Preparing for an New Era of Teaching and Learning

In this issue of CELT newsletter, we highlight some of the recent developments since the start of the academic year, such as the Pilot OBE Course Project, the OBE Syllabus Builder and the new sub-projects for the Innovative Assessment of Learning Outcomes project.

From Fall 2008 to Spring 2009, CELT has organized and delivered numbers of seminars and workshops in order to prepared faculty and teaching staff for the highly advocated outcome-based education and equip them with new pedagogical initiatives. One of our new initiatives is the *Professional Development Week for Faculty and Research Postgraduates*. During the week of 12 Jan 2009, we conducted a series of seminars for faculty to provide them information about developing their career at HKUST, research grants and successful proposal writing in Hong Kong, up-to-date research about student learning at HKUST and teaching and learning. For research postgraduates, new sessions included PhD supervision and career development. This Professional Development Week will become a regular CELT feature, along with teaching and learning related sessions, at the beginning of the Fall and Spring semesters. If you have any suggestions for additional topics for this program or any other seminars and workshops for teaching or research, please contact Nick Noakes (ctnick, ext 6809).

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All our previous seminars can be retrieved from the *Seminar Archive* of the CELT website.

Outcome-Based Education

The Pilot OBE Course Project

In the last academic year, a lot of effort has been put in drafting provisional intended learning outcomes (ILOs) for Schools and undergraduate programs. In the long run, these program-level learning statements will need to be reflected in the courses that comprise programs. To explore these implications, the OBE steering group is undertaking a Pilot OBE Course Project to identify how the OBE approach can be scaled up for general implementation in the special circumstances of HKUST. The Project was launched on 29th November 2008. At present, 54 instructors from various departments of the four Schools have participated, corresponding to 48 pilot courses that involve more than 3000 students, that is, about 50% of the total. A sharing session will be held within Schools in the middle of the Spring semester for the instructors to share successes and challenges.

At the same time, Schools continue to prepare faculty for OBE by organizing workshops and providing individual support with the University's external consultants. Prestigious scholars have been invited to be the external OBE consultants, Prof Harvey Brightman for the School of Business and Management, Prof David Lange and Prof Karl Smith for the School of Engineering, Prof Tony Hung for the School of Humanities and Social Science and Prof Spencer Benson for the School of Science. Their valuable input and advice are helping formulate a long-run plan for introducing OBE at the course-level in the University.

To know more about the Pilot OBE Course Project, please visit the ***Project webpage*** or contact the School OBE representatives:

SBM: Prof Larry FARH (mnlfarh@ust.hk)
SENG: Prof Mounir HAMDI (hamdi@cse.ust.hk)
SHSS: Prof Barry SAUTMAN (sobarrys@ust.hk)
SSCI: Prof King L. CHOW (bokchow@ust.hk)

"Teaching is leading students into situation in which they can only escape by thinking"

Spencer Benson, Ph.D., Director
The Center for Teaching Excellence,
University of Maryland
2008-09 Fulbright Scholar,
Hong Kong University
HKAC General Education Initiative

UNIVERSITY OF MARYLAND

Outcome-Based Education

The OBE Syllabus Builder — a start-up tool for your OBE syllabus

To facilitate faculty and teaching staff in aligning the learning outcomes, the teaching and learning activities and the learning assessment in their courses, CELT has developed an OBE Syllabus Builder. Here is a quick step-by-step introduction to the Syllabus Builder.

Step 1: Getting started with the OBE Builder

To open the Syllabus Builder, you can go to the *OBE website* and click on the OBE Syllabus Builder button (Fig 1).
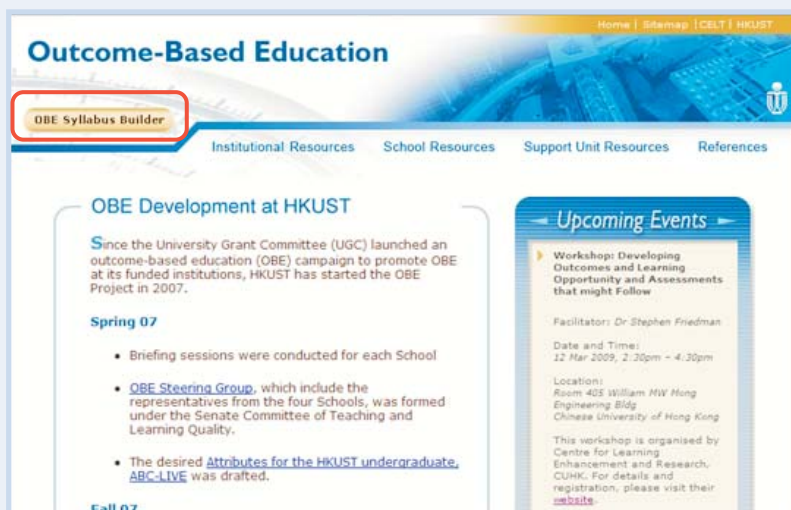
Fig 1

The Syllabus Builder (Fig 2) will then pop up. Its structure is based on the Bloom's revised taxonomy of cognitive outcomes.
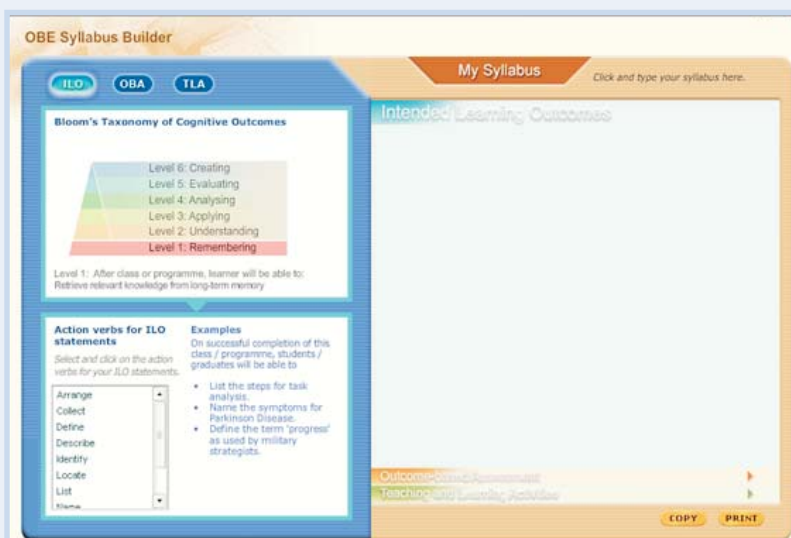

Fig 2

Outcome-Based Education

The OBE Syllabus Builder — a start-up tool for your OBE syllabus

Step 2: Building your OBE syllabus

If, for example, you want to work on the ILO statements, then:

a. Select the level of cognitive outcomes.

b. Select your action verbs. The corresponding examples will then be shown.

c. Here is the composition area. After selecting your action verb, it will be shown here. You can then start typing the ILO statements.

d. After finishing your ILO statements, you can go ahead to plan for the assessment (OBA) and teaching and learning activities (TLA).

Here is your OBE syllabus.

Outcome-Based Education

The OBE Syllabus Builder — a start-up tool for your OBE syllabus

Step 3: Outputting your OBE syllabus

You can always copy your syllabus to another document or directly print it out.
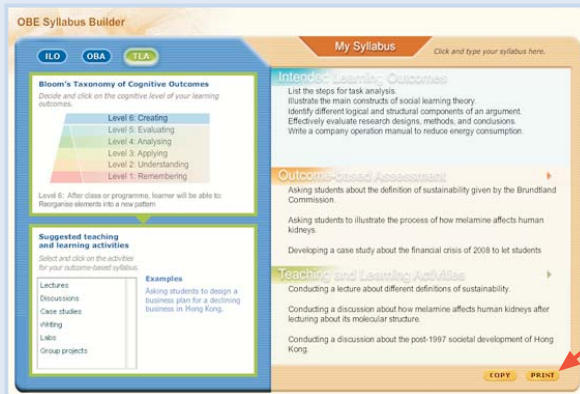
a. Click the Print button to print.
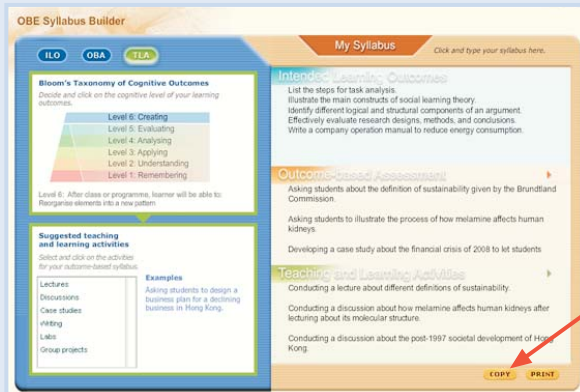
b1. Or click Copy and your syllabus will then pop up in a new window.

b2. Select the contents you want to copy with CTRL+C. Then paste it into another document with CTRL+V.

Design your OBE syllabus with the OBE Syllabus Builder now!

Student Engagement and Satisfaction Questionnaire Survey

To ensure the quality of the undergraduate programs, the Student Engagement and Satisfaction Questionnaire (SESQ) Survey, whi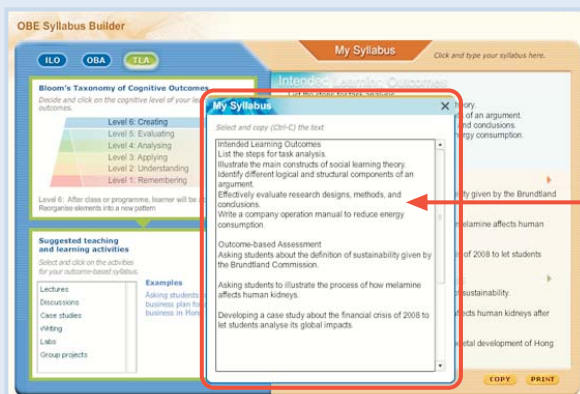ch forms part of the University's quality assurance measure, is conducted annually to garner the feedback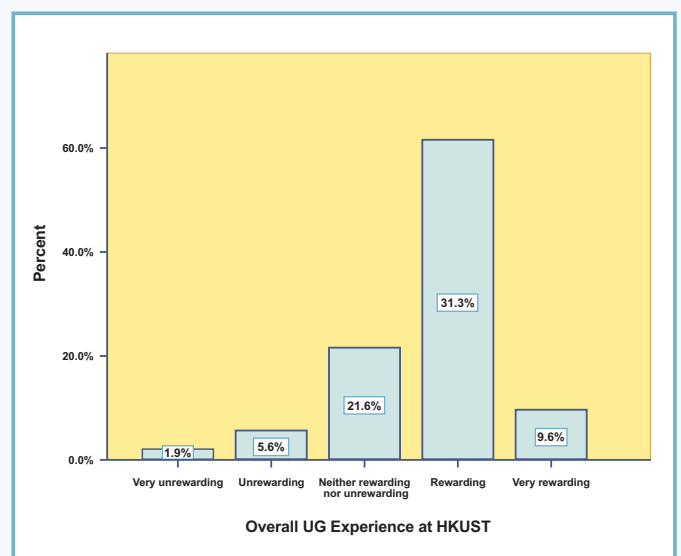 from the graduating students on the programs they studied. After the first launch of the Survey in May 2007, the second round of the Survey was conducted during the periods of March to June in 2008. All the final-year undergraduate students in the 2007/08 academic year, a total of 1888 students, were invited to complete the survey online. Among all, 783 students completed the survey, representing a response rate of 41.5%.

- Students in general found their UG education as effective in helping them to develop their general competencies, especially in presentation skills, collaborative work, self-learning, time management, getting along with people as well as critical and analytical thinking.

- Comparing with 2007, more final year students in 2008 found their UG experience as either 'rewarding' or 'very rewarding', evidenced by nearly 71% of the students expressing such view as compared with 60% of students in 2007.

- When students were asked if they would recommend the UG program they had completed to other students, over 70% of them answered 'definitely yes' or 'probably yes'. 5.1% chose 'definitely no'. The result is an improvement on that of the SESQ in 2007 when around 10% of the students chose 'definitely no'.

- Similar to the results of last year, having a too heavy workload is still a major complaint of students. They would like to see a reduction in their workload so that they can have a more balanced and all-rounded university education. Apart from this, they would also like the university to improve in the areas of campus facilities (e.g. student canteen, library, sports facilities and residential halls), support services for students (e.g. learning support for those with poor academic performance, career preparation and job search), and support for student activities, etc.

Overall UG Experience at HKUST

Category	Percent
Very unrewarding	1.9%
Unrewarding	5.6%
Neither rewarding nor unrewarding	21.6%
Rewarding	61.3%
Very rewarding	9.6%

Student Learning Research

Since 2007, CELT has been conducting a series of studies about HKUST students. It is hoped that findings from these studies will help to build a scientific and evidence-based understanding of our students, thus to provide useful information that would guide teaching improvement, policy making and program development. Below is a list of studies undertaken by CELT on HKUST students.

Annual recurrent studies since 2007
- Student Intake Survey (Year 1 Fall)
- Student Engagement and Satisfaction Questionnaire (SESQ) (Year 3 Spring)

Longitudinal Study
- A longitudinal study about value-addedness of UG education (2007-10)

Studies done in each semester since 2007
- A study about Students' Access and Use of Technologies (Fall 2007)
- A study about Student Motivation (Spring 2008)
- A study about Student Orientation (Summer 2008)
- A study about Effective Learning Environment (Fall 2008)

In the studies above, we gathered data about the background of our students, their general competencies such as critical thinking, information literacy, learning and study strategies, leadership skills, study habits and use of technologies etc. The findings of these studies have been disseminated through CELT newsletters, seminars and meetings. If you are interested in the findings of the above studies or possible collaboration, please do not hesitate to contact Dr Tak Ha (cttsha@ust.hk) or Dr Lucia Yeung (ctlucia@ust.hk).

Below are some highlights from the studies:

- Analysis showed that motivation has a significant positive correlation with students' academic performance.

- In the 2008-011 cohort of UG students, ratio of local and non-local students is 80:20. Over 60% of the students spent over 1 hour traveling to campus.

- In a critical thinking skills survey on a random sample of the 2007-10 cohort of UG students, results indicated that students performed particularly well in inference and deduction thinking compared to the U.S. norm.

- From a leadership survey on a random sample of the 2007-10 cohort of UG students, UST students are generally good at working with other students. However, they are weak in self-understanding, commitment and their ability to bring about change for oneself and others in the society.

Innovative Assessment of Learning Outcomes

In summer 2008, CELT introduced the Innovative Assessment of Learning Outcomes project in response to the coming 4-year undergraduate curriculum and the outcome-based approach strongly advocated by UGC. The project encourages faculty and teaching staff to propose sub-projects for assessment of learning that is innovative and bounds to an outcome-based approach. For the first round of application, seven sub-projects from all four Schools were funded. A brief description of them is given below:

Development of a New Assessment Method for CBME Laboratory (Prof John BARFORD, CBME)

- This project aims at re-designing the lab course assessment from report-based assessment to comprehensive viva-like oral-based assessment and examination. The new assessment allows students to demonstrate their in-depth understanding of relevant theory associated with the experiments, technology used in the experiments and the relevant theory related to the core lecture courses in CBME.

An IT Platform for Assessment in Linear Algebra (Prof Shiu Yuen CHENG, MATHS)

- This project will design an IT platform with test bank for continuous assessment to enhance students' conceptual understanding of the Linear Algebra and lessen their stress over examination.

Group Project Assessment - Ensuring Grading Fairness and Implementation for Educational Merit (Prof King CHOW, BIOL)

- This project tries to apply the Games Theory for group project assessment to encourage students to contribute their full and best efforts to achieve the intended learning outcomes of the courses.

Adopting Computer Algebra Systems in Engineering Education: Curriculum and Assessment Issues (Prof Thomas HU and Prof Xueqing ZHANG, CIVL)

- This project tries to reform the assessment focus of engineering courses with permission and encouragement using CAS (computer algebra system) calculators in examination to enhance students' problem solving skills with more complex, realistic and creative modeling questions.

Teamwork Development Across the Chemical and Biomolecular Engineering Curriculum (Prof Edmond KO, CBME)

- This 3-year project develops an assessment strategy for the systematic MBTI-based teamwork training to students through explicit instructions, practice opportunity and formative feedback throughout the undergraduate curriculum in the department of Chemical and Biomolecular Engineering.

Student Self Assessing Practice Test Sites (Prof Barry SAUTMAN, SOSC)

- This project will develop an online self-assessed practice test site with interactive study resources, including annotated model essays, self-assessed directional question bank and discussion board, to improve students' ability to apply declarative knowledge, writing skills and enhance their exposure to the social phenomena or events that are significant to China and the world.

Establishing an Assessment Reporting System for Undergraduate Programs (Prof Mike SO, ISOM)

- This is a program-level project that aims at developing a new assessment and reporting system for the new program — Risk Management and Business Intelligence — to understand individual students' strengths and weaknesses as well as to keep track how program intended learning outcomes achieved throughout the course study.

Application for the new round of sub-projects has been started. Deadlines of applications are 30 June 2009 and 30 Nov 2009. For enquiries, please contact Christine Chow (christine.chow@ust.hk)

Spring 2009 Teaching Assistant (TA) Training Program

Support programs are being provided to all TAs every academic year. This year the **Spring 2009 Enhancement Program** for TAs was offered from **4 to 20 February 2009**. It provided an opportunity for TAs to polish their skills and/or to make-up for any incomplete training which the University offered in Fall 2008. The program was comprised of *Induction Training (mandatory according to department),* the *ICAC seminar* (mandatory) and *Competency Enhancement Workshops* (optional).

If you want to know more about the Spring TA Program, you may take a look at the brochure at *http://celt.ust.hk/ta/news.htm*.

Fall 2008 TA Event - "Teaching Assistants on FIRE"

The Fall 2008 TA Event — "TAs on FIRE" organized by the Teaching Assistant Coordinators Committee (TACC) and the Center for Enhanced Learning & Teaching (CELT) was completed successfully on **8 Nov 2008 (Sat)**. More than 50 TAs from different departments participated in the event. All TAs were seated together in the BBQ site for the sharing session. The event provided a relaxing environment for TAs to express their opinions on their needs and feedback on their TA training. TAs also shared their problems with their TACs and other TAs. The event was rounded off with a delicious BBQ. All TAs were satisfied and enjoyed the gathering.

In the feedback session, TAs expressed various concern and issues. The following are the four major ones:

1) They want to develop better relationships and communication with supervisors and students.

2) They want to have training to enhance their teaching skills, e.g. "How to deal with students in class?"

3) They want to know more about how to identify and tackle the problem of plagiarism.

4) They want to be equipped more with career managing skills to increase their employability in a business environment.

Seminars and training for all research postgraduate students addressing their concerns were delivered during the Professional Development Week in January 2009.

To view the snapshots of this event, please visit *http://celt.ust.hk/ta/photo.htm*.

TA Events Highlights

- **Spring 09 TA Induction Program** was held from 4 to 20 Feb 2009.

- **March 09 TA Event—"A Good Show Part II"** was held on 20 March 2009.

- **TA Certificate of Achievement Presentation Ceremony** will be held on 19 May 2009. Details of the event are available at *http://celt.ust.hk/ta/news.htm*.

Upcoming CELT Events

May 2009

- *Tech Camp 2009* are running from 18–19 May. With the theme, 'Let's Google! Facilitating students' project work with Google applications', you will be introduced to the handy online Google applications that you can use to engage students in active learning by facilitating their project work, from planning, to information searching, to content composing, to progress tracking and presenting. More information is available at *http://celt.ust.hk/instr/TechCamp/index.html*.

- *Assessment of Business Students' Intended Learning Outcomes at HKUST: The Experience at the School of Business and Management* by Prof Larry Farh of SBM (26 May 2009). Please click *here* for details and registration.

June 2009

- *Strengthening Research-Teaching Linkages as a means of promoting Inquiry-Based Learning* by Prof George Gordon, University of Strathclyde (2 June 2009). Please click *here* for details and registration.

- *Developing Research Students and Newer Researchers* by Prof George Gordon, University of Strathclyde (3 June 2009). Please click *here* for details and registration.

- Application for project funding for the new round of *Innovative Assessment of Learning Outcomes* has started. Deadlines will be 30 June 2009 and 30 Nov 2009. More information is available at *http://celt.ust.hk/ialo/index.html*.

Summer 2009

- *New Faculty Orientation* (17–21 Aug 2009)
- *TA Induction Program* (24–28 Aug 2009)

Fall semester 2009

- The following programs are also planned for the Fall semester. Details will be announced soon.

  - *Outcome-based Teaching and Learning Workshops Series* (Nov 2009)
  - *Experience Sharing with OBE Course Pilot Project Leaders* (mid Dec 2009)
  - *Professional Development Week for Faculty* (11–15 Jan 2010)
  - *Professional Development Week for Research Postgraduates* (11–15 Jan 2010)