

## II Project Information

Project Title (in English)

SDL classroom – An Outcome-based Approach to Self-Directed Learning supported by e-Learning

Project Title (in Chinese)

SDL 教室：目標為本的電子學習平台，支援自我導向學習

### A. Project Summary

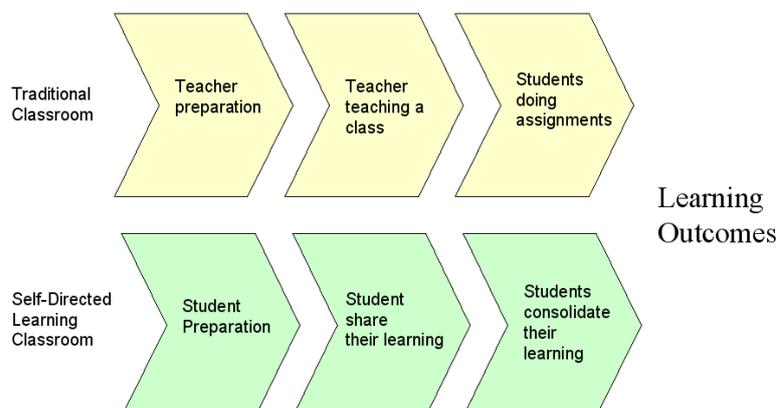
(please provide an executive summary of the project proposal in no more than 500 words).

According to the "Reform Proposal for the Education System in Hong Kong" in September 2000, it was emphasized that students must develop the attitudes, capabilities, and habits of life-long and life-wide learning [1]. Instead of *Reproduced Learning*, where students follow standard programs and receive knowledge from teachers, it is claimed that *Student-Directed Learning* (SDL) will achieve better learning by asking students to read, to explore, and to express their learning [2].

On the other hand, there is an increasing interest in the *Outcome-based Approach* (OBA) to teaching and learning. Instead of focusing on the resource inputs, OBA focuses on the outcomes that students should acquire and demonstrate their learning. The UGC encourages universities to place emphasis on outcomes so that institutions may focus their effort on achieving its goal, with a view to leading to better teaching and learning [3].

At first sight, SDL and OBA seem to be in conflict. SDL encourages students to define their own learning objectives and embark on individual learning journeys. OBA requires teachers to define specific learning outcomes, and help students to achieve them. SDL focuses on students, and OBA focuses on the results. This dilemma has caused confusions and misunderstandings in both implementations. With SDL, students might explore without guidance and in the end, they cannot demonstrate what they have learned. With OBA, learning might become teacher-centric, where a teacher passes out all the knowledge and gives answers to all the questions.

This conflict can be resolved by adopting an Outcome-based Approach to Self-Directed Learning, or the SDL classroom model, as depicted below. The learning outcomes are defined. In a traditional classroom, teachers prepare and teach a class, and hence students will become passive receivers. In an SDL classroom, teachers provide learning questions and resources for students to explore their learning. During class, students are asked to discuss their finding, and do further work to consolidate their learning. As a result, students will develop self-directed learning attitudes and skills, while achieving specific learning outcomes.



Note that the idea of asking students to prepare and present in a class is not new. Most will agree, however, that the challenge is to encourage teachers and students to adopt this new learning paradigm in an effective manner, and we need to provide the needed resources, training, and support to them to ensure a successful implementation.

This QEGS project therefore has three objectives: (1) To build an e-Learning platform to provide online-support for an outcome-based SDL classroom; (2) To convert 4 courses into SDL classrooms, by helping staff develop study questions and resources for self-directed learning; and (3) To empower teachers and students on the use of the SDL classroom model through training and support.

This project will bring a change of teaching and learning paradigm in the College, and we will promote the concept and practices to other institutions in Hong Kong. Students learn how to learn, instead of passively receiving knowledge. Teachers change their role to become learning facilitator and mentor, guiding the knowledge exploration process.

#### References

1. Education Reforms in Hong Kong: Challenges, Strategies, & International Implications, Prof. Y.C. Cheng, Plenary Address in the International Forum on Education Reform, 2001.
2. Reform Proposal for the Education System in Hong Kong, Education Commission Policy Document Submitted to the Hong Kong Government, September 2000.
3. "Quality Education, Quality Outcomes: The Way Forward for Hong Kong", Symposium on Outcome-based Approaches in Student Learning, University Grants Committee, June 2008.

## **B. Project Objectives**

*(please identify the needs of the target recipients and explain how the project aims to address the needs).*

#### Needs of the target recipients

Hang Seng Management College (HSMC) has around 1200 Degree and Associate Degree students. Like most students in Hong Kong, they have been trained by public examinations to become passive learners: listening to lectures, doing homework, and reproducing answers. They seldom ask questions in class, and they tend to avoid questions or give only simple answers. They prefer teachers to give them all the presentation slides and notes, and they seldom read beyond the designated textbook or references. While we can achieve most learning outcomes with the conventional teaching model, we cannot empower our students to become life-long and life-wide learners.

HSMC has around 100 dedicated and experienced teachers. Still, most courses are delivered based on traditional classroom model, where teachers prepare and deliver lessons. The past successes of A-Level results and Associate Degree programmes strengthen their beliefs and practices on teacher-centric classroom models. While teachers appreciate the importance of letting students direct their learning, they always find it hard to adopt the model as (i) they will need to develop a complete new set of materials for students to learn; (ii) they will need to learn from good practices before they can commit to change; and (iii) they will need a platform to support the new learning model. In a recent survey after a SDL sharing session, teachers agreed that students should take a more proactive role in learning, but they also expressed that training and support is needed for a successful implementation.

### How the project aims to address the needs

Aristotle once said, “For the things we have to learn before we can do them, we learn by doing them.” If we want to develop students to become self-directed learners, we need to provide opportunities in classes that students will direct their own learning. This project will provide the needed platform, support, and empowerment teachers and students need to embark on the journey of Self-Directed Learning.

The objectives of the project include:

- (1) To build an SDL classroom to support outcome-based self-directed learning. This platform allows teachers to upload online resources (reading passages, web links, and video clips) for students to prepare before a class. More importantly, teachers will provide three levels of study questions in accordance to the learning outcomes. These questions cover (i) *Concepts* that students can understand and master; (ii) *Applications* that students can apply with what they have learned; and (iii) *Explorations* that students can explore with new possibilities of understanding. We do not expect students to self-learn and understand everything. Rather, we expect students to explore and appreciate what they do not understand. This will create a “gap” of understanding, and motivate students to ask and discuss their learning. In doing so, they will achieve the learning outcomes. Simultaneously, they will develop the capability of self-directed learning. Since the learning is now represented in the form of questions, students will also develop the capability of asking questions, appreciating questions, and finding answers to questions.

The SDL classroom will consist of the following hardware and software components:

- (a) A Web-based e-Learning system of hardware and software to support online learning.
  - (b) A Mini Studio to produce video clips for online learning
  - (c) A Self-Directed Learning classroom with 20 IPADs for students to do learning and discussion simultaneously. Students will view the notes, post questions, and share their learning using the Web-based e-Learning system.
- (2) To convert 4 courses into SDL classrooms, by helping staff develop study questions and resources for self-directed learning. The project is not just about building a platform. It is more about jump-starting the journey of self-directed learning. Hence we will identify 4 courses and help the professors to migrate to use the SDL model for teaching and learning. The effort include:
    - (a) Consultation with teachers how to convert their teaching materials to become self-study learning materials, and design self-study questions that target on the learning outcomes;
    - (b) Provide support to teachers in editing and uploading materials, and preparing online questions for students to answer;
    - (c) Produce video interview clips of teachers explaining different topics. They will be used for students to view at home for better understanding. In doing so, teachers have more time to discuss with students during class hours.

Tentatively, we plan to select the following four General Education courses for conversion:

- (a) Critical Thinking, (b) Hong Kong Society, (c) Global Politics, (d) Japanese Language and Society. The first three are core modules which have hundreds of students each year. These courses are delivered using mass lectures with relatively few teacher-student interactions. They are good candidates to explore new teaching and learning models. The last course is a language course which requires students to do a lot of learn and practice on their own.

- (3) To empower teachers and students on the use of SDL classroom model through training and support. We need to provide training and demonstrations to teachers on the delivery of SDL lessons, to ensure that lessons can deliver the learning outcomes. We need to prepare students with the necessary mindset and skills to become self-directed learners. They will include basic skills like reading to learn skills, questioning skills, and discussion skills, and advanced skills such as research skills, analytical skills, and information presentation skills. To evaluate the effectiveness of the project, we will carry out an action research among teachers and students on how they see the effectiveness of self-directed learning in achieving learning outcomes.

Prof. P.C. Wong had been a Professor in the Chinese University of Hong Kong for twenty years before he joined Hang Seng Management College in 2010. He had put the Self-Directed Learning model into practice in two courses. One course was of a mass lecture with over 100 students, and one was a small General Education class. In both courses, he provided reading materials and study questions for students before class. During class, students were asked to present their learning in groups, and then together, they would discuss their learning and understanding. After class, students were asked to do further studies to demonstrate their learning outcomes.

The results were very promising:

1. Students are much more engaged in class. In the past, many students just laid back to receive information. With the new model, students are prepared before class and are more motivated to discuss their learning.
2. Students get better and better in self-learning. Throughout the course, we see that students do better presentations, ask better questions, and become better learners.
3. Students speak and communicate better. With more opportunities in presenting and discussing, students gain more confidence in speaking to people.
4. In the past, the teacher teaches all the content. Now that the students can prepare and present what they have learned, the teacher can focus to teach what students do not understand. The discussion becomes more in-depth, and students are more motivated to explore what they need to learn.



*(please include the expected number of target beneficiaries and explain how they will benefit from the project).*

The project will produce:

- An e-Learning platform to support an outcome-based SDL classroom. The platform will have online resources for more than 1400 Degree/AD students to carry out self-directed learning, and for students to discuss their questions and present their learning.
- Four courses delivered based on the Outcome-based SDL classroom. Each course will have self-learning materials, study questions, video clips and usage statistics to demonstrate the effectiveness of self-directed learning. Teachers will have our full support.
- A series of training workshops and sessions for all the teachers and students. Survey results will be obtained to evaluate the effectiveness of the SDL classroom.
- To share with other tertiary institutions, we will also hold workshops to share our experiences. We will also open guest accounts for their colleagues to see how our SDL classrooms actually work.

The following picture shows a video interview. It uses an interactive conversation to let the professor share about the learning content. The interview will focus on questions and answers, helping students to appreciate the process of asking and answering questions.



#### D. Implementation Details

The General Education Department of Hang Seng Management College is pleased to initiate and manage the project, and the ITSC will provide the necessary IT support. The Project Team will consist of the following members:

Prof. P.C. Wong (Academic Leader, General Education Department)

Dr. Victor Chan (GE Curriculum Coordinator, General Education Department)

Dr. Anselm Lam (GE in Action Coordinator, General Education Department)

Ms. P.S. Cheung (Department Coordinator, General Education Department)

Mr. Jeremy Sun (IT Manager, Information Technology Service Centre)

### **Phase One: Preparation**

1. Servers and networks - we will install servers and networks for the project.
2. Development - we will develop our e-learning platform, together with the mobile classroom.
3. Consultation - we will assist colleagues to convert the courses.
4. Training - we will provide training and demonstrations to teachers and students.

### **Phase Two: Production**

5. Video - we will record interview sessions to be used as online learning materials.
6. Learning resources - professors will prepare learning resources for students to do self-study.
7. Guidelines - materials and mechanisms will be provided to teachers and students.
8. Launching - the project will be launched in the College.

### **Phase Three: Practice**

9. Delivery - Four courses will be delivered to students using the new SDL classroom model.
10. Support - Support will be provided to teachers and students.
11. Sharing - Teachers will be invited to share their experiences with other colleagues.
12. Observation - Classrooms will be opened for observation.

### **Phase Four: Promotion**

13. Evaluation - The project team will carry out evaluation on the effectiveness of the project.
14. Promotion - The project will be promoted to other courses for possible implementation
15. Sharing - The project will be shared with other tertiary institutions.
16. Report - The Project Team will write and submit the report.

The actual timeline can be found in section E under the title of Implementation Schedule.

<b>E. Implementation Schedule</b> <i>(Please extend this table if necessary.)</i>		
Estimated start date of project:		September 2011
<b>Action</b> <i>(please indicate key milestones)</i>	<b>Timeframe</b>	<b>Cashflow Requirement</b>
1. Servers and networks, SDL classroom platform. 2. Consultation, Training 3. Production of the 1st course (video, Learning resources, guidelines) 4. Launching of the programme	2011-9-1 2012-2-29	\$570,000
5. Practice of the 1st course (Delivery, Support, Sharing, and Observation) 6. Production of the 2nd and 3 course (Video, Learning resources, guidelines) 7. Promotion of the 1st course (Evaluation, Promotion, Sharing, and report)	2012-3-1 2012-8-31	\$354,000
8. Practice of 1st, 2nd, and 3rd courses (Video, Learning resources, guidelines) 9. Production of the 4th course (Video, Learning resources, guidelines)	2012-9-1 2013-2-28	\$360,000
10. Practice of 1st, 2nd, 3rd, and 4th courses (Video, Learning resources, guidelines) 11. Promotion of 1st, 2nd, and 3rd courses (Submit final report) 12. Sharing sessions	2013-3-1 2013-6-30	\$129,000

Estimated completion date of project: June 30, 2013

<b>F. Project Budget</b>						
<b>Projected Expenditure</b> <i>(Please provide detailed breakdown under each item)</i>	<b>Amount in HK\$</b>					
	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Total</b>
a. Manpower	\$500K	\$333K				\$833K
b. Equipment / Facilities	\$350K	\$40K				\$390K
c. Services	\$46K	\$36K				\$82K
d. General Expenses	\$28K	\$20K				\$48K
e. Others (e.g. auditor's fee)		\$60K				\$60K
<b>Total Expenditure :</b>	<b>\$924K</b>	<b>\$489K</b>				<b>\$1,413K</b>
<b>Projected Income</b>	<b>Amount in HK\$</b>					
	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Total</b>
a. (e.g. fees received)						
b.						
c.						
<b>Total Income :</b>						
<b>Sources of Funding</b>						
a.	Amount of grant sought under this application: <u>\$1,413,000</u>					
b.	Other sources of funding ( <i>this may include donations, contributions from the applicant/its parent organization, etc. Please give the name(s) of the sponsor(s), the amount of funding, and indicate whether the funding has been secured.</i> ):					
	i) Licensing for eBooks (\$200K)					
	ii) Wifi network for the entire college (\$300K)					
	:					
	:					

## G. Monitoring and Self-evaluation Mechanism

This project will implement three quality assurance, monitoring, and self-evaluation mechanisms:

1. External review - The course materials will be submitted to external examiners for comments and evaluations.
2. Internal surveys - Survey-based evaluations will be carried out among teachers and students.
3. Classroom observation - Classrooms will be opened to other teachers.
4. Professional dialogue - the Principal Investigator will hold discussions with the responsible teachers. Their experiences will be written to share with other teachers.

The results of these mechanisms will be included in the final report.

## H. Management Support and Key Personnel Involved

As discussed earlier, the Project Team will consist of the following members:

Prof. P.C. Wong (Academic Leader, General Education Department)

Dr. Victor Chan (GE Curriculum Coordinator, General Education Department)

Dr. Anselm Lam (GE in Action Programme Coordinator, General Education Department)

Ms. P.S. Cheung (Department Coordinator, General Education Department)

Mr. Jeremy Sun (IT Manager, Information Technology Service Centre)

Mr. Stephen Wan (Senior Web Programmer, Information Technology Service Centre)

Mr. Simon Tsang (Senior System Administrator, Information Technology Service Centre)

Prof. P.C. Wong (Principal Investigator)

*BSc, MPhil, PhD (CUHK)*

*SMIEEE, MACM, MH*

Associate Vice-President (Development)

Director, Centre for Quality Teaching and Learning

Academic Leader of General Education



### Biography

Prof. P.C. Wong is a renowned IT expert and educator in Hong Kong. In 1998, he launched the Hong Kong Cyber Campus (<http://www.hkcampus.net/>) project to bring the Internet era to schools. This project offered Internet services to over 900 schools and 60,000 teachers. In 2000, he expanded the project to become the Hong Kong Education City (<http://www.hkedcity.net>), which is now the flagship education portal in Hong Kong. In 2004, he started another large scale project – VChina, a video conferencing network linking hundreds of schools in HK, China, and overseas. In 2008, he started

eParent, an e-learning academy, which quickly attracted over 20,000 parent members. Prof. Wong is very experienced in managing government-funded projects. Prof. Wong has secured more than \$60 million funding from the Quality Education Fund, IT Industry Support Fund, and UGC grants. All of the projects were well-received by the funding organisation.

#### **Awards and Honors**

Prof. Wong published widely and has received many awards. Hong Kong School Net won the IT Application Award in Education in 1998. VIOLA won two US patents and the IT Excellence Award in 1999. NetPlan won two Grand Linux Adoption Awards (SME and Education categories) organized by HKPC in 2003. VChina won the 10<sup>th</sup> anniversary QEF Outstanding Project Award in 2008. In 2001, he was awarded the Medal of Honor by the Hong Kong SAR for his contributions to the use of IT in education.

#### **Education Services**

Prof. Wong is serving in many government committees. He is now the Chairman of the Committee on Home-School Cooperation, leading 18 districts of parent-teacher associations to promote home-school cooperation and family education. He is also a member of the Education Commission, Family Council, Advisory Council on Food and Environmental Hygiene, Committee on Services for Youth at Risk, and ICT Advisory Committee of the Trade Development Council. He is an honorary consultant to many schools and organizations, and has given hundreds of seminars and workshops to teachers and parents.

### **I. Special Justifications if the Grant Sought Exceeds \$2 million**

### III Other information

**1 Project Sustainability** *(If applicable, please describe how the recurrent expenditure involved will be met after completion of the proposed project)*

The College is undergoing an expansion process. It will have more programmes and students in the coming years. The project staff will be absorbed as additional staff to continue promoting and supporting the SDL classrooms in the College.

**2 Preparatory work done** *(If any)*

The College has committed funding to build a WiFi network for the entire campus. It has also allocated a new server room for hosting the servers and network equipment for the project.

**3 Past experience in organizing projects of similar or relevant nature and achievements** *(If any)*

Hang Seng Management College

HSMC is a new institution based on Hang Seng School of Commerce (HSSC), a very successful tertiary institution that offered AL and Associate Degree programmes. In 2009, HSSC received a grant of \$1,079,000 from QEGS on “Project FLY – To Enhance the Employability of Associate Degree Students Through Increasing Students' Understanding of Themselves and the Market.” The project includes a Careers Office website which has abundant resources and support to AD students.

Prof. P.C. Wong (Principal Investigator)

Prof. P.C. Wong had extensive experiences in managing funded IT and learning projects.

	Project Title	Funding Body
1998	Hong Kong Cyber Campus (\$12 million)	University Grants Committee
1999	Cyber Campus I and II (\$18.9 million)	Quality Education Fund
2000	Hong Kong Education City (\$31.85 million)	Quality Education Fund
2001	Small Campus (\$1.44 million)	Quality Education Fund
2003	VChina – Linking HK and China (\$2.5 million)	Quality Education Fund
2005	VChina – Facing the world (\$1.8 million)	Quality Education Fund
2007	eParent – Online Learning Academy for Parents (\$2.43 million)	Quality Education Fund