

## Outcome-Based Education: Developing a Variety of Assessment Methods

With the emphasis on embedding outcome-based education into all courses and programs, the first step is to describe the level of disciplinary knowledge, generic and disciplinary skills performance, and attitudes we expect the students to achieve on completion by writing intended learning outcomes.

Following this, we need to decide on the assessment methods that will align with the intended learning outcomes. Using traditional assessment methods such as examinations and essays to assess students' attainment on disciplinary knowledge and skills will still be relevant, but these will not work for assessing student's generic skills and attitudes such as these:

So the question is: How can we make better judgements on students' teamwork skills and professional development? In this issue, we will look at additional ways to assess the level of achievement of intended learning outcomes as well as monitoring and involving others in the process.

To help assess students' generic skills performance and attitudes, consider broadening the range of assessment methods. Why?

- To develop students' competencies
- To make sure the assessments are matched with the intended learning outcomes
- To take a holistic approach

Upon successful completion of this course you will have achieved the following learning outcomes:

- Participate as an effective member of a team
- Appreciate the responsibilities of marketers in our society.

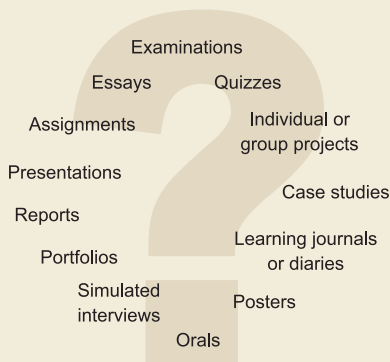
Adapted from the Griffith University:

[http://www.marketingpower.com/content/Rundle-Thiele\\_Griffith\\_ug.pdf](http://www.marketingpower.com/content/Rundle-Thiele_Griffith_ug.pdf)

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### What kinds of assessment methods you are using now?



For more information on different assessment methods and their advantages and disadvantages, please visit <http://celt.ust.hk/ideas/ajl/Mexam/index.html#methods>

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## 360° Perspective

In order to have a holistic approach, involving students in the assessment process should be encouraged. One way to do it is through self and peer assessment.

Self or peer assessment is a process in which students are put into the role of assessors of their own or of each other's work (Boud, 1995). In other words, students become the source of assessment. The process may involve the attribution of marks, formative comment or both. Advantages of using self and peer assessment include:

- saves marking time for teaching staff though monitoring students' assessment will still be needed;
- changes the role of students from passive to active;
- provides valuable learning environment for students to construct knowledge, develop reflection skills and make quality assessment.

Self and peer assessment can be applied in almost any area of assessment. However, it is very important that clear assessment criteria are developed and the students must

know the basis on which they are attributing marks, judging pass and fail status or giving feedback.

CELT developed an online system for student peer evaluation (OSSPE) which helps instructors collect and process student peer evaluation data. To find out more about this tool, please check it out at <http://peaks.ust.hk/osspe>



*Example: Self assessment tool for planning and reflection for skills development from the University of Bristol*  
<http://www.swap.ac.uk/learning/Assessment2.asp>

1 Learning Objective	2 How will you work towards this	3 How will you know about your progress	4 Progress in reaching objective	5 Evidence	6 What got in the way	7 Further work needed
Examples						
To learn about and develop skills in use of tone and timing	Reading Role-play Observation to other	Feedback from others How confident I feel Taping a session	I feel much clearer in how to do this I read relevant chapter in Kadushin I participated in 2 role-plays, working on tone and timing	Feedback from others Confidence	Not being able to tape a session	More practice
To develop skills in motivational interviewing & apply to clients other than those using drugs	Reading presentation to group	Feedback from others Assignment result	I feel ready to try this approach with clients Read Miller & Rollinck Reviewed wider literature	Feedback from others Assignment result	Needed more time	More practice & reading Perhaps co-work with colleague

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Example: Including peer assessment to enhance student learning and in assessment in a nanotechnology engineering course

<http://www.nanotechnology.northwestern.edu/press/Herzam%20Journal%20Eng%20Article.pdf>

In this example, learning objectives are expanded beyond the traditional content-based knowledge objectives (Figure 1). The procedures for assessing the students are redesigned to align with the learning objectives and 46% of the final grade is determined by peer assessment (Figure 2)

To know more about sources of assessment, please visit <http://celt.ust.hk/ideas/afl/Mexam/index.html#sources>

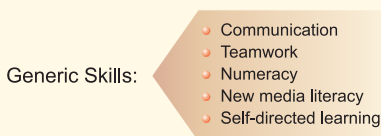
Practices	Learning Objectives (Categories)			
	Intellectual	Practical	Personal	Social
Collaborative Learning	√		√	√
Interdisciplinary Learning	√			√
Problem-based Learning	√	√	√	
Peer Assessment		√	√	√

Figure 1

	(I) % of grade determined by peer assessment	(II) % of overall course grade	(III) % of overall course grade determined by peer assessment = product of (I) and (II)
Group Activities	100%	40%	40%
Final Project	20%	30%	6%
Final Exam	0%	30%	0%

Figure 2

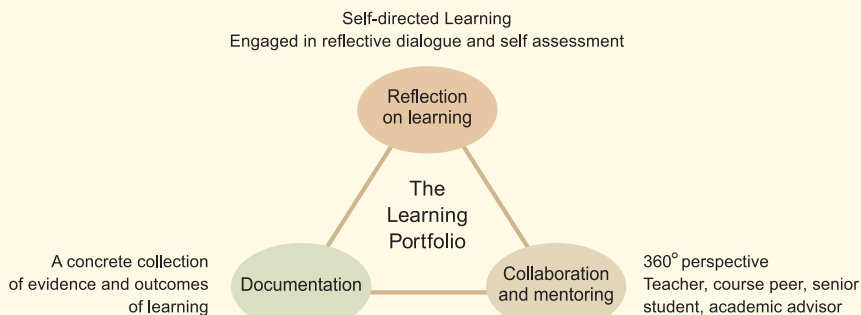
## How to better assess generic skills and attitudes?



For intended learning outcomes involving generic skills and attitudes, traditional assessment methods such as examinations and essays may not be effective in helping teachers make judgements on student performances. Using a **portfolio** as an assessment method is a common alternative.

### What is a Portfolio?

Stiggins (1994) defines a portfolio as a collection of student work that demonstrates achievement or improvement. The material to be collected and the story to be told can vary greatly as a function of the assessment context.



A Learning Portfolio Model (adapted from 'The Learning Portfolio' by John Zubizarreta, 2004)

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Using a portfolio as an assessment method does not test the learning itself but a representation of the learning. It allows self and peer assessment, continuous feedback from teachers, advisors, mentors and peers that lead to continuous development with a holistic approach towards students' growth and achievement over time. When used at program level, it helps students process the feedback

they receive from faculty, external assessors and peers during years of study. Also, students are able to document the connections of their personal and academic lives, take more control of their own development and become self-directed learners. When assessing a portfolio, we need to consider giving feedback on students' performance rather than those abstracted grades.

*Example: Using portfolio as an assessment method at program level*

URL: <http://www.kzoo.edu/pfolio/>

This example shows how the portfolio builds into part of the overall student education with an emphasis on:

- \* Dimensions: lifelong learning, career readiness, leadership, intercultural understanding and social responsibility
- \*\* Skills: information literacy, quantitative reasoning, writing and oral communication

The Kalamazoo Portfolio Framework

Year	Portfolio entry	What it is	Who responds
Freshmen	Foundations essay	Connects high school experience with the dimensions* and skills** and sets goal for the first year	Advisors and peer leaders
	Portfolio creation and writing self-assessment	Creation of home page, writing self-assessment, link to Seminar paper and Foundations Essay	First-year seminar faculty and portfolio consultants
	Academic goals and plan of study	Looks forward to sophomore year, declaration of major and study abroad	Advisors
Sophomores	Declaration of major	Brief description of preparation and goals for the major	Registrar, to departments
	Foundations for intercultural understanding	a) essay questions for study abroad application, or b) reflection on experience with another culture c) course work	a) international programs staff, or (a and b) portfolio office
Juniors	Reflection on career readiness	Resume and a) reflection on career internship, or b) completion of career "Readiness Barometer" or other reflective piece	a) Career advisor, or b) portfolio office
	Senior Individual Project (SIP) contract	Brief description of preparation and goals for the SIP	SIP advisors
Seniors	Senior Connections Essay	Connects various parts of "K" education, reflects on K Plan & SIP, discusses growth in dimensions* and skills**	Portfolio office, major department, or assessment committee

Adapted from 'The Learning Portfolio: Reflective Practice for Improving Student Learning' by John Zubizarreta, p. 133



## Outcome-Based Education Website

To get started, please go to the newly developed Outcome-Based Education (OBE) website <http://celt.ust.hk/obe> which provides an overview of OBE and practical guides on planning and implementing your assessment project.



# New Tools for Teaching and Learning

## *Online tools for helping your students plan for their project and monitor their progress:*

### **Google Docs and Spreadsheets** (<http://docs.google.com>)

This is a free web-based word processing and spreadsheet program that keeps documents current and lets the people you choose collaborate on these files through the web. For example, students can coordinate their teamwork assignments. They can create basic documents and spreadsheets from scratch or upload from their existing files. They can choose who can access their documents and spreadsheets, share instantly and edit with others in real time. They can edit from anywhere, safely store their work and easily save and export copies. They can publish their work as a web page, control who can see their pages, post the documents to their blog and publish within their group. This is an external tool for research paper collaboration too.

### **Google Calendar** (<http://www.google.com/calendar>)

Students can see their friends' and family's schedules right next to their own; quickly add events mentioned in Gmail conversations or saved in other calendar applications; and add other interesting events that they find online. They decide who can see their calendar and which details they can view. For planning a meeting, they can create invitations, send reminders and keep track of replies right inside Google Calendar.

### **Gliffy** (<http://www.gliffy.com>)

Gliffy is an online application designed to draw flow charts, workflow documents, class diagrams, network diagrams, database schemas, website layouts/wireframes, floor plans, seating charts and more. Students can share instantly and edit with others in real time and documents can be published as static images online. These features greatly enhance team and project work.

### **Blogger** (<http://www.blogger.com>)

A blog is an easy-to-use interactive website, where you can quickly post thoughts, interact with people, and more. All for free. In simple terms, a blog is a website where you write journal-like entries on an ongoing basis. New entries show up at the top, so visitors can read what's new. They can comment on it, link to it, or email you.

### **Google Reader** (<http://www.google.com/reader>)

With Google Reader, students can keep up with their favorite websites. Google Reader can constantly check their favorite news sites and blogs for new content, share interesting items with their friends and family and it is totally free. Besides, it works in most prevailing browsers, without the need to install any software.

## *Online tools for helping your students search, collate and share information for their projects:*

### **Del.icio.us** (<http://del.icio.us>)

Del.icio.us is a collection of favorites. It is a social bookmarking website — the primary use of del.icio.us is to store their bookmarks online, which allows you to access the same bookmarks from any computer and add bookmarks from anywhere, too. On del.icio.us, you can use a personal and shared classification system using tags to organize and remember bookmarks. This is a much more flexible system than folders. You can also use del.icio.us to see interesting links that friends and others have bookmarked, and to share links with them in return. Friends, coworkers, and other groups can use a shared account, special tag (e.g. MGTO100), or their del.icio.us networks to collect and organize bookmarks that are relevant — and useful — to the entire class.

# New Tools for Teaching and Learning

## **Flickr** (<http://www.flickr.com>)

Flickr can also be used to help you or your students present course content and projects in a creative way. It is perhaps the best online photo management and sharing application on the web and has *two main goals*: to help people make their photos available to the people who matter to them; and to enable new ways of organizing photos. In Flickr, you can give your friends, family, and other contacts permission to classify and organize your photos - not just to add comments, but also notes and tags. And as all this info accretes around the photos as metadata, you can find them so much easily later on, since it is also searchable.

## **Wikispaces** (<http://www.wikispaces.com>)

Wikispaces can also be used to help you or your students present course content and projects in a creative way. You can also present rich media papers publicly or among peers. It is great for any kind of group website. For example, you can energize your classroom or organize group meetings. A wikispace for a class is a great place for students to post their work so that teachers and classmates can correct, improve, and discuss their work. Got a group project? A wikispace allows you to post schedules, plans, and lists that the rest of your group can update and edit any time they like. Your group members can also be notified of changes as they happen so that they never miss out on updates.

## **Slideshare** (<http://www.slideshare.net>)

This online tool can be used for helping your students present the PowerPoints of their work in a creative and easily accessible way. You can upload your PowerPoint, OpenOffice, Keynote or PDF presentations, tag them, embed them into your blog, website or wikispace, browse others' presentations, and comment on individual slides. What's more, the transcripts of your presentation will be indexed by internet search engines and will show up in search results. It is a great way to share your ideas with others, or to learn from other people and it is free.

### ***Lunchtime Workshops: Stepping into the Teaching World of Web 2.0***



A series of three Lunchtime Workshops, aimed at facilitating students' project work with social software, was held on 16-18 May 2007. With the theme, **Stepping into the Teaching World of Web 2.0**, participants experienced the teaching and learning value of online tools that can be used with students or peers to facilitate their project work from planning through to presentation. Social software including blogs, wikis, collaborative writing tools, social bookmarking, photosharing and online presentation tools were introduced.

Comments from over 20 teaching staff participants include: *"I like the SlideShare part, it is amazing"; "Become aware of new software that would enhance students' learning through the web"; "Very practical and useful, thanks for arranging it"; "Very good to the education industry"; "Topics discussed were just fine"; "The contents covered are very useful and the staff is helpful"; "Gives me an idea of what I can explore further on the internet."*

For more information, please visit <http://idcelt.wikispaces.com/>



# Teaching and Learning Symposium: Learning Impact through Teaching Innovation

## Call for Papers

The 3<sup>rd</sup> Teaching and Learning Symposium, to be held on 11 December 2007 aims to showcase and celebrate continuous improvement in the quality of teaching and learning at the University, as well as to emphasize collaboration with teaching practices and innovations within the University community.



## Teaching Innovation Awards 2007 — Call for Nominations

Higher education in the 21st century is characterized by widening participation, an increasingly diverse student population, intense accountability and reduced funding. It is a challenge for teachers to find innovative ways of enhancing students' learning in such a context.

The symposium will be organized around four main themes:

- Promoting the use of technology innovations and tools that enhance student learning
- Using visualizations and simulations to increase student understanding
- Implementing innovative instructional strategies such as peer learning and problem-based learning
- Implementing across the curriculum and across the community initiatives

All papers which fall within the four main themes of the conference will be considered for inclusion in the presentation sessions. Abstracts of up to 500 words with a list of up to five keywords should be sent as an email attachment in MS Word format to [tlsymp@ust.hk](mailto:tlsymp@ust.hk) by **10 September 2007**. For more information, please visit <http://celt.ust.hk/tlsymp07>

To recognize and reward dedicated and progressive faculty and teaching staff, the University offers up to five Teaching Innovation Awards for the concerted effort made by instructors in improving the quality of their teaching and students' learning experience by introducing innovative practices or technologies.

The Teaching Innovation Awards will be presented at the 2007 Teaching and Learning Symposium and will be the highlight of the event.

**Closing date of nominations: 28 September 2007**

Nomination Form can be obtained from CELT office at Room 1031 (Lift 2) or downloaded from the Award website <http://celt.ust.hk/tlsymp07/awards.htm> after 20 August 2007.

## CLI Calling for 6th Round Proposals for Adaptations now!

Applications are now invited from program teaching teams or individual teaching staff seeking funding for adaptations of teaching and learning innovation projects with a focus on student learning improvement for the coming academic year.

This is the sixth year of the Continuous Learning and Improvement (CLI) through teaching innovation project. Project leaders are encouraged to propose project adaptations that can facilitate students to adopt a deep learning approach.

In addition, two kinds of measurement are required to collect solid evidence of improvement in students' performance: (1) Generic measurement of student level of deep/surface learning using the Study Process Questionnaire to be conducted pre and post the teaching innovations; (2) Subject specific baseline measurement (to be determined by individual project leader).

Deadline for proposal submission: 14 September 2007. For more information, please visit <http://celt.ust.hk/cli>

# 2006-2007 Teaching Assistant (TA) Training Program

More than 300 Year-1 Teaching Assistants (TAs) from different departments participated in the TA Orientation and Induction Training Program for 2006-2007 academic year and most of them have received the certificate of completion from Dr David Mole, AVPAA in the TA's Certificate of Achievement Presentation Ceremony held on 25 April 2007.

According to the TA Program Opinion Survey which was conducted during the departmental feedback session, the induction program was well received by many TAs. A majority of TAs (85%) expressed that the TA training program was appropriate and useful and 73% rated the overall TA program effective. Most of the TAs (74%) were satisfied with their Teaching Assistant Coordinators (TACs) performance and 72% rated the work of TACs beneficial. Among the mandatory training workshops, 'Orientation', 'Departmental Briefing Sessions' and 'Marking & Grading' were found to be most applicable to TAs.

## Best TAC Award

In March 2007, all TAs were invited to vote for their departmental TA Coordinator (TAC). Two outstanding TACs, Mr Kok Mang Hin, Marco from PHYS (left) and Miss Au Yim Lee, Emily from IELM (right) who were voted by TAC Committee and TAs respectively, received the Best TAC Award.



Major recommendations for 2007/08 academic year are:

- *The need for workshops on communication skills*
- *The need for introductory workshops on the new Learning Management and Evaluation System*

Accommodation of these needs are being considered in the coming Fall 2007 TA Induction Program.

## TA Event — "How to teach effectively and make your teaching inspiring"

This seminar and discussion panel was completed fruitfully on 8 March 2007. With the promotion of TACs and support from TAs, over 100 participants joined the event.

The keynote speaker, Prof S Y Cheng, Dean of School of Science, was invited to deliver an inspiring lecture to our TAs. Also, four experienced TA speakers from different schools shared their valuable teaching experiences which benefited most of the TAs.



## Upcoming Events

- **TA Induction Programme:** Fall 2007 TA Induction Program will be held from 24 to 29 August 2007. For details, please go to <http://celt.ust.hk/ta/index.html>
- **Faculty Orientation** will be held in late August. Further details will be announced through email.
- **The 3<sup>rd</sup> Teaching and Learning Symposium** will be held on 11 December 2007. For details, please go to <http://celt.ust.hk/tlsymp07>