



**Final Report of Project**

**Project No. : 2009/0314**

**Part A**

Project Title: Game-based Collaborative Inquiry Learning between Hong Kong and Beijing Primary Schools

Name of Organization/School: Centre for the Advancement of Information Technology in Education (CATIE), The Chinese University of Hong Kong (CUHK)

Project Period: From 10/2010 (month/year) to 09/2011 (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 8<sup>th</sup> 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 8<sup>th</sup> 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.*



## Final Report of Project (Part B)

Project No.: 2009/0314

### 1. ATTAINMENT OF OBJECTIVES

#### Objective 1

Objective statement	To activate students' interest in collaborative inquiry learning.								
Activities related to the objective	The students were engaged in pursuing collaborative inquiry learning in <i>Learning Villages</i> <sup>1</sup> (abbreviated as "LV" hereafter)—an online game-based collaborative learning platform which operates in a form of massively multi-player online role-play game (MMORPG).								
Extent of attainment of the objective	Fully achieved								
Evidence or indicators of having achieved the objective	<p>The large number of the students' formative collaborative learning artefacts in LV (the discussions in the villages) reflects that the students were highly motivated to participate in the collaborative learning tasks in this project. The following table shows the quantity of the discussions in LV in the project:</p> <table><tr><th>VILLAGES CREATED <i>(no. of issues discussed in LV)</i></th><th>HOUSES BUILT <i>(no. of first-tier discussions in LV)</i></th><th>POSTINGS <i>(no. of second-tier discussions in LV)</i></th></tr><tr><td>2816</td><td>51,666</td><td>251,448</td></tr></table>			VILLAGES CREATED <i>(no. of issues discussed in LV)</i>	HOUSES BUILT <i>(no. of first-tier discussions in LV)</i>	POSTINGS <i>(no. of second-tier discussions in LV)</i>	2816	51,666	251,448
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2816	51,666	251,448							
Reasons for not being able to achieve the objective, if applicable	Nil								

#### Objective 2

<b>Objective statement</b>	To promote cultural exchange between students from Hong Kong and Beijing.		
<b>Activities related to the objective</b>	<ol style="list-style-type: none"> <li>1. The students from Hong Kong and Beijing formed inter-school collaborative learning teams in the project. When pursuing various collaborative inquiry learning tasks, they discussed and exchanged different views and opinions in LV.</li> <li>2. Two face-to-face students' cultural exchange activities were organized in the project. They are (i) Hong Kong Schools' Visit to Beijing Schools, and (ii) Closing Ceremony and Project Work Exhibition on 25 June 2011.</li> </ol>		
<b>Extent of attainment of the objective</b>	85% attained		

<sup>1</sup> <http://www.learningvillages.com>

<b>Evidence or indicators of having achieved the objective</b>	<ol style="list-style-type: none"> <li>1. The Hong Kong and Beijing students actively participated in collaborative inquiry learning in LV.</li> <li>2. In the steering committee meetings and interviews, the teachers and students stated that, after the face-to-face visits, their communication with the Beijing partner schools had been enhanced. They also realized that they had gained more in-depth understanding of their culture.</li> </ol>
<b>Reasons for not being able to achieve the objective, if applicable</b>	In the project, a small portion of Hong Kong students collaborated with Guangzhou and Foshan students, rather than Beijing students. As delineated in "PROJECT VARIATION" of the progress report, in the original proposal, we had planned to invite 10 Beijing schools to participate in the project. However, in turn, only 8 Beijing schools joined the project. Thus, we extended our beneficiaries to students in Guangzhou and Foshan so as to enable more cross-city pairs of learning partnership for facilitating more Hong Kong students to participate in the project.

### Objective 3

<b>Objective statement</b>	To facilitate students to acquire subject-specific knowledge in the KLA of Personal, Social, and Humanities Education at the level of Hong Kong Primary-5 Education.
<b>Activities related to the objective</b>	In this project, the collaborative inquiry learning tasks for the students were designed to align with a number of selected topics of the Primary-5 General Studies curriculum (under the KLA of Personal, Social, and Humanities Education). For the list of the collaborative inquiry learning tasks, please refer to Appendix A.
<b>Extent of attainment of the objective</b>	Fully achieved
<b>Evidence or indicators of having achieved the objective</b>	<ol style="list-style-type: none"> <li>1. An evaluation panel was set up to review and evaluate the students' villages in LV (formative learning artefacts) and their project works (summative learning artifacts). The members of the panel include 3 advisors (the academic staff of CAITE) and 6 reviewers (experienced LV school-teachers). Appendices B and C show the evaluation rubrics of LV villages and project works.</li> <li>2. The students' formative learning artefacts reflect that they were gaining the knowledge with respect to the curriculum concerned during the project.</li> <li>3. The students' summative artefacts reflect their acquisition of the knowledge with respect to the curriculum concerned at the completion stage of the project.</li> </ol>
<b>Reasons for not being</b>	Nil

able to achieve the objective, if applicable	
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#### Objective 4

<b>Objective statement</b>	To enhance students' higher-order thinking skills for problem solving.
<b>Activities related to the objective</b>	Pursuing collaborative inquiry learning in LV, the students were guided to set up inquiry scopes, search / collect / examine / organize / analyze information, evaluate formative and summative results, make judgments, etc. All of these were their problem-solving higher-order thinking skills practising in this project.
<b>Extent of attainment of the objective</b>	Fully achieved
<b>Evidence or indicators of having achieved the objective</b>	<ol style="list-style-type: none"> <li>1. In the interviews with the students, they realized pursuing collaborative inquiry learning in LV enhanced their communication, collaborative, Information Technology and self-management skills for problem solving. It also improved their skills in analyzing, integrating and evaluating resources from the Internet.</li> <li>2. Our research indicates that there were statistically significant changes in some of the participating students' learning strategies. Some students stated that they started to think from different angles and search information needed from various resources when encountering problems.</li> </ol>
<b>Reasons for not being able to achieve the objective, if applicable</b>	Nil

#### Objective 5

<b>Objective statement</b>	To establish networks of learning among schools in Hong Kong and Beijing.
<b>Activities related to the objective</b>	In the project, the participating schools from Hong Kong and Beijing formed learning partnerships.
<b>Extent of attainment of the objective</b>	85% attained
<b>Evidence or indicators of having achieved the objective</b>	<ol style="list-style-type: none"> <li>1. The students among the partner schools formed inter-school collaborative learning teams to pursue inquiry learning in LV.</li> <li>2. The teachers among the partner-schools co-facilitated their students' learning progress in LV, and shared their LV facilitation experience during the face-to-face school visits.</li> </ol>
<b>Reasons for not being able to achieve the</b>	In the project, a small number of Hong Kong schools established networks of learning with Guangzhou and Foshan schools, rather than Beijing schools. As

<b>objective, if applicable</b>	delineated in “PROJECT VARIATION” of the progress report, in the original proposal, we had planned to invite 10 Beijing schools to participate in the project. However, in turn, only 8 Beijing schools joined the project. Thus, we extended our beneficiaries to students in Guangzhou and Foshan so as to enable more cross-city pairs of learning partnership for facilitating more Hong Kong students to participate in the project.
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## Objective 6

<b>Objective statement</b>	To study the effectiveness of collaborative inquiry learning through an online interactive game-based approach.
<b>Activities related to the objective</b>	Questionnaire-based surveys, interviews, classroom observations, analysis of students’ formative and summative learning artefacts were conducted to study the effectiveness of pursuing collaborative inquiry learning in LV.
<b>Extent of attainment of the objective</b>	Fully achieved
<b>Evidence or indicators of having achieved the objective</b>	Data from the questionnaires, interviews, observations, and learning artefacts were analyzed. The findings were presented in the project booklet and will be disseminated through other conference papers.
<b>Reasons for not being able to achieve the objective, if applicable</b>	Nil

## 2. PROJECT IMPACT ON

### 2.1. Learning Effectiveness

#### *(a) Broadening students' horizons*

The project enabled the participating students to broaden their horizons by gaining access to resources and views of students from different cities of China (Hong Kong, Beijing, Guangzhou, and Foshan) on a variety of topics in LV and during the face-to-face school visits. They were also required to complete collaborative inquiry learning tasks on various topics ranging from “Causes of Global Warming,” “Solutions to Water Shortage Problems,” “Solutions to Traffic Congestion Problems,” to “Pros and Cons of Using the Internet.” In order to carry out the tasks, they had to search relevant resources about the topics concerned on the Internet. Besides, they were encouraged to discuss and interact with the students from their partner schools. This provided them with insights into the views of people with different cultural backgrounds. Hence, the participation in the inquiry tasks expanded the students' limit of knowledge, ideas, and experience.



A group of Hong Kong students and teacher visited their partner school in Beijing

#### *(b) Increasing students' sense of achievement*

LV promotes students' quality discussions with an *invest-and-reward* mechanism. In the project, the students had to invest their learning tokens in order to create villages or build houses in LV. Nevertheless, when the number of quality houses in their invested villages reached a certain amount, the villages would be upgraded by their teachers. Benefits brought to the students included learning token reward, higher social status conferment for enjoying extra privileges in LV. It provided with the students with sense of achievement for participating in quality collaborative inquiry learning. Apart from that, every inter-school collaborative team was provided with an opportunity to present their collaborative inquiry learning outcomes to the non-partner school students and guests during the project work exhibition. Moreover, the teams who created outstanding LV villages (the formative learning artefacts) and/or outstanding project works (the summative learning artefacts) were awarded “Excellence Awards” during the closing ceremony.



Students' presentation in the project work exhibition



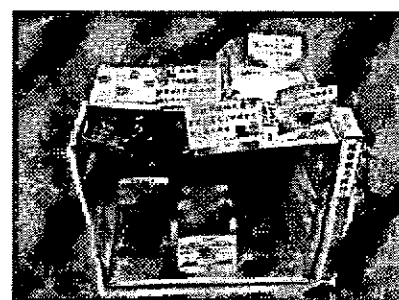
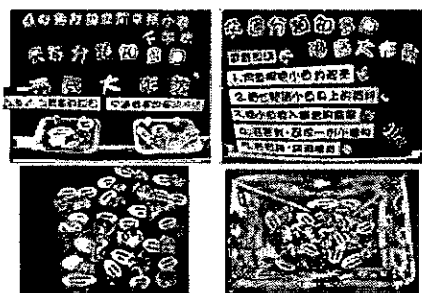
Award winning students in the closing ceremony

### *(c) Fostering students' development in their potential and specific abilities*

In this project, the collaborative inquiry learning tasks for the students were designed to align with a number of selected topics of the Primary-5 General Studies curriculum. An evaluation panel was set up to review and evaluate the students' villages in LV (formative learning artefacts) and their project works (summative learning artifacts). According to the panel review results, the students' LV villages and project works reflect their acquisition of the knowledge with respect to the curriculum concerned. Furthermore, the CAITE researchers interviewed 2 teachers and 5 students from each participating school for investigating the project impact. The analysis of the interviews indicates that both the teachers and students realized participating in LV enhanced the students' problem solving abilities, especially the skills in analyzing, integrating and evaluating resources from the Internet.

### *(d) Equipping students with a variety of learning approaches*

This project aimed at promoting game-based collaborative inquiry learning. The students were engaged in pursuing collaborative inquiry learning in LV which operates in a form of massively multi-player online role-play game (MMORPG). At the completion stage of the project, they could create their project works in different presentation format, such as PowerPoint slides, posters, models, etc.



Students' project works



*(e) Training students to better meet social demands*

In this project, through pursuing collaborative inquiry learning in LV, the students not only gained the subject knowledge in the KLA of Personal, Social, and Humanities Education, but also sharpened their higher-order thinking skills for problem-solving.

*(f) Cultivating students' team spirit*

Accomplishing the collaborative inquiry learning tasks in LV, the partner-school students had to collaborate with one another towards the same goals. This experience helped to cultivate their team spirit.



The partner-school students teaming up

## 2.2. Professional Development

*(a) Increasing teachers' sense of achievement*

In the project, the teachers took the role of facilitators who provided the students with guidance and monitored their collaborative inquiry learning process in LV. With the teachers' efforts and guidance, the students accomplished their collaborative inquiry learning tasks, and it was also found that the students' higher-order thinking skills for problem solving had been enhanced.

*(b) Increasing training opportunities for teachers and enhancing their professional development*

In the project, training workshops were held to equip the teachers with the necessitated knowledge and skills to facilitate their students to pursue collaborative inquiry learning in LV.



Teacher training workshop

*(c) Improving teachers' professionalism and self-improvement in the process of project implementation*

A LV steering committee (composed of the project leader, project coordinator, teaching and technical staff of CAITE, project participating teachers) was set up to oversee the project implementation progress. Besides having right to make decision on the implementation details of the project activities during the committee meetings, the teachers also exchanged with one another their opinions and ideas of the facilitation of students' learning in LV.

*(d) Broadening teachers' scope of vision*

The project offered the teachers an opportunity to collaborate with teachers from other schools in Hong Kong, Beijing, Guangzhou, and Foshan. They benefited from the views and teaching experience of various school cultural backgrounds.

## 2.3. School Development

*(a) Enhancing the overall image of the school*

The project provided the schools with a chance to experience the integration of an innovative game-based educational approach into learning and teaching. It also fostered inter-school collaboration by encouraging the students to interact and discuss with those from other schools in other cities of China. Moreover, the schools were given a chance to enable others to know about their students' works in the project work exhibition. All of these helped to enhance the overall image of the schools.



Students' presentation of their work to guests in the project work exhibition

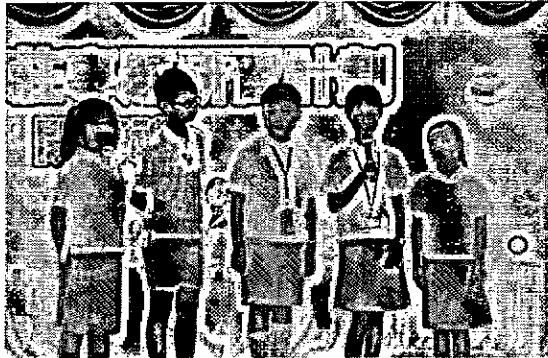
*(b) Improving learning atmosphere*

In this project, the students were engaged in pursuing collaborative inquiry learning in LV which operates in a form of massively multi-player online role-play game (MMORPG). The large number of the students' formative collaborative learning artefacts in LV (the discussions in the villages) reflects that they were highly motivated to participate in collaborative learning tasks in this project.

*(c) Increasing opportunities for schools to organize activities*

The project invited some of the participating teachers and students to give a sharing or presentation on their experience of using LV for collaborative inquiry learning during the closing ceremony. It also invited all the participating schools to take part in the project work exhibition in which the students present their project

works and shared their learning experience with students from other schools and guests.



Students' sharing on their project experience during the closing ceremony.



Students' presentation of their work to guests during the project work exhibition

*(d) Inducing collaborations with professional organizations*

The participating schools collaborated with the Centre for the Advancement of IT in Education (CAITE) at The Chinese University of Hong Kong (CUHK), and Department of Educational Technology at Peking University. These two organizations contributed their expertise in the project, especially in the aspect of computer-supported collaborative learning, inquiry learning, and game-based learning. This helped to inspire the schools on how to integrate IT into learning and teaching, and equip the teachers of the schools with enhanced professional knowledge and skills in IT in education.

### 3. COST-EFFECTIVENESS

Budget Items (Based on Schedule II of Agreement)	Approved Budget (a)	Actual Expense (b)	Change [(b)-(a)]/(a) +/- %
Staff Cost	406,728.00	387,089.08	-4.83%
Equipment	17,000.00	16,970.00	-0.18%
Service	101,650.00	103,950.00	+2.26%
General Expenses	73,622.00	72,246.71	-1.87%

#### Utilization of available resources

CUHK provided all the venues and equipment for organizing the teacher training workshops and steering committee meetings. The cost for the general expenses was thus reduced. During the project implementation, CAITE also contributed its computers for monitoring the LV web and game servers. Furthermore, the project team members spent extra 20% of their working hours on giving consultation and technical support to the participating teachers and students.

#### Unit cost for the direct beneficiaries

The total expenditure of the project was \$580,255.79 and there were altogether 1,842 students and 60 teachers directly benefiting from the project. Therefore, the unit cost for each participant was \$305.08.

#### Sustainability of the learning programme and materials developed

The project enabled the participating teachers and students to experience the benefits of learning with the use of LV which integrates collaborative inquiry learning with online gaming. The platform, training materials (including the LV operation and pedagogy manuals, etc.), exemplars of the students' formative and summative learning artefacts, press release, as well as project booklet can be used to further promote this learning approach. Some participating schools have expressed their interest in continuing the use of the platform. Besides, the participating teachers can capitalize on what they learned and gained about collaborative inquiry learning, online learning, as well as game-based learning to design other own learning programmes for their students.

#### Expenditure items which require no injection of resources when the project is replicated by other schools

The operation and pedagogy manuals of LV can be downloaded from <http://www.learningvillages.com/>. With the CAITE's provision of login accounts, similar projects can be run in schools. CAITE also produced a booklet which summarizes the process of implementation, effectiveness and impact, teachers' facilitation

experience, as well as students' learning experience of the project. The booklet can be given to other participating schools for reference.

**Alternative approaches for equivalent benefits at less cost**

Since the administrative cost and the cost for server maintenance can be relatively fixed, inviting more schools to participate in the project can reduce the unit cost for the beneficiaries, while maintaining the benefits of the project.

#### 4. DELIVERABLES AND MODES OF DISSEMINATION

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.
Learning Villages (LV)  <a href="http://www.learningvillages.com/">http://www.learningvillages.com/</a>	LV is a well-developed online interactive game-based learning platform which facilitates students to pursue inter-school, inter-region collaborative inquiry learning.	1,842 students from Hong Kong, Beijing, Guangzhou, and Foshan used the platform for pursuing collaborative inquiry learning from October 2010 to May 2011.	The QEF can introduce LV to the education community by disseminating the URL of LV as well as trial accounts to promote game-based collaborative inquiry learning.
Operation Manual of LV  <a href="http://www.learningvillages.com/doc/lv_gm.pdf">http://www.learningvillages.com/doc/lv_gm.pdf</a>	LV users will understand how to use the platform with the manual.	The manual was distributed in teacher training workshops held in Hong Kong and Beijing in October 2010, and downloaded by all participating students in the project.	The QEF can distribute the manual to the education community for reference so that they can understand how to use the platform.
Teacher Training materials	The materials (including the pedagogy manual, PPT, demonstration videos) help teachers understand how to facilitate collaborative inquiry learning in LV.	The materials were distributed in teacher training workshops held in Hong Kong and Beijing in October 2010.	The QEF can make use of the materials to promote game-based collaborative inquiry learning to schools in various educational seminars.

Exemplars of Students' Collaborative Inquiry Works (i.e., the LV villages and project works)	Exemplars of the artefacts are selected for the education community's reference, and draw their attention to the positive outcomes of integrating gaming into learning and teaching.	The exemplars were presented in the closing ceremony and exhibited in the exhibition held on 25 June 2011. Besides, the exemplars were also published on the LV website for public's reference.	The QEF can make use of the exemplars to promote game-based collaborative inquiry learning to schools in various educational seminars.
Press Releases <i>(See Appendix D)</i>	The public can know more about the project and LV through press the releases.	Two press releases were issued on 25 June 2011 respectively through (1) Communications and Public Relations Office of CUHK, and (2) Sing Pao Newspaper.  <i>(<a href="http://www.cpr.cuhk.edu.hk/en/press_detail.php?id=1053">http://www.cpr.cuhk.edu.hk/en/press_detail.php?id=1053</a>) (<a href="http://www.singpao.com/NewsArticle.aspx?NewsID=179445&amp;Lang=tc">http://www.singpao.com/NewsArticle.aspx?NewsID=179445&amp;Lang=tc</a>)</i>	The QEF can forward the press releases to schools to promote game-based collaborative inquiry learning.
Project Booklet <i>(See Appendix E)</i>	The booklet allows the public to better understand the project.	The booklet summarized the process of implementation, effectiveness and impact, teachers' facilitation experience, as well as students' learning experience of the project.	The QEF can distribute the project booklet to schools to promote game-based collaborative inquiry learning.

## 5. ACTIVITY LIST

Activities 1		
<b>Types of activities</b> (e.g. seminar, performance, etc.)		Teacher Training Workshops
<b>Brief description</b> (e.g. date, theme, venue, etc.)		<ul style="list-style-type: none"> <li>- 25 September 2010 at CUHK (in Hong Kong)</li> <li>- 9 &amp; 10 October 2010 respectively at Information Centre in Yanqing County and Peking University (in Beijing)</li> <li>- Elaborating on the teachers' facilitation roles in the project, steps of building villages and houses to initiate discussion and respond messages in LV, as well as other useful communication tools in LV.</li> </ul>
<b>No. of participants</b>	<b>Schools</b>	20 (12 HK schools, 8 Beijing schools)
	<b>Teachers</b>	60
	<b>Students</b>	/
	<b>Others (Please specify)</b>	/
<b>Feedback from participants</b>		The teachers realized that the workshops helped them understand the rationale, design, and implementation of the project. They also stated that the training materials were the useful reference when facilitating their students' learning in LV.

Activities 2		
<b>Types of activities</b> (e.g. seminar, performance, etc.)		Steering Committee Meetings
<b>Brief description</b> (e.g. date, theme, venue, etc.)		<ul style="list-style-type: none"> <li>- 5 meetings, respectively on 20 October 2010, 17 November 2010, 5 January 2011, 23 February 2011, 4 May 2011</li> <li>- All held at CUHK</li> <li>- Overseeing the project implementation progress, making decision on the implementation details of the activities, and providing advice to CAITE for evaluating the effectiveness of the project.</li> </ul>
<b>No. of participants</b>	<b>Schools</b>	12 (HK schools)
	<b>Teachers</b>	24 (2 representatives from each HK school)
	<b>Students</b>	/



	<b>Others (Please specify)</b>	Project members from CAITE
Feedback from participants		The teachers realized that it was good to have meetings regularly so as to ensure the effective and successful execution of the project.

<b>Activities 3</b>		
<b>Types of activities</b> (e.g. seminar, performance, etc.)		Students' Discussions in LV
<b>Brief description</b> (e.g. date, theme, venue, etc.)		<ul style="list-style-type: none"> <li>- October 2010 to May 2011</li> <li>- Students participated in LV discussions for pursuing collaborative inquiry learning.</li> </ul>
<b>No. of participants</b>	<b>Schools</b>	25 (12 HK schools, 8 Beijing schools, 2 Guangzhou schools, and 3 Foshan schools)
	<b>Teachers</b>	60 (teachers as learning facilitators)
	<b>Students</b>	1,842
	<b>Others (Please specify)</b>	/
Feedback from participants		The large number of the students' formative collaborative learning artefacts in LV (the discussions in the villages) reflects that they were highly motivated to participate in collaborative learning tasks in the project.

<b>Activities 4</b>		
<b>Types of activities</b> (e.g. seminar, performance, etc.)		Schools' Visits to Partner Schools
<b>Brief description</b> (e.g. date, theme, venue, etc.)		<ul style="list-style-type: none"> <li>- November 2010 to April 2011 (depended on each school's own schedule)</li> <li>- A number of activities were conducted among the students and teachers in each visit, for example, an ice-breaking game, campus tour, class observation, sharing of school life and their experience in collaboration in LV, discussion of creating and submitting project works at the project completing stage, as well as their participation in the closing ceremony.</li> </ul>
<b>No. of participants</b>	<b>Schools</b>	20
	<b>Teachers</b>	Around 34
	<b>Students</b>	Around 900
	<b>Others (Please specify)</b>	/



Feedback from participants	In general, the teachers and students realized that the visits brought them fruitful memories.
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Activities 5		
Types of activities (e.g. seminar, performance, etc.)		CAITE's Visit to the Participating Schools
Brief description (e.g. date, theme, venue, etc.)		<ul style="list-style-type: none"> <li>- December 2010 to May 2011</li> <li>- Monitoring the project implementation progress and collecting feedback on the project from the schools.</li> </ul>
No. of participants	Schools	20
	Teachers	Around 36
	Students	Around 320
	Others (Please specify)	/
Feedback from participants		Most teachers in the visits elaborated that the students quite engaged in participating in LV.

Activities 6		
Types of activities (e.g. seminar, performance, etc.)		Closing Ceremony and Project Work Exhibition  <i>(Some photos of the ceremony and exhibition are put in Appendix F)</i>
Brief description (e.g. date, theme, venue, etc.)		<ul style="list-style-type: none"> <li>- 25 June 2011</li> <li>- At CUHK FAA Thomas Cheung School</li> <li>- Students' learning experience sharing</li> <li>- Students' presentation of exemplary LV villages in LV and project works</li> <li>- Presenting excellence awards to the winning students</li> <li>- Exhibiting students' project works</li> </ul>
No. of participants	Schools	18
	Teachers	Around 45
	Students	Around 300
	Others (Please specify)	Guests of honor, parents
Feedback from participants		<ul style="list-style-type: none"> <li>- Most teachers praised that the ceremony and exhibition were held successfully.</li> <li>- Some Hong Kong teachers realized that the time allocated to the closing ceremony could be</li> </ul>



	<p>shortened, and the time allocated to the exhibition should be longer.</p> <ul style="list-style-type: none"><li>- Some Beijing schools realized that the closing ceremony should be held in July instead of June (as students in Beijing are usually having exams during late-June).</li></ul>
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## **6. DIFFICULTIES ENCOUNTERED AND SOLUTIONS ADOPTED**

### **Fewer participating Beijing schools than expected**

In the original proposal, we planned to invite 10 Beijing schools to participate in the project. However, in turn, only 8 Beijing schools joined the project. Thus, we extended our beneficiaries to students in 2 other cities of China (Guangzhou and Foshan) so as to enable more cross-city pairs of learning partnership for facilitating more Hong Kong students to participate in the project.

### **Discrepancy in students' login time**

Although all participating students came from the same time zone (Hong Kong, Beijing, Guangzhou, and Foshan), they logged in LV at different time. It was thus difficult for students from different schools to exchange views and ideas in LV in a real-time manner. In order to solve the problem, some schools scheduled some lessons in which their students could hold discussions on their collaborative inquiry tasks with those in their partner-schools simultaneously.

### **Difficulties in communication between Hong Kong and Beijing teachers**

At the beginning of the project, the HK teachers made use of email to communicate with the partner-school teachers in Beijing. However, some Beijing teachers were not used to discuss teaching-related things through email and did not reply to the emails sent by their partner-school teachers in Hong Kong. CAITE then advised the HK teachers to use QQ to communicate with the Beijing teachers. The problem was solved, and during the project both HK and Beijing teachers were comfortable to use this communication tool to discuss the co-facilitation strategies to support their students to pursue the collaborative learning tasks in LV.

## Appendix A: Cross-City Pairs of Inter-school Learning Partnership and Collaborative Inquiry Learning Tasks

*Note: The number of pupils from each school is indicated in the brackets in bold.*

Cross-City Pair	Topic(s)	HK School(s)	Schools Outside HK
1	1. 京港綠色文化之初探 2. 京港綠色科技發展的近況 3. 活出健康精彩人生	- Tai Po Old Market Public School (Plover Cove) <b>(100)</b>	- 北京市朝陽區望京新城南湖中園小學 <b>(72)</b>
2	1. 如何解決交通擠塞的問題	- S.T.F.A. Ho Tat Tung Primary School (A.M.) <b>(29)</b> - S.T.F.A. Ho Tat Tung Primary School (P.M.) <b>(15)</b>	- 北京市東城區校尉胡同小學 <b>(30)</b>
3	1. 健康積極人生 2. 環境污染大搜查：京港比較	- Tin Shui Wai Catholic Primary School <b>(336)</b>	- 北京市延慶縣第一小學 <b>(249)</b> - 北京市延慶縣第四小學 <b>(85)</b>
4	1. 全球變暖的原因 2. 如何解決水資源缺乏 3. 如何解決交通阻塞	- H.K.T.A.Y.Y.I. Chan Lui Chung Tak Memorial School <b>(14)</b>	- 北京市延慶縣第二小學 <b>(16)</b>
5	1. 北京人與香港人的生活習慣 2. 應否申辦大型運動會 3. 怎樣愛護大自然 4. 道的旅遊景點 5. 如何保護我們的地球	- Shek Wu Hui Public School <b>(32)</b>	- 北京市延慶縣第三小學 <b>(37)</b>
6	1. 全球變暖的原因 2. 如何解決水資源缺乏 3. 如何解決交通阻塞	- Christian Alliance S.Y. Yeh Memorial Primary School <b>(78)</b> - C.C.C. Kei Wai Primary School <b>(73)</b>	- 北京市延慶縣十一學校 <b>(87)</b>
7	1. 全球變暖的原因 2. 如何解決水資源缺乏 3. 互聯網的利與弊	- St. Eugene de Mazenod Oblate Primary School <b>(96)</b>	- 北京景山學校 <b>(179)</b>
8	1. 全球暖化的原因 2. 如何解決水資源缺乏 3. 如何解決交通擁塞	- H.K.T.A.Y.Y.I. Chan Lui Chung Tak Memorial School <b>(12)</b>	- 廣州市越秀區朝天小學 <b>(49)</b>



9	1. 全球暖化 2. 交通擁擠問題 3. 水資源缺乏	- H.K.T.A.Y.Y.I. Chan Lui Chung Tak Memorial School (12)	- 廣州市花都區新華圓玄小學 (27)
10	1. 網絡交友的利與弊 2. 怎樣才算低碳？低碳生活給我們帶來什麼？ 3. 學生應該怎麼樣科學理財	- Yuen Long Public Middle School Alumni Association Primary School (40)	- 佛山市三水区西南街道第十一小學 (36)
11	1. 網絡交友的利與弊 2. 怎樣才算低碳？低碳生活給我們帶來什麼？ 3. 學生應該怎麼樣科學理財	- Buddhist Lim Kim Tian Memorial Primary School (36)	- 佛山市三水區西南街道第四小學 (36)
12	1. 網絡交友的利與弊 2. 怎樣才算低碳？低碳生活給我們帶來什麼？ 3. 學生應該怎麼樣科學理財 4. 是否繼續發展核能源？	- Lok Sin Tong Primary School (32)	- 佛山市三水区西南街道第十小學 (34)

## Appendix B: Rubric for Evaluating Students' Villages in LV (Formative Learning Artefacts)

	0 mark	1 mark	2 marks	3 marks
Structure of discussion (Village's structure) 討論結構 (村莊的結構)	The houses were rarely / illogically linked with roads.	Most of the roads between the houses were built without the proper use of scaffolds.	Some of the roads between the houses were built with the proper use of scaffolds.	Most of the roads between the houses were built with the proper use of scaffolds.
Argumentative Elaboration (Postings inside houses) 討論闡述 (房屋內的文章)	Most of the postings were nonsense.	Most of the postings were ambiguous claims.	Some of the claims elaborated in the postings were rational and evidentially grounded.	Most of the claims elaborated in the postings were rational and evidentially grounded.
Participation in discussion (Writing postings and creating houses) 組員的參與 (貼文章及建房子)	Only small number of houses and postings were found in the village.	Less than half of the group members engaged in the discussion.	Most of the group members engaged in writing postings to respond others; however only few of them created houses to elaborate new ideas.	Most of the group members engaged in both writing postings to respond to others, and creating houses to elaborate new ideas.
Reflection (Postings insides reflection houses) 反思 (反思屋內的文章)	Rare reflective postings were found in the reflection houses.	Less than half of the group members responded to the questions posted in the reflective houses.	Most of the group members responded to the questions posted in the reflective houses.	Most of the group members responded to the questions posted in the reflection house, and wrote good reflective statements.
	0 mark	1-3 marks	4-6 marks	7-9 marks
Social Interaction (Responses to group members) 同校及配對學校組員的互動 (對組員的回應)	Rare intra- and inter-school responses among the group members were found.	Limited intra- or inter-school responses among the group members dominated.	Some extent of intra- or inter-school responses among the group members was found.	Some extent of both intra- and inter-school responses among the group members was found.

### Appendix C: Rubric for Evaluating Students' Project Works (Summative Learning Artefacts)

比重 10	劣 1-2	平 3-5	良 6-8	優 9-10
比重 5	劣 0.5-1	平 1.5-2.5	良 3-4	優 4.5-5
內容 10	未能具體表達觀點或意見，提出不合理的解釋。	雖有具體的觀點或意見，但未能提供充分的支持理據，不完整或欠合理解釋。	提出具體和完整的觀點或意見，也能提供一些合理的支持理據，但欠詳細的解釋。	提出具體、完整及詳細的觀點或意見，也能提供充分有力的支持理據，又有合理而詳細的解釋。
表達 5	文字表達不清楚，沒有配合適合的圖表來解說。	簡單、清楚的文字表達，能運用精簡、易明的圖表來解說。	簡單、清楚的文字表達，以清楚、詳細的圖表來解說。	詳細、清楚的文字表達，以清楚、詳細的圖表來解說。
資料應用 5	只提供部分的資料，但欠缺完整性及準確性，未能運用資料來支持觀點或意見。	資料能覆蓋大部分範疇所需，未能運用準確的資料來支持觀點或意見。	資料能覆蓋全部範疇所需，資料完整，能運用準確的資料來支持觀點或意見。	資料能覆蓋全部範疇所需的資料，能準確、完整、精簡地運用資料來支持觀點或意見。
分析 10	分析尚算合理，解釋模糊，只集中某角度去分析問題。	分析頗合理，解釋不太清晰，只集中某角度去分析問題。	分析合理，解釋亦可明白，能從多角度去分析問題。	分析精確，解釋清楚詳盡，提出合理的意見與判斷，且能從多角度去分析問題。
組織結構 5	結構凌亂，各部分互不連貫。	有基本結構，各部分有連繫。	結構有層次，各部分均有連繫。	結構非常有條理、層次與系統，各部分緊密連繫，且行文流暢。
創意 5	成品欠新意。	成品尚具新意，略有意思。	成品有新意和吸引，有意思。	成品具創意，引人入勝，有意思。
引用及綜合 網上討論 10	成品沒有引用網上討論	成品少量引用網上討論，並沒有適當地綜合有關討論	成品引用了不少網上討論，並簡單地綜合了關討論	成品大量引用網上討論，並有適當地綜合有關討論



## Appendix D: Press Releases

Press release by Communications and Public Relations Office of CUHK ([http://www.cpr.cuhk.edu.hk/en/press\\_detail.php?id=1053](http://www.cpr.cuhk.edu.hk/en/press_detail.php?id=1053))



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## Press Releases

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25 June 2011

中大跨區學習平台 引領網上遊戲化學習 (Chinese version only)

為培養小學五六年級及初中學生對專題研習的興趣及獨立學習能力，提升他們的高階思維、協作及溝通技巧，以及促進學校的文化交流，香港中文大學（中大）資訊科技促進中心於2006年起舉行「學習村莊專題研習計劃」，來自不同國家和地區的學生可透過由該中心研發的「學習村莊」系統，進行跨區網上討論及專題研習活動。

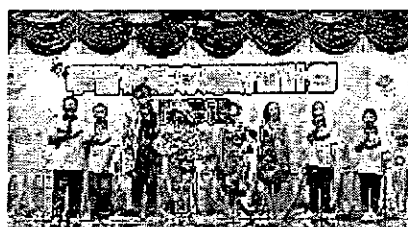
#### 從網上虛擬世界轉化為真實世界 五地學生大聚會

本年度的「學習村莊專題研習計劃」共有36所來自香港、北京、臺北、廣州及新加坡的學校參與，人數近三千人。經過數月來的網上學習、專題研習成品製作、互相探訪等活動，中心於今天（6月25日）假香港中文大學校友會聯會張煒昌學校舉行開幕禮，主禮嘉賓包括香港特別行政區政府教育局總課程發展主任（資訊科技教育）余孟先生、中大教育學院副院長張善培教授、北京市延慶縣教育信息中心副主任時宏民先生、臺北市政府教育局主任秘書馮清皇先生、香港道教聯合會副學務主任湯修齊先生、新加坡南洋小學副校長林美君女士，以及香港中文大學校友會聯會張煒昌學校校長梁滿榮先生。逾五百名嘉賓及師生出席典禮，場面非常熱鬧。

開幕典禮上，大會頒發獎項予在計劃中表現優秀的同學，並邀請他們分享學習心得。同時，每所參與學校的同學亦展出及講解他們的學習成果，促進學校間的交流。

#### 「學習村莊」平台 多角度提升學習效能

「學習村莊」(<http://www.learningvillages.com/bia5/index.php>)是一個網上虛擬學習社群。這個創新的教育系統融合了專題研習任務、電腦協作學習討論平台及網上遊戲的元素。同學在教師的指導下，互相合作，並對不同主題作出深入討論，以完成專題研習。



「學習村莊專題研習計劃」的學員分享學習心得



中大資訊科技促進中心李芳樂教授（右一）與兩位承辦學校校長（左一及二）致送紀念品予臺北市教育局代表



承辦學校師生合照



在「學習村莊」內，每條村莊代表一個討論主題。同學可以建立村莊來引發圍繞某一個知識主題的討論，例如全球變暖的原因、如何解決水資源缺乏、互聯網的利與弊等，同時擔任村長的角色；其他同學可以進入村莊建設房屋，成為村民，參與討論。村莊內的房屋會隨著討論的增加而擴大。此外，這個虛擬社群設有一個聲望提升機制，同學可透過建立優質的村莊和房屋來提高聲望，以加強在村莊內的地位。他們有機會從一個學徒晉升為武士，甚至更高等級。換言之，這個聲望提升機制有助鼓勵同學參與高質素的討論。

中大資訊科技教育促進中心對計劃的成效作出了研究，結果顯示「學習村莊」的專題研習任務有助激發同學學習，讓他們共同建構知識，並培養各種高階思維技巧。此外，學生在參與計劃後，對考試的觀念和學習策略亦有顯著變化。他們認為考試和解決問題的技能未必一致，學習不僅是為了通過考試，而是為了解決實際問題，可見「學習村莊」系統對學生產生了正面影響。

#### **擴展學習地區 拓展文化交流**

過往曾參與此項研習活動的學校來自廣州、佛山、北京以至台灣、新加坡及美國等地。獲香港優質教育資金資助，中大資訊科技教育促進中心於2006年9月至2007年8月與美國紐約州立大學奧斯威格分校課程與教學系，以及中國華南師範大學教育資訊科技學院合作，展開「以『學習村莊』進行內地、香港、美國學校跨地專題研習」，共有2,100名來自22所中學的學生參與。中心另於2010年9月至本年6月與北京大學教育學院合作，進行「京港配對學校網上遊戲專題研習計劃」，共有17所小學參加，學生人數逾1,500名。

此外，中心自2008年始與臺北市府教育局合作，推行「港臺配對學校網上遊戲專題研習」計劃；同年亦分別與廣州華南師範大學及佛山市禪城區教育局合辦「粵港配對學校網上遊戲專題研習」及「香港佛山配對學校網上遊戲專題研習」計劃；今天亦與新加坡學校合作，推行「港新配對學校網上遊戲專題研習」計劃，藉此促進學生的學習成效，為香港學生提供與其他各地學生交流的機會。



放大圖片

參加「學習村莊專題研習計劃」

新聞

### 虛擬社群「學習村莊」跨區研習

【本報專訊】為培養小學五六年級及初中學生對專題研習的興趣及獨立學習能力，香港中文大學本年度的「學習村莊專題研習計劃」，共有36所來自香港、北京、台北、廣州及新加坡的學校參與，人數近3,000人。經過數月來的學習交流，該計劃日前頒發獎項予在表現優秀的同學，並邀請他們分享學習心得。同時，每所參與學校的同學亦展示學習成果，促進學校間的交流。

中大資訊科技促進中心於06年起舉行「學習村莊專題研習計劃」，來自不同國家和地區的學生可透過由該中心研發的網上虛擬學習社群「學習村莊」系統，進行跨區網上討論及專題研習活動。中心將於下年度隆重推出「學習村莊2」。

在「學習村莊」內，同學可以建立村莊來引發某一個知識主題的討論；其他同學可以進入村莊建設房屋，成為村民，參與討論，村莊內的房屋會隨討論的增加而擴大。此外，虛擬社群設有聲望提升機制，同學可透過建立優質的村莊和房屋來提高聲望，有機會從學徒晉升為武士。

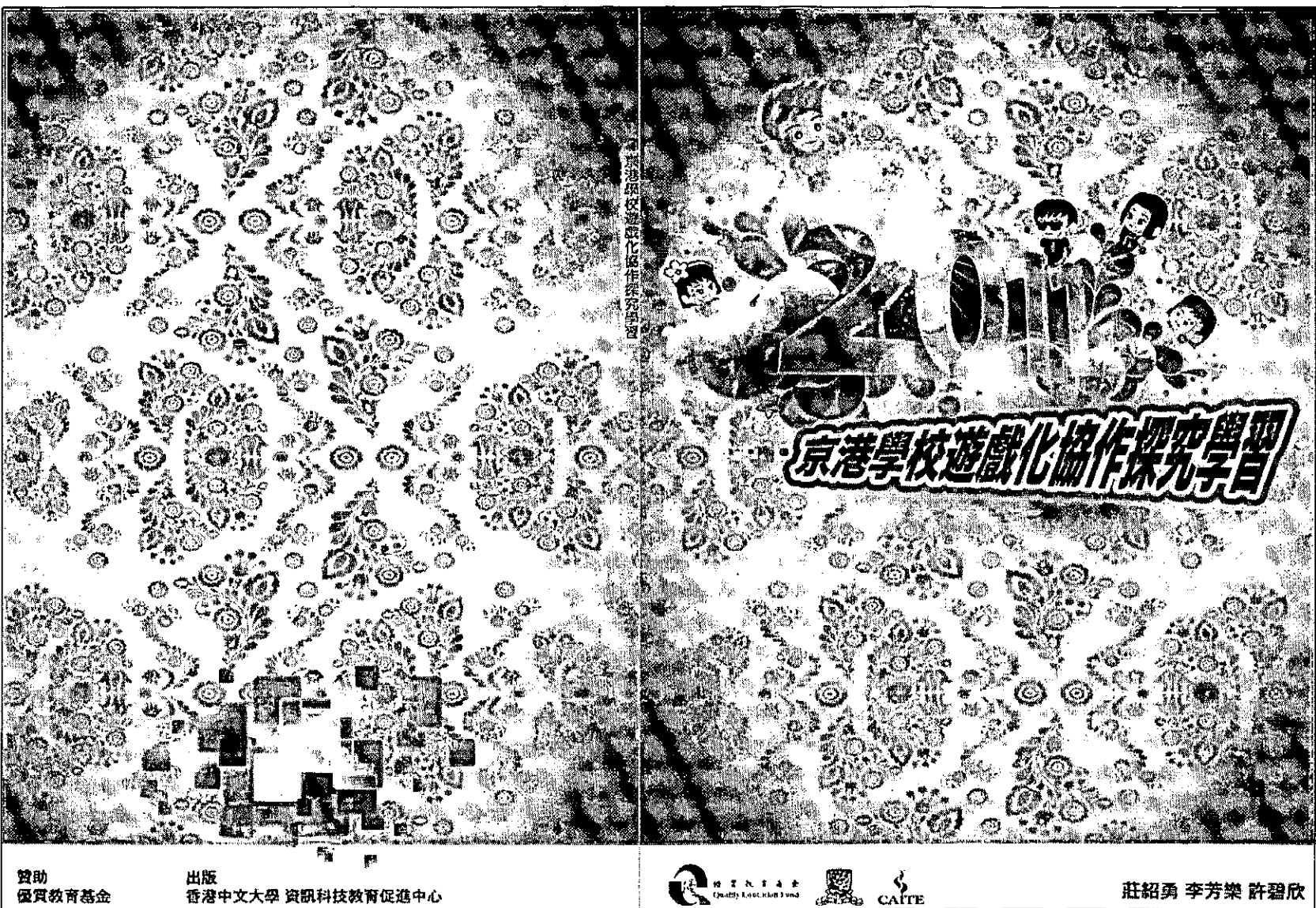
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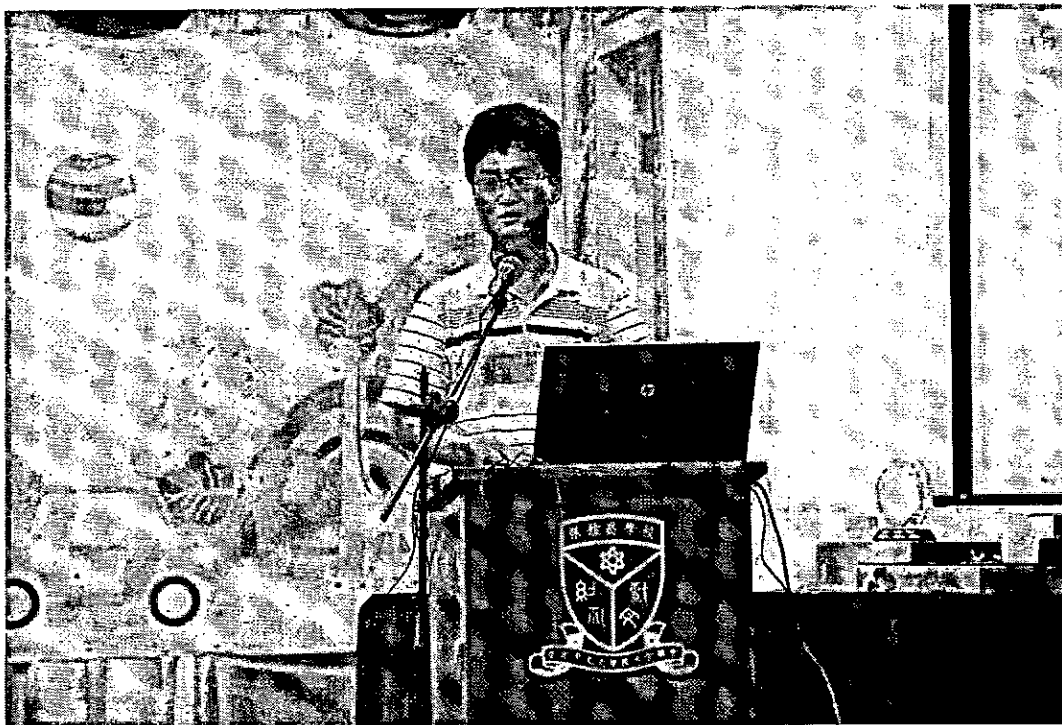


優質教育基金  
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## Appendix E: The Project Booklet



## Appendix F: Photos – Closing Ceremony and Project Work Exhibition



A speech given by Associate Director of the Information Centre in Yanqing County in the closing ceremony



An excellent project-work award presented by Associate Dean of Faculty of Education (CUHK) to the students with outstanding performance in the project



A thank you speech given by the project leader to all guests, principals, teachers and students



Students' presentation of their project work to guests in the exhibition