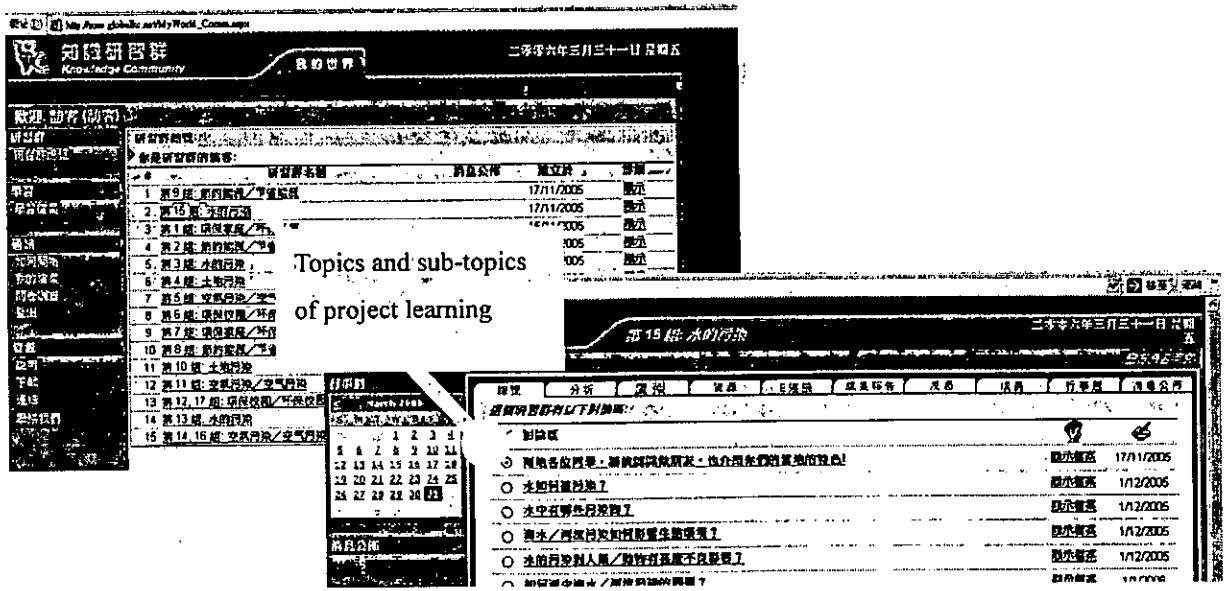

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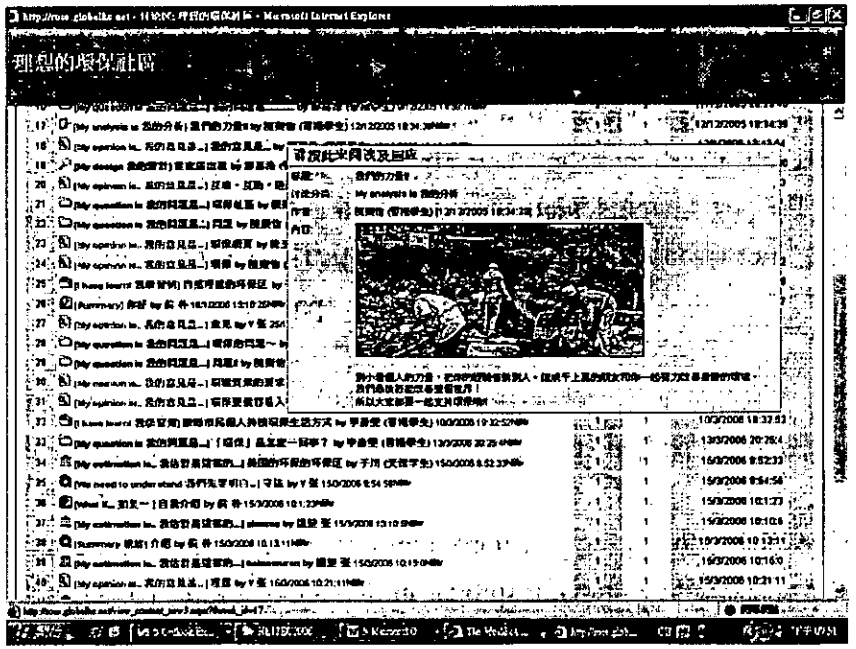

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  Over 300 participants including principals, teachers, students and parents from 13 Hong Kong schools had a two-day trip to Shunde during 12th and 13th of May, 2006. In the trip, the students visited their partner schools in Shunde and meet their "teammates" in web-based project learning in person for the first time. They know more about their partner schools and discussed about the arrangements in the coming project summary conference in Hong Kong.

  In the summary ceremony held in 順德第一中學附屬小學, teachers and students from both Hong Kong and China shared their outcomes in the project on the second day of the trip.

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  Over 80 participants, including principals, teachers, students and parents from Hong Kong schools and staff-in-charge of the 3-I Project, joined the 2nd visit to Beijing.

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number of participants was over 90. The participants visited their partner school in Tianjin and joined the summary ceremony on 17th May. In the summary ceremony held in 天津市第二南開中學, we are honored to have speeches from the officials and educational professionals in Tianjin. The ceremony gave valuable opportunities for the participating schools to exchange ideas and experiences through the sharing sessions and presentations.

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  Principals, teachers, students and parents from Hong Kong schools in Qingdao group and staff-in-charge of the 3-I Project, totally over 80 people went to Qingdao on 14th to 17th September 2006 for their second visit to Qingdao. They joined the Qingdao summary ceremony and visited their partner schools. Students showed passion in meeting their online "teammates" in the project.

G. Hong Kong Visit by Schools in Mainland China

The participating schools in mainland China visited Hong Kong in 25th to 26th May 2006. They visited partner schools in Hong Kong and attended the summary conference in 27th May.

H. Summary Conference of 3-I Project (27/05/2006)

To summarise the whole project, a grand summary conference was organized in 香港正覺蓮社佛教黃藻森學校 on 27th May 2006. Over 1500 attendants from 81 participating schools, including representatives from Beijing, Tianjin, Qingdao, Shunde, Suzhou and Hong Kong, attended the conference. Honored guests were invited to host the project launch ceremony. They were 香港教育統籌局資訊科技教育組高級課程發展主任李志榮先生、全球華人計算機教育應用學會香港分會主席暨香港中文大學資訊科技教育促進中心主任李芳樂教授、全國中小學計算機教育應用研究中心項目主管張有寧先生、蘇州市電化教育館宋杏元書記、天津市教育研究室徐家吉書記、廣東省佛山市順德區電化教育中心黃兆超主任、張家港市電化教育館邱宏斌副館長、蘇州市電化教育部網絡建設部汪磊主任、吳江市教研室余家友副主任、蘇州市平江區教研室巫茂華書記、廣東省佛山市順德區信息中心張英華主管、青島市市北區教研電教室曲宏濤副站長、吳中區教技中心沈秋明主任. [English translation to be added]

At the start of the conference, 香海正覺蓮社佛教黃藻森學校鍾振文校長 made a welcome speech. After that, 張有寧先生 expressed "「三跨」研習項目對兩地學習交流的促進作用". 國立南澳大學陳有義博士 gave a speech about "「三跨」項目的反思". Moreover, sharing sessions by

three students from Hong Kong participating schools were held, which is about their impression and experience when collobrating with the students from mainland China. Finally, we had Professor Lee Fong Lok to summarise the project.

To further display the outcome in the project, we organised sharing sessions between the partner schools on the day. All schools had 10~ 15 minutes to present their works. In addition, exhibitions were held in the same venue with the ceremony. Participating schools could display their project works in the exhibitions.

The 3-I project comes to the end successfully on 27th May 2006.

Appendix 8 Student / Teacher interviews parameters

No.	School Name	No. of Students Interviewed
1	順德樂從岑松江夫人小學	6
2	青島嘉裕關學校	9
3	青島市實驗小學	5
4	天津市和平區萬全道小學	6
5	北京市東四九條小學	6
6	聖方濟愛德小學	6
7	九龍禮賢學校	6
8	嗇色園主辦可信學校	6
9	元朗公立中學校友會小學	5
10	天水圍天主教小學	8
11	胡素貞博士紀念學校 (上午校)	5
12	周氏宗親總會學校	6
13	聖方濟各英文小學	6
14	沙田循道衛理小學	8
15	荔枝角天主教小學	7
16	天主教佑華小學	5
17	嘉諾撒小學 (新蒲崗)	11

c	School Name	No. of Teachers Interviewed
1	順德樂從岑松江夫人小學	3
2	青島嘉裕關學校	4
3	青島市實驗小學	2
4	天津市和平區萬全道小學	2
5	北京市東四九條小學	2
6	聖方濟愛德小學	2
7	九龍禮賢學校	1
8	嗇色園主辦可信學校	2
9	元朗公立中學校友會小學	3
10	天水圍天主教小學	3
11	胡素貞博士紀念學校 (上午校)	2
12	周氏宗親總會學校	1
13	聖方濟各英文小學	2
14	沙田循道衛理小學	4
15	荔枝角天主教小學	3
16	天主教佑華小學	1
17	嘉諾撒小學 (新蒲崗)	4

Appendix 9　Official news

■ 中小學訊息技術教育網

http://www.nrcce.com/project/3i/inform/kt_sz.htm

跨学科、跨学校、跨地域网络条件下研究性学习课题各地区开题概况

——苏州地区开题情况简介

一、时间：２００５年１１月9日
二、地点：苏州新苏示范附属小学
三、到会的专家领导有：
全国中小学计算机教育研究中心北京部主任苗逢春博士、张有宁老师
香港中文大学教授李芳乐教授
香港中文大学教师陈有义博士
香港学校的学校代表
顺德地区的学校代表
苏州市电教馆副馆长金 陵以及苏州市电教馆副馆长和有关领导
四、苏州各实验学校及课题及负责人

吴江市实验小学	潘国平	信息中心主任	吴江市松陵镇永康路 84 号
苏州新区实验小学	沈国良	教导处主任	苏州新区狮山新苑 73 号
常熟市义庄中心小学	陈越峰	信息中心主任	常熟市义庄弄 18-1 号
园区新城小学	张伟	信息中心主任	苏慕路 77 号
昆山开发区实小	姚云	副校长	昆山市珠江北路 317 号

苏州国际外语	宋天民	信息中心主任	苏州相城
星海学校	王晓珠	教科室副主任	苏茜路 18 号
碧波实验小学	吴哲	人事秘书	吴中开发区白云街 1 号
平江实验学校	董晨	校务办	干江东路 518 号
吴江市鲈乡实验小学	梅阿中	副校长	吴江市松陵镇仲英大道油车路口
张家港市万红小学	卞向飞	教科室主任	张家港市万红小学
新苏师附小	陈建忠	信息中心主任	苏州市胥门吉庆街 10 号
常熟市元和小学	彭艳秋	教科室主任	常熟市南庆巷 45 号

五、课题开题报告及大会发言

1）开题会由全国中小学计算教育研究中心张有宁主持

2）苏州电教馆馆长金陵致答谢辞，并宣布课题实验学校名单

3）全国中小学计算机教育研究中心北京部主任苗逢春博士做开题报告

4）香港中文大学教教授李芳乐做信息素养的报告

5）香港中文大学教师陈有义博士做课题规划与进展

六、颁发课题实验校铜牌证书并合影留念

七、目前进展情况：

通过课题的开题仪式后，各个实验学校在建立相互认识的基础上确定了课题共同研究的方向。并根据各自的特点和相互的共性确定了相应的研究题目，制定了相应的课题研究计划和实施方式。建立了校本课题研究的组织机构，明确了各自的职责与任务。并组织来自香港和顺德地区的老师共同研究讨论实施方安，进一步的培训平台的使用以及研究方法等。

■ 城區小學

http://www.sdcqxx.com/ReadNews.asp?NewsID=959

发表日期：2006年5月30日 编辑：lance-linfeng 有372位读者读过此文 【字体：大 中 小】

"跨科、跨校、跨地网络专题研习课题"于2006年5月27日在香港黄藻森小学隆重结题

"跨科、跨校、跨地网络专题研习课题"于2006年5月27日在香港黄藻森小学隆重结题

我校两位教师代表在梁镜波副校长的带领下参加此次结题大会。5月26日下午，大会先安排我校与课题研习学校-香港九龙湾圣若翰天主教小学进行交流，5月27日在香港黄藻森小学进行隆重结题，-会议中我校林志锋老师代表学校发表了题为《架起沟通的桥梁 扬起学习的风帆》课题工作总结报告，课题报告受到了与会的领导和师生的高度赞扬。具体情况如下：

■ 國際在線

http://gb.cri.cn/1321/2005/10/09/1568@729236.htm

香港与内地四城市小学联合实施协作交流计划

新华网香港10月8日电（记者张雅诗）约1000名师生及家长8日在此间参加一项内地与香港小学协作交流计划的启动仪式。

该项名为“跨科、跨校、跨地”专题研习2005之北京、青岛、天津、顺德及香港小学协作交流计划，由中国教育部全国中小学计算机教育研究中心、全球华人计算机教育应用学会香港分会共同主办。

这一计划为国家级重点研究项目，通过香港与内地小学的协作交流，提升小学研究性项目学习至国际水平，建立香港与内地小学协作交流的模式。

据了解，香港与内地的小学将以“环境保护”为主题展开协作交流，培养香港与内地师生对“环保”的正确认识和价值观；发展学生作为一个终身学习者所需的研究和思维技巧，如探索、分析、评估、综合、总结等；发展教师建立以学生为主的学习文化及促进技巧。

计划将整合先进的信息技术，并提供多项教育先驱研究课题报告。为期1年的协作计划共吸引了31所香港小学和38所北京、青岛、天津、顺德4城市的小学参与，参与人数达7000多人。