1. Project summary

Project Title: Promoting a collaborative teaching approach to inquiry project-based learning with Web 2.0 at upper primary levels

Name of Organization/School: The University of Hong Kong

Project Period: From 04/2009 to 01/2012

Funded By: Quality Education Fund

2. Goal and objective statement

A) To implement the collaborative inquiry PBL approach in three local schools with top, average and low academic performing students;

B) To conduct suitable training programmes for the teachers and provide adequate scaffolding support to equip them with the implementation of the new teaching and learning method;

C) To heighten students’ information and media literacy through an online learning environment;

D) To describe the effects of the programme on the students and the development of the programme as experienced by the teachers.

3. Project Impact on

The project brings a number of positive effects in regards to the following areas:

---fostering students’ development in their potential and specific abilities

Inquiry project-based learning in collaborative approach was shown to foster students’ development in 12 learning dimensions including reading, writing, subject knowledge, cognitive abilities, presentation skills, problem solving skills, information literacy, ICT skills, social and communication skills, self-directed learning, self-confidence and research skills. Collaborative teaching approach involves school administrators, subject teachers and school librarian as a teaching team to work together towards the development of students’ knowledge and skills. Concluding the positive impact on students’ learning experience and knowledge/skills attainment, a number of papers were written by some of the teachers and project investigators. Hui et al. (2010) acknowledged improvement in students’ information literacy skills as they became increasingly familiar with the school library online catalog and WiseNews (an electronic news database) after the inquiry-based project. Law et al.’s (2010) findings indicate that, due to the collaborative approach, students showed significant progress in their Chinese writing skills in the General Studies inquiry-based project.

---training students to better meet social demands

As stated in EDB public information, students’ are encouraged to achieve seven learning goals including responsibility, national identity, habit of reading, language skills, learning skills, breadth of knowledge and healthy lifestyle. Regarding the habit of reading, Hui et al. (2010) indicated that the school library online catalog had been more frequently used and the borrowing rate had increased after the implementation of the pedagogy, suggesting that students were able to develop a reading habit through the new learning style. In addition, students’ language and learning skills (such as information literacy and media literacy), as well as
their breadth of knowledge had shown to be improved. Law et al. (2010) indicated that the average word count of students’ Chinese composition had increased from 257.36 to 316.69 characters after the implementation of the pedagogy, suggesting a significant improvement on students’ writing ability. We are confident that the project identified a teaching approach which trained students to better meet the social demands.

–increasing students’/teachers’ sense of achievement

The result supported that the project was useful in fostering students’ learning and teachers’ teaching effectiveness. Impressive improvement was found in students learning interest and enthusiasm. Based on students’ feedback, as inquiry project work required them to find the answer and solve the problem independently, it increased their sense of achievement and satisfaction alongside the project completion. In a survey which investigated the wiki’s influence on students’ learning, most participating students (79%) believed that “I stayed on task more because of using the Wiki”. In an interview a student said, “I prefer to use Google Sites than write on paper”. Furthermore, teachers also reported that the project enhanced their teaching effectiveness by increasing the communication between teachers and enhancing subject integration and thus resulted in better sense of achievement. For example, many teachers believed that their IT and information literacy have improved through the project which gave them more confidence on guiding students through the inquiry learning process. A GS teacher put it this way: “Sometimes I want to train my students to be critical thinkers, but I don’t have the expertise to provide them with effective tools and practical resources. With the Web 2.0 tools, students can engage in discussions within a group. Their interactions are now of a higher quality, and I believe this is a good way ahead to help students, especially for the stronger students to help weaker ones when doing group projects”. Hence, the suggested use of web 2.0 technologies has significant impact on teachers’ teaching effectiveness.

–increasing training opportunities for teachers and enhancing their professional development

Teaching in collaborative approach increased the opportunities for teachers to communicate with one another. It enhanced better integration of subject areas, and provided more chances to determine effective teaching strategies. As a result, it enhanced teachers’ teaching development through discussion. A teacher coordinator expressed his view that collaborative teaching approach allowed teachers to review their teaching schedule to better cater for their students’ needs, “because we have to work with the GS teachers in implementing the GS project, we teach PowerPoint earlier in our teaching schedule. In the past, we were very much bound by the teaching guidelines and taught PowerPoint in Primary 4. But now we feel that even Primary 3 students have the ability to handle the skills of using PowerPoint. So we have exercised our professional discretion of moving the teaching of this IT skill to an earlier stage”.

–improving learning atmosphere

The student group interviews indicated that the project intervention in second year facilitated their peer learning and interpersonal relationship skills. The introduced teaching strategy using web 2.0 provided them a space to comment on each other’s work. Essentially, students were presented with ample opportunities to evaluate others’ work and reflect on their own, leading to improved quality of their writing. The group interviews revealed that students found the experience of using wiki for their English collaborative writing very rewarding due to its accessibility. One student noted, “If we use Google Sites as the collaborative platform, we get to read the pieces of writing from other classes, exchange views and comment on our classmates’ work. If we write on paper, we can only read a few pieces”. In addition, the technological support of Google Sites has been shown to have positive impact on students’ learning experience. A student who compared using wiki to the traditional learning approach remarked, “Google Sites is better because we
can easily locate all the information we need online”. Chu et al. (2011) and Yu et al. (2011) found that students were very positive about and contented with the use of Google Sites, a wiki, to co-construct their General Studies group project in Chinese.

—inducing collaboration with other schools / professional organizations.

Teaching (especially subject teachers) were encouraged to collaborative with teachers from other schools. In our regular subject-based meetings, experience sharing seminars and some of the workshops, teachers and curriculum leaders from ALL four concerned school were invited to actively share their findings and experience. In particular, teachers from various subject areas were invited to share their practice and difficulties in their teachings during the subject-based meetings. Collaboration was induced via such experience exchanging. Such meetings have been found to be very fruitful for the development of teachers’ professionalism. For example, a teacher expressed that “in the meetings with teachers from different schools, I’ve learnt a lot during the discussion as well as the sharing. For example, when the teachers discussed how to set Chinese writing topics, although I am not teaching Chinese this year, I can still learn something new. And the discussions on what the students have learnt through inquiry project-based learning and which teaching methods worked and which did not have proven to be very fruitful to me too”. Another comment from the participating teachers is “I’ve learnt a lot from the sharing with teachers from other schools, but the most important thing that I feel I have gained is the need to bring back the messages and experiences from others to my own school to share with my colleagues so that they know what we are doing on the project. Thus, when I require their help on some tasks related to the project, at least they are aware of what I am doing. I’ve sharpened my coordination skills and communication skills here”.
4. Deliverables and Modes of Dissemination

The following items should be included in the evaluation of each of the project deliverables and their value for dissemination

<table>
<thead>
<tr>
<th>Item description (e.g. type, title, quantity, etc.)</th>
<th>Evaluation of the quality and dissemination value of the item</th>
<th>Dissemination activities conducted (e.g. mode, date, etc.) and responses</th>
</tr>
</thead>
</table>
| A public project website  
Contains links to the related publications as well as powerpoints used by teachers the project team in 2 QEF sharing seminars. Examples of students’ work on Google Sites were captured in the powerpoints, together with students’ and teachers’ opinions regarding the new pedagogy. | It serves as an exemplar of good practices which can be accessed at any later time for reference to what has taken place in each of the phases of the study and for adaptation by schools.  
In addition, the examples of students’ work in the sharing powerpoints will provide concrete ideas to the public on how the project was actually carried out in schools. | The public project website is open to everyone from October 2010. |
| 6 academic conference papers  
(For title, please refer to appendix item 1-7)  
5 seminar papers  
(For title, please refer to appendix item 8-12) | The papers are of high quality with ideas supported with both quantitative and qualitative data. They are of great dissemination value as first-hand experience in implementing the innovative pedagogy is recorded and discussed. | All of the papers are uploaded to the public project website and are open to everyone. |
Continuance of Part 4: Deliverables and Modes of Dissemination

<table>
<thead>
<tr>
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</thead>
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| 3 sets of teaching guide titled: 探究式學習教師手冊:小四
classroom teachers’ manual for inquiry
| The teaching schedules and
| and responses |
| 年級常識科專題研習，探究式學習教師手冊:小五
| recommendations included in
| Teacher Professionalism. Paper presented at CITE Research
| 探究式學習學生筆記：Google Sites 用手冊 (written in Chinese)
| the teaching guides are designed
to best fit the Hong Kong
| Symposium 2011, The University of Hong
| The guides are designed in particular
| education curriculum. The
| Kong, Hong Kong.
| for on-the-job primary 4 and 5 teachers
| teaching guides are hence most
| Teachers indicated that these teaching
| respectively. They provided some
| relevant to Hong Kong primary
| guides are useful material to refer
to how implement inquiry-learning and
| teachers.
| guides are most
| to when implementing the project.
| hands-on guide and hints on how to
| facilitate students collaborative wiring
| relevant to Hong Kong primary
| Distributed to 4 participating
| using Web 2.0
| using Web 2.0 technologies.
| using Google Sites in teaching.
| schools and 62 concerned teachers
| and responses |
| 500 copies of a book titled
| This book captured the project
| soft-copy is uploaded onto the
| “Developing upper primary students’
| essence included both
| public website for easy
disability”
| 21st century skills: inquiry learning
| theoretical and functional
| dissemination.
| It introduced (1) the teaching theories
| structure targeting ALL
| countries.
| through collaborative teaching and Web
| elements.
| The books have been distributed in
| behind the project, (2) how the
| teaching practitioners and
| 2.0 technology”
| It is well-written and in a fine
| various seminars held locally and
| suggested pedagogy relates to the EDB
| educational researchers
| structure targeting ALL
| abroad. School librarians, teachers,
| curriculum and education roadmap and
| worldwide.
| principals and researchers were
| (3) the detailed description on how to
carry out the three core ideas of the
| invited to join the seminar.
| to carry out the three core ideas of the
| pedagogy (inquiry PjBL, collaborative
| teaching and the use of web 2.0
| technologies).
| Appendix

group project work. Paper presented at the International Conference on Addressing Student Learning
Diversity in Hong Kong, Hong Kong.

Teacher Professionalism. Paper presented at CITE Research Symposium 2011, The University of Hong
Kong, Hong Kong.

Education and How Students Perceive Using It. Paper presented at CITE Research Symposium 2011,
The University of Hong Kong, Hong Kong.

4) 余澤銘、方志新、郭惠娟、羅詩敏、朱啟華、葉珈甄(2011)。研究匯報：利用 Google Sites 在常
識科進行協作式專題研習。優質教育基金研究計劃研討會。香港：香港大學教育應用資訊科技


7) 謝錦玉、朱啟華、胡詠恒、袁樂輝、嚴儲文 (2010)。長洲聖心學校協作探究式專題研習(IPjBL)的進程分享。優質教育基金研究計劃研討會。香港: 香港大學教育應用資訊科技發展研究中心


12) Chu, S. K. W., Chow, K., Wong, K. & Ng, J. (2011). Inquiry project-based learning with Wiki at Primary 5 level with a collaborative teaching approach. Paper presented at QEF Project Dissemination Symposia: Applying a collaborative teaching approach to inquiry project-based learning with Web 2.0 at upper primary levels, the University of Hong Kong, Hong Kong, June 30, 2011.