

# Quality Enhancement Grant Scheme

**Final Evaluation Report**

**Project No. : 09/QEGS/A-08-09**

## Part A

**Project Title** : Adoption of open source course management system (CMS) in post-secondary institutions – A pilot study


**Name of Grantee** : The Community College at Lingnan University

**Project Period** : From May 2009 (month/year) to December 2010 (month/year)

## Part B

Please use separate A4-size sheets to provide an evaluation of the Project with regard to the following aspects:

1. Project activities contributing to the attainment of Project objectives, extent of attainment of the objectives, evidence or indicators attesting to the attainment of the objectives, and if applicable, reasons for not able to achieve the objectives.
2. Impact or benefits of the Project to the participants, the target institution(s) or the sector.
3. Cost-effectiveness of the Project against clear indicators, e.g. utilization of available resources, unit cost per beneficiaries, sustainability of Project activities/impacts, applicability of Project outcomes/deliverables to other institutions, or alternative approaches for equivalent benefits at less cost, etc.
4. Outcomes and deliverables of the Project.

Signature: 

Organization Chop: 

Name of Authorized Person: Dr Edward FUNG

Name of Grantee The Community College at

Organization: Lingnan University

Position of Authorized Dean of the Community

Person: College and Further  
Education

Date: 31 March 2011

# Adoption of Open Source Course Management System (CMS) in Post-Secondary Institutions – A Pilot Study

## QEGS Final Evaluation Report (May 2009 – December 2010)

<30 Dec 2010>

<v1.0>

### Report Status

Division:	QEGS Project Team at CC
Category:	[Category: Report]
Template number:	<b>Final Evaluation Report</b>
Date Reviewed:	30 Dec 2010
Version:	1.0

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## Supporting Documents:

- Annex 1 – CCLUCMS User Guide for Teacher and for Student
- Annex 2 – CCLUCMS Production Launch Plan
- Annex 3 – CCLUCMS - Application Install and Develop Guide
- Annex 4 – CMS Workshop (10 Dec. 2010) – Snapshots
- Annex 5 – Financial Reports

# 1. Attainment of Objectives

The following table shows all the major objectives along the whole project period.

Objective	Activities	Extent of attainment of the objective	Evidence of having achieved the objective
<b>Formation of project team</b>	<ul style="list-style-type: none"> <li>Recruited two research assistants as the core members in the team.</li> <li>Established the project advisory committee.</li> </ul>	Fully achieved	<ul style="list-style-type: none"> <li>The QEGS project is running smoothly under this structure</li> <li>Resources allocation and operational supports are well received from the Community College</li> </ul>
<b>Project feasibility study</b>	<ul style="list-style-type: none"> <li>Set up of initial hardware equipment and software, including one application server and one development server</li> <li>Set up the Bugzilla – a bug tracking system</li> <li>Studied the feasibility of the project</li> </ul>	Fully achieved	<ul style="list-style-type: none"> <li>A feasibility report was compiled and included in the Progress Report (1)</li> </ul>
<b>Functional requirement study</b>	<ul style="list-style-type: none"> <li>Conducted a user survey (1) on user experiences for using the WebCT</li> <li>Based on the survey and the interviews with teachers, compiled a set of functional requirements</li> </ul>	Fully achieved	<ul style="list-style-type: none"> <li>A functional requirement report was compiled and included in the Progress Report (1)</li> </ul>
<b>CMS production run (1)</b>	<ul style="list-style-type: none"> <li>Conducted an internal system test</li> <li>Involved groups of teachers and students to participate the first run (during the period from Jan to May 2010)</li> <li>Collected users' feedback by completing the user survey (2)</li> </ul>	Fully achieved	<ul style="list-style-type: none"> <li>A user guide for teachers and the survey report were included in the Progress Report (2)</li> </ul>
<b>Development of additional CMS function</b>	<ul style="list-style-type: none"> <li>Developed additional function – Attendance taking</li> <li>Discussed the functional requirements with three representatives from the group of Project Yi-Jin</li> </ul>	Fully achieved	<ul style="list-style-type: none"> <li>The additional software module was integrated into the existing CMS system</li> </ul>

Adoption of Open Source Course Management System (CMS) in Post-Secondary Institutions – A Pilot Study

Objective	Activities	Extent of attainment of the objective	Evidence of having achieved the objective
<p><b>CMS production run (2)</b></p>	<ul style="list-style-type: none"> <li>Installed a new set up of CMS platform (with the Community College's own resources) for this production run</li> <li>Involved teachers and students from Pre-Associate Degree (Pre-AD) programmes, and some individual programmes, like the top-up degree programme (during the period from September to December 2010)</li> </ul>	<p>Fully achieved</p>	<ul style="list-style-type: none"> <li><u>User Guide</u> manuals for teacher and student were compiled</li> <li><u>A Production Launch Plan</u> was compiled</li> <li><u>Installation Manual</u> were compiled</li> <li>A user training session was conducted for teachers</li> </ul>
<p><b>CMS Workshop</b></p>	<ul style="list-style-type: none"> <li>Invited guest speakers from the Centre of Enhanced Learning &amp; Teaching (CELT) of the Hong Kong University of Science &amp; Technology (HKUST); and the Teaching &amp; Learning Centre (TLC) of Lingnan University (LU)</li> <li>Arranged invitation letters sent over to all secondary schools</li> <li>Arranged the newspaper advertisements for the publicity of the workshop</li> <li>Set up a public web site for hosting the project information and sharing resources</li> <li>Conducted the workshop</li> </ul>	<p>Fully achieved</p>	<ul style="list-style-type: none"> <li>The CCLUCMS project website was set, <a href="http://project-cms.cclife.hk">http://project-cms.cclife.hk</a></li> <li>The official CMS logon page was set</li> <li>Invitation letters and posters were sent to 457 secondary schools</li> <li>The workshop was held on December 10, 2010</li> </ul>

## 2. Project Impact

This project has contributed numerous impacts by covering the students' learning effectiveness, the teaching staff's professional development, and the College's ongoing development. A brief description of each impact is as follows:

- Regarding students' learning effectiveness, the setup of the open sourced course management system trains up the CC students to better meet the technological and social demands. As CC students are required to conduct the usual CMS operations, including email checking, CMS browsing, class material downloading, and online assignment submission, they will get used to some technological tools and also get trained to communicate with their peer students and subject teachers.
- The setup of the CMS also provides a platform for students to improve their learning atmosphere; as class materials with different media are able to be posted on the platform.
- The setup of the CMS further enhances the professional development of CC's teaching staff. The teachers have a chance to learn how to manage their teaching materials effectively on the CMS platform. Training opportunities have been increased for teachers who might join the CMS user training or attend the CMS workshop.
- Regarding the Community College's ongoing development, the setup of the CMS has facilitated the College's ability to manage their offered courses or programmes completely. Before that, the College was limited to have any development on the old CMS system, simply because of the CMS ownership issue. Any special needs can be planned and developed now according to the College's own resources. For example, the "Attendance Taking" tool is being implemented into the CMS system in order to suit the need of the Project Yi-Jin (PYJ).

### 3. Cost-effectiveness

Financial status is shown in the following table in order to illustrate the overall performance of the planned project budget:

**Table: Financial status of the project as per 30 December 2010 balances**

Budget Items (Based on Schedule I of Agreement)	Approved Budget (HK\$)	Actual Expense (HK\$)	Balance Remaining (HK\$)
Manpower	798,000.00	630,065.33	167,934.67
Equipment / Facilities	10,000.00	8,310.00	1,690.00
Services	6,000.00	1,920.00	4,080.00
General Expenses	18,000.00	4,121.10	13,878.90
Others	81,000.00	36,290.00	44,710.00
<b>Total Expenditure</b>	<b>913,000.00</b>	<b>680,706.43</b>	<b>232,293.57</b>

The Highlights of the project's cost-effectiveness are briefly described in the following:

- **Utilization of available resources was strived to be minimum**—Only two high performances desktop PCs were purchased directly from the project fund. These two machines serve as an important asset for us in setting up a stable operating platform; so that we can conduct software testing and development on it.
- **Sustainability of the learning system and materials were developed**—With an extra resource supported by the Community College, a set of high-graded CMS servers was set up for production run. All operating and installing procedures were documented in details. As a result, a sustainable system was developed that future research or development could be performed continuously.
- **Expenditure items could be minimum**—when the project is replicated by other schools. This point can be fulfilled without any doubts, since the feasibility study of the project was done and the project was implemented successfully by us. Supporting documentation and system evaluation were already done. Any other schools could easily follow us and simply implement the system, provided that if they have their own even a small I.T. support team and some extra computer equipment for the system.
- **Alternative approaches for equivalent benefits at less cost**—Usually employee's long learning curve to a new technology or tool will make the system very costly as well. Even the other schools have their own I.T. team; the system may still be costly to implement if they take 2 to 3 months in learning by their own paces. To speed up the process, user trainings, consultation or outsourcing services could be considered as the alternative approaches. If the employee's learning curve from 2 to 3 months, down to 1 month or less, then it is justified to get equivalent benefits but at less cost. As the Community College has the work experience of this project, we could provide consultation and outsourcing services at low cost in the future and contribute the efforts back to the educational community.

## 4. Deliverables and Modes of Dissemination

### Deliverables of the Project

	Deliverable	Remark
1	<p><b>Design, development, and deployment of the open source CMS at the College</b></p> <ul style="list-style-type: none"> <li>▪ An infrastructure of the whole CMS components has been set up for production run in August 2010.</li> <li>▪ A user training session with duration of 3 hours was conducted on 25 August 2010. Ten CC teachers and three I.T. supports attended.</li> <li>▪ CMS User Guide for Teacher and Student were compiled that students are able to download the document at the logon page. While a copy was sent over to all involved teachers by email.</li> <li>▪ The College's CMS website was formally set up on 15 October 2010, and its web content was posted and frequently updated afterwards.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Refer to <i>the Production Launch Plan</i> document for the infrastructure</li> <li>▪ See <i>the CCLUCMS User Guide</i> document</li> </ul>
2	<p><b>Sharing of research findings of our open source CMS at the College</b></p> <ul style="list-style-type: none"> <li>▪ A CMS Workshop was conducted on 10 December 2010 at Lingnan University campus.</li> <li>▪ The workshop was open to the public and invited parties. The total number of attendees and participants was about 90.</li> <li>▪ The workshop was conducted with a series of sharing sessions in form of presentation and one Q&amp;A session.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Refer to <i>the CMS Workshop Snapshots</i> document for detail of the event</li> </ul>

### Success of the Project

The following factors or elements are very critical and contributing to the success of the project. A brief description of each factor is listed as follows:

- **An Internal Professional I.T. Team** – The team was formed by a group of I.T. and Mathematics College Lecturers. Currently we have four members in this team and each member possesses specialized knowledge in I.T. and application field. As a result, technical solutions can be quickly determined and recommended.
- **A Team of Research Assistant (RA) with Dynamic Skill Set** – Currently we have two RAs in this team, and each is with dynamic skill set. One RA has great experiences with computer equipment setup, configuration, software installation, and application development. While another RA is strong with documentation, I.T. concepts, user level service & training, and self-learning skill. With these combinations in skills, project planning and execution is running smoothly.
- **Upper Management's Support** – This project is in line with the future growth of the Community College; for example the College should require a complete owned course management system to manage and tailor the special needs from different programmes. With management's support in mentality, project resources are in a better position to get approval and allocated.

Feasibility of continuing the project would be recommended, as this facilitates the ongoing development of the College to sustain the future demands.



## 5. Activity List

The significant activities for the whole project are summarized in the following table:

Types of activities	Brief description	Number of participants	Feedback from participants
User Survey (1) of user experiences on pervious course management system (i.e. the WebCT)	<ul style="list-style-type: none"> <li><b>Period:</b> during the month of Sep 2009</li> <li>Provided a channel for teachers and students to express their comments on the usage of the WebCT.</li> </ul>	Teachers about 30; Students about 440	<ul style="list-style-type: none"> <li>Survey results were shown in the Progress Report (1) before.</li> </ul>
CMS production trial (1) and User Survey (2)	<ul style="list-style-type: none"> <li><b>Period:</b> Jan 2010 – May 2010</li> <li>Launch of the CMS services to be tested by a group of teachers and their students</li> </ul>	Teachers about 6; Students about 280	<ul style="list-style-type: none"> <li>Survey results were shown in the Progress Report (2) before.</li> </ul>
CMS production trial (2)	<ul style="list-style-type: none"> <li><b>Period:</b> Sep 2010 – Dec 2010</li> <li>Launch of the CMS services to all Pre-AD programmes and some selected programmes</li> </ul>	Teachers about 50; Students about 800	<p>Initial verbal feedbacks from teachers were:</p> <p><b>Pro:</b> Simple user interface and easy to operate</p> <p><b>Con:</b> Need more user trainings to some teachers/students with less I.T. skills</p>
CMS workshop	<ul style="list-style-type: none"> <li><b>Date:</b> Dec 10, 2010 (Friday)</li> <li>Time: 2pm – 5pm</li> <li>Venue: MB-G07, Lingnan University campus</li> <li>Provided one CMS project Introduction and five sharing sessions on experiences using open sourced CMS by CC, LU and HKUST</li> </ul>	<p>Participants about</p> <p>Secondary school teacher: 5</p> <p>Secondary &amp; Post-secondary school administrative*: 18</p> <p>Secondary &amp; Post-secondary school I.T. support: 9</p> <p>CC's teachers and staff: 40</p> <p>Others (walk-in and from other industry): 13</p>	<p>Refer to the report of <u>CMS Workshop – Snapshots</u></p>

Where \* – the secondary and Post-secondary school administrative includes school principal, curriculum officer, administrative officer, etc.