

Student Feedback Collection Tools that can Help to Continuously Improve Your Teaching

Jochen Wirtz, Ph.D., Associate Professor
NUS Business School
Winner of Outstanding Educator Award (2003)
Academic Director, Asia Pacific Executive MBA
(APEX-MBA) Program
Academic Co-Director, UCLA-NUS Executive MBA
Program



A/Prof Wirtz (right) receiving the Outstanding Educator Award from NUS President, Prof Shih Choon Fong (left)

When I first started teaching 10 years ago, I came from the industry and had no previous teaching experience. My ratings reflected this: they were in the 80th percentile of all professors in the first semester I taught! In contrast, my latest rating—4.8 out of 5—for my Services Marketing MBA class, was one of the top ratings in our faculty. How did I achieve such excellent ratings when I started from such a low base?

Seeking Negative Feedback is Important!

Soliciting and responding to feedback, and being open to criticism were the most important factors in my development as an educator. In fact, academic research in management and organisation shows that an important trait of outstanding performers is their willingness to seek negative feedback with the objective of improving themselves. How can you obtain such feedback?

Why Should I Use Several Feedback Tools?

The standard university-wide student evaluation system is a good start. It provides a relatively hard and objective evaluation of your teaching. It shows your teaching standard

compared to your peers. However, when you want to know exactly how and what to improve, you suddenly realise that the open-ended feedback provided by students in the university system is mostly ‘top of the mind’ or very general such as “he is very friendly” or “the course was very interesting.” Such feedback is excellent for learning about how students perceive your course or your style, but gives little specific and actionable feedback to questions such as:

- “Which cases did students really like?”
- “Was this project seen as value-added?” and
- “What exactly should I do differently the next term?”

Answers to such detailed questions provide insights on what to maintain, improve or change in your module and teaching.

How to Obtain Detailed and Actionable Student Feedback?

To obtain detailed student feedback, one should ask specific questions on the module design and teaching style, and offer an anonymous avenue for students to give that feedback. I have been using two main means of obtaining such

continued on page 13

inside

Mind Your Pedagogy
and Questions 3

Teaching Students to Think Using
Peer Instruction and Student
Electronic Response (PISER)
for the Enhancement of
Conceptual and Critical Learning 4

Use of Analogies to Teach
General Biology to
Non-Biology Majors 6

Teaching Methods

Encouraging Deep Learning 2

Enhancing Teaching and Learning
through Developmental
Peer Observation (DPO) 7

Designing Interdisciplinary Modules 14

Learning Issues/ Interdisciplinary Modules/ Teaching Evaluation

Welcome to CDTL/Goodbye 8

2003 Statistics at a Glance 8

Ideas on Teaching 8

TLHE 2004 9

Teaching & Learning Highlights 10

CDTL News / From the Faculties

Encouraging Deep Learning

Chew Fook Tim, Assistant Professor
Department of Biological Sciences



In my first semester of teaching, I undertook a survey on learning motives and strategies of students in my cross faculty module (BL1306: General Biology) of 350 and compared them to responses from students of two other large modules conducted by colleagues¹ using the Biggs' Learning Process Questionnaire². We undertook this study as part of our teaching practicum under the Professional Development Programme-Teaching organised by the Centre for Development of Teaching and Learning. The preliminary results were presented during our final teaching practicum seminar on 11 May 2002 and described elsewhere². Basically, there were no significant differences in the proportion of students with surface, deep and achieving motives or strategies among our different groups of students and we generally felt that the data we obtained were representative of our general student population at the National University of Singapore.

However, what struck me clearly from the survey results was that a large proportion of students (although not statistically significant) using surface and achieving learning approaches were obtaining B grades or better than the deep learners in my module. Although the deep and achieving learners were scoring significantly better when the analysis was made at a higher cut-off point (A grade or better), I was concerned that this trend may encourage surface learning and send the wrong message. Hence as a group, the teaching team for the BL1306 decided to do something about this.

To address the issue, we needed to understand why students use a surface approach to learning. From our literature research^{3,4}, we gathered some possible reasons:

- Modules that encourage rote learning were those that lacked a clear presentation of the overall objectives, those that had a structure that could not be followed closely, and those in which the topics were presented disjointedly.
- The subject matter did not take students' prior knowledge into account. Hence, students could not engage the content meaningfully. And if the module contained too much information or content for the limited time allotted, the students were compelled to just try to 'cope' rather than be deeply engaged. Other elements that promote discouragement and disinterest include teaching methods that are teacher-focused and mainly emphasise transmission of information rather than true understanding of concepts, as well as teaching styles that encourage cynicism/anxiety/other negative feelings about the subject.
- The assessment tasks (e.g. exam questions which only require rote learning/lists of facts to pass or even obtain distinctions) encourage and even reward learners who take a surface approach to learning.
- There is inadequate feedback on students' progress.
- Students do not see any intrinsic value in learning the subject, and the teachers or teaching process do not help them to see the value by stressing the relevance of the subject matter.
- Students were previously successful in using only a surface approach to learning. Or they had multiple other commitments (e.g. taking too many modules, having a project that takes too much time, or other external distractions) and were only trying to do the bare minimum necessary to pass the module.

As seen, many of these points are within the control of the teacher to varying degrees, while others are not.

My teaching team thus decided to make some changes and act on the determinants that were within our control to encourage deep learning:

- To prevent students from believing that assessments were just machinery for deriving grades and thereby remaining with a surface approach of learning, we re-designed the assessment tasks and style to reward students for understanding, making connections and exploring rather than rote recall of facts or information. For instance, we changed the finals into an open-book examination with exam questions that require application of knowledge in unseen situations.
- We encouraged learning by experience (e.g. physical visits to the Raffles Museum of Biodiversity Research).
- To promote active engagement with the subject and learning tasks, students were encouraged to use the course discussion forum for the inquiry and exploration of complex issues/problems/case studies. The discussion forum also offered students the opportunity to discuss, debate and compare their understandings with each other and with teaching staff.
- Apart from giving marks or grades, tutors were explicitly encouraged and shown how to give students qualitative feedback frequently on the assessed work as well as on discussions and email questions.
- We explicitly brought out the structure of the subject and challenged students to make connections with what they already know, or to question their existing knowledge base. Lectures are designed such that connections within and between topics, as well as relevance to daily living, were emphasised.
- As the first assignment of the module, we asked the students to list down their learning goals and standards. This practice helped students to perceive their own

continued on page 15

Mind Your Pedagogy and Questions

Ernest C.T. Chew, Associate Professor
University Scholars Programme



In February 1992, I spoke at the University's annual Seminar on Teaching Methodology on "Minding Your P's and Q's". I mentioned three sets of P's and Q's relevant to teaching and learning: Personality and Quality, Philosophy and Quest, and Pedagogy and Questions¹. In this article, I would like to elaborate on Pedagogy and Questions.

'Pedagogy'—the science of teaching, or training—comes from a Greek word *paidagogos*, a slave who led a boy to school. I am sure that there is hardly an academic pedagogue today who regards himself as a slave to his students (and more likely as a scholar with authority over them!), but the Greek word enshrines the important principle that education involves discipline and guidance. Indeed, 'education' comes from the Latin *educare*, which meant to raise or to lead, with a view to instruction and training.

Along these classical lines of thought, we recall how the great philosophers and teachers of the ancient world often taught by means of questions. I think it was Aristotle who said that "in order to succeed, one must ask the right questions," and questions were part of the Socratic method. Similarly, the *Analects* of Confucius are replete with questions from both the Master and his disciples as a means of establishing principles². In the Christian Gospels, Jesus of Nazareth taught by means of parables³ and frequently by searching questions⁴.

In our own pedagogic context, we would do well to identify key questions and issues—whether in research or teaching—before moving on to present generalisations, hypotheses, theories and paradigms. It is a common observation that there is a gap between the school and pre-university curricula, on the one hand, and university courses, on the other. And it is a common complaint that university teachers sometimes fail to appreciate where their students are coming from, in their eagerness to introduce them to fresh academic subjects. I would recommend that we devote part of our introductory tutorial or lab sessions to finding out more about our students' backgrounds, interests and expectations. We need to proceed by questions, to lend a listening ear to these new students, and to suggest possible handles and keys to academic doors. Certainly in education, one size doesn't fit all.

As I have observed elsewhere, each of us is born and grows with questions:

"First, after birth every individual awakens to the quest for *personal identity*, which is expressed in the question, 'Who am I?' Secondly, with growing self-

awareness and maturity, he embarks on the quest for *group integration*, expressed in the question, 'Where do I belong?' Thirdly, in this Age of Nationalism, people also engage in the collective quest for *national independence* and *integrity*, expressed in the questions, 'Who are we?' and 'How can we be free and united as a distinct people?'⁵."

Children are born with innate curiosity, and we can either encourage or discourage this curiosity. In a recent interview, Mr Tharman Shanmugaratnam, the incoming Acting Minister for Education, was asked, "How can parents discipline and encourage their children to explore and venture into new grounds?" His reply:

"I think the most basic point is to encourage children to ask questions from very young. Once they get through secondary school and become young adults, they should have developed a certain scepticism towards established wisdom, and I don't mean cynicism. Having a questioning attitude towards established knowledge, and even established ways of doing things, is not a bad habit—it leads to wanting to find a better way or alternative solution. We also need discipline to succeed in creative endeavour⁶..."

For some time, I have tried to phrase some of the key points in my lecture presentations in the form of questions. I have sometimes taken my cue from Rudyard Kipling's poem in *Just So Stories*, first published in 1902:

"I keep six honest serving-men
(They taught me all I knew);
Their names are What and Why and When
And How and Where and Who⁷."

In one lecture outline, I linked these 'honest serving-men' to questions related to the making of the Singapore national identity, and they provided fertile ground for further exploration and discussion.

Of course, it is essential not merely to ask questions, but to **mind** or think through the questions that might be helpful for particular subjects, sessions and situations. There are different kinds of questions—interrogative (sometimes threatening), provocative (challenging), rhetorical (not requiring an answer), stimulating, supplementary, and even nonsensical. The attitude and manner of the questioner may well affect the outcome of the dialogue. We may not wish to adopt the format of *Larry King Live* or *Hard Talk* in our tutorials!

continued on page 15

Teaching Students to Think Using Peer Instruction and Student Electronic Response (PISER) for the Enhancement of Conceptual and Critical Learning



Dr L.A. Snider, Senior Lecturer
Department of Electrical Engineering
Hong Kong Polytechnic University
eesnider@polyu.edu.hk

A few years ago I was discussing a difficult problem in physics with an undergraduate student. It was a problem that departed somewhat from the problems that we had been solving, and typically, he did not even know where to start. After we solved the problem, I said, "Wasn't that fun?" The student replied "No." I asked, "Why not?" And he replied, "I used to think science was fun, but after all the exams, not anymore." This student, and too many others, had lost the excitement to learn and the ability to think conceptually.

Can learning to think be taught? It is a matter of opinion, but I would suggest that even under the best of conditions the conventional didactic lecture approach is of limited effectiveness in teaching conceptual thinking. We do not have the best of conditions: students arrive at the university with an educational background which does not encourage conceptual thinking, resulting in little grasp of basic concepts, lack of lateral thinking, limited creativity and insufficient motivation to learn. Rote learning and memorisation is the norm. Students are marks rather than results orientated; as one student put it, "don't bother me

with all this theory stuff...just tell me what's on the exam!"

As teachers we need to rekindle students' curiosity that has been long suppressed by continual exam pressure. Teaching is a good way to learn but learning needs motivation. More importantly, learning should be fun.



The Personal Response System (PRS) transmitter

PISER

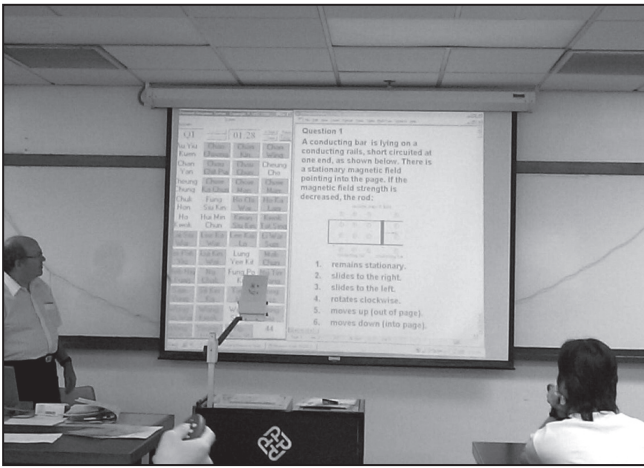
The Peer Instruction and Student Electronic

Response¹ (PISER) system comprises a one-way wireless communication network where each student is provided with his own pocket-sized wireless Personal Response System (PRS) transmitter with which he responds to as many as 10 choices of multiple-choice questionnaires. Simple infrared receivers connected to a laptop computer collect all the responses. The results are then collected by the computer that summarises, stores (in an EXCEL spreadsheet format) and displays the results straight away. The PRS transmitters are individually coded so that the performance of individual students can be tracked and stored in a database.

The basis of the Peer Instruction method, which is to a large extent a form of problem-based learning, is as follows:

1. Students are told what to read before the next lecture.
2. Students do a 5–10 minute reading test at the start of the lecture. The test comprises multiple-choice questions designed to evaluate the degree to which the students have read the materials. To provide some extra motivation, students should be informed that the test marks count towards their final grade. This assessment is done using the PRS.
3. Students attempt a series of four to five *conceptual questions* (within the same 1-hour lecture) following the reading test. These questions are designed to encourage students to learn by understanding rather than simply memorising the basic concepts. The multiple-choice questions do not have to have 'correct' answers. In fact, some questions can be open-ended to provoke discussion in a broad range of disciplines. The main objective is to promote thinking and discussion.
4. Students are given time (two to five minutes depending on the nature/difficulty of the questions) to think before recording their individual answers using the PRS. The tally of answers received from the PRS transmitters provides feedback to lecturer. It gives some indication of the extent to which individuals have understood the concepts.
5. Students are asked to discuss with their neighbours after submitting their answers. This is *Peer Instruction*: the students, having answered anonymously, which avoids

1. Peer Instruction and Student Electronic Response (PISER) is an adaptation of the Peer Instruction method developed at the Harvard University. It is enhanced by the incorporation of an instantaneous student feedback system, Personal Response System (PRS) developed at Hong Kong University of Science and Technology



Student answering a concept question. Note the PRS student name grid: a square with a darker colour indicates the answer has been recorded.

the ‘face’ problem, now justify their views ‘locally’ (to one or two other students), which avoids the ‘shy’ problem. Through these debates, students learn from each other.

6. Students then record their revised answers using PRS following their exchanges with each other. This feedback will give some indication of the extent that the class as a whole understands the concept. The spread of answers will also indicate the direction that students are thinking, and help the lecturer formulate his/her explanations.
7. The teacher explains the correct answer. At this point, the attention of the students is virtually guaranteed—they have already considered the questions related to the topic and they are *interested* in the answer. Also, there is the possibility of being the ‘winner’ in their mini-debates with their neighbours.
8. Finally, the teacher gives a summary as well as a reminder of what to read for the next lecture.

Experience Using PISER

I have been using PISER for the past four years and found it to be a valuable teaching tool especially for promoting conceptual understanding and critical thinking. In a course where there are three 1-hour lectures per week, I use PISER on every third lecture. Whenever the PISER is used, the students become quite animated. The noise level rises sharply as the students enthusiastically argue their positions with each other as well as with the lecturer when he joins their debates and gives the ‘correct’ answer to a concept question. I find that students improve in answering conceptual-based questions in class and in the final exams. Furthermore, the method requires minimal effort from the lecturer and is well suited for conducting continuous assessments, even with very large classes.

Students like the method. Here’s a selection of students’ comments on what they liked about the method:

- “Through the reading quizzes, I can discover what I really understand and don’t.”
- “Through answering the ‘Reading and Concept’ questions, I know which part I don’t understand, and

thus can put in more effort to work on the specific area.”

- “Interactive, apply theory in questions, lots of chances to practice.”
- “Not boring. Encourages people to discuss and ask questions.”
- “Concepts are clear (better than normal lecture).”
- “Having opportunities to discuss the questions with classmates.”
- “Discussing the subject with peers can make the concept easier to understand.”
- “Having concept tests where no marks are counted. Having many discussions in the lecture.”
- “I like the multiple-choice question quizzes; they help me to study and learn more.”

Conclusion

My overall impression of using PISER is positive. It has helped students understand the concepts better and improve their critical thinking skills. The reading tests have also motivated students to read the material. From my own observations as well as the students’ comments, it is evident that students have enjoyed learning with the PISER approach and participated actively in the lectures. In fact, the attendance rate at lectures is close to 100%.

Another advantage of PISER is the reliable and user-friendly electronic response system. While some extra work is required to develop the multiple-choice questions, this is offset to a large extent by time savings realised from using PISER for continuous assessment.

Several faculties at the Hong Kong Polytechnic University as well as other universities in Hong Kong and abroad now use PISER widely for teaching and training in several disciplines, including Engineering Languages, Business and Health Sciences.

Reference

Mazur, Eric. (1997). *Peer Instruction: A User’s Manual*. NY: Prentice Hall. ■



Students engaged in peer instruction, actively defending their answers.

Use of Analogies to Teach General Biology to Non-Biology Majors

Chew Fook Tim, Assistant Professor
Department of Biological Sciences

Biology can sometimes be difficult, particularly when describing things that we cannot see or abstract concepts that we cannot fully comprehend the first time round. Some students have the notion that Biology is boring, and that the subject requires only memory work to get one through. Others find the subject irrelevant. Yet others find it extremely technical with bombastic terms littering every other sentence in a typical Biology text. Many students base such perceptions on how they were taught Biology in school.

To overcome these views, I have sought to make learning Biology the exact opposite of what many perceive it to be: simple, exciting, relevant and comprehensible. One of the many tools I have employed to achieve this aim is the use of analogies. According to Ruhl, “*An analogy is a comparison of something unfamiliar with something familiar in order to explain a shared principle*”¹. Like a bridge that spans the gap between what a teacher wants a student to learn and what the student already knows, an analogy builds on the framework of the learners’ existing knowledge so that they are not starting from scratch¹.

Teachers in primary school and even kindergarten often use actual models or play things to facilitate the learning process and introduce new concepts in ways that are understood by the children. Such supposedly simplified presentations of concepts help students to *make connections* with the new knowledge. Similarly, an analogy allows students to form an initial mental model of concepts to be learnt based firstly on what they are already familiar with and then transposing it to the new knowledge. Analogies work because human reasoning is said to be primarily based on sparse data and the identification and comparison of patterns instead of logical inference²: we look at a new experience and try to match it with similar experiences in the past. Analogies are thus something one can use to establish and organise links among experiences and make them available for retrieval in the creative problem-solving process².

Glynn, Russell and Noah³ describe a Teaching-With-Analogies (TWA) model (first proposed by Glynn, Duit and Thiele⁴) that shows how analogies can be used in the teaching process. In this model, the goal is to transfer ideas from a familiar concept (the *analog*) to an unfamiliar one (the *target*). If both the analog and target share some similar features, an analogy can be drawn between them. The process of comparing the features is called *mapping*³. When using analogies, one has to go through the following steps³:

- Introduce the target concept (e.g. the DNA molecule).
- Review the analog concept (e.g. a long, twisted ‘ladder’).
- Identify relevant features of target and analog (e.g. the two side handles of the ladder contain sugar and phosphate

units; the ‘rungs’ are made of pairs of chemicals called bases).

- Map similarities (e.g. ‘side handles of the ladder’ and DNA backbone; ‘rungs’ and bases).
- Indicate where analogy breaks down (e.g. a ladder is rigid; a DNA molecule can open up and be replicated).
- Draw conclusions (e.g. about the structure and function of DNA or about mutations occurring at the bases).

Ruhl¹ describes how analogies can be used to communicate complex medical concepts to patients. A list of very imaginative medical analogies, which I have found very useful in my teaching, has been gathered and listed in http://www.altoonafp.org/special_analogies.htm⁵. Ruhl¹ also suggests that in order to construct and use analogies effectively, one must understand what works and what does not. Five rules are suggested (adapted below) for teaching students (instead of patients):

- An analogy works best when the concept being taught is new.** If the student already has some understanding of the topic, it may be better to build on the already available framework.
- Use analogies only if the concept is hard to grasp.** Analogies take time to set up and explain. If the concept is simple, a straightforward explanation may be quicker and will not open the student to possible misconceptions from misapplication of the analogy.
- Make sure the student understands the analog.** If the students do not even understand the analog, it would not help in the understanding of the target concept.
- Explain the specific similarities.** Simply stating the analogy does not focus the learners’ attention on how it is similar.
- Be aware of misconceptions the analogy may leave.** Ruhl¹ warns that one of the greatest hazards of teaching by analogy is that the student may transfer inappropriate knowledge from the analog to the target and leave with misconceptions. Analogies can hinder as well as help learning³. When stretched too far, analogies lead to misconceptions: “*An analogy is like a car. If you take it too far, it breaks down*”¹.

After the target concept is learnt, the student should be able to learn new things without always going back to the analogy. Once the analogy has helped the student to understand the skeleton of the concept, the learner can now add further insights directly to this outline and build his own knowledge base. Thus the learner is ‘weaned’ from use of the analogy¹!

continued on page 12

Enhancing Teaching and Learning through Developmental Peer Observation (DPO)

Singh Bilveer, Associate Professor
Department of Political Science



Introduction

As NUS strives to be a world-class university, its research and teaching components are invariably significant performance benchmarks. Given that quality teaching is highly valued in universities, adopting the Developmental Peer Observation (DPO) to review teachers' performance could further expand teachers' teaching skills and capabilities. While the existing Peer Review and Teaching Evaluation Report have its place in the assessment of a staff's teaching in NUS, it is also propitious that DPO be introduced for teaching development as well.

What is Developmental Peer Observation (DPO)?

Broadly speaking, DPO is a process whereby a third party observes and provides feedback on teaching and learning support taking place in a university. Its purposes are to strengthen and enhance the quality of teaching and learning by providing feedback to the staff observed, to provide opportunities for staff to learn from each other and to assist with staff development. The most critical guiding principles of DPO are developmental, not judgemental.

Reasons for DPO

DPO is well regarded because it helps to:

- Identify a teacher's strengths and weaknesses (especially how the teacher designs classroom activities to promote teacher-student interactions) to improve one's teaching
- Prepare an individual for external evaluation
- Gather evidence on the individual's teaching quality for personal and departmental benchmarking purposes
- Create a forum for discussion of the selection and structure of teaching activities

Benefits of DPO

The benefits of observing go both ways; not only do the observed teachers receive feedback on their teaching, those doing the observation are also exposed to an increased number of teaching approaches. In addition, DPO offers other advantages such as:

- Permitting a teacher to reflect on his/her own practices
- Raising the level of discussion about teaching and learning methodology

- Providing triangulation for teacher vis-à-vis other evaluation (e.g. student feedback)
- Demonstrating to students the department's concern with improving teaching skills
- Identifying staff developmental needs
- Contributing to effective departmental quality review
- Enabling teaching staff to share best practices and concerns

Challenges of DPO

DPO, like any other instrument of assessment, has its limits. In order to reap the above-mentioned benefits, the following are some possible areas of concern that need to be considered:

- Observers must be able to put themselves in the 'shoes' of the observed to understand and appreciate his/her teaching
- Observers (notwithstanding the pre-observation dialogue) have no way of judging whether the lesson observed is a typical, experimental or special case activity
- Observed should not feel victimised regardless of his/her performance

Guidelines and proposed design for the DPO process

Table 1 (page 12) shows a summary of the timing, guidelines and proposed design for the DPO process. The total time required to complete a full DPO process (i.e. pre-observation dialogue, observation, post-observation dialogue and report and action plan writing) would take about four to six hours. With regard to the frequency of observation, a minimum of one observation per semester, initiated by the observed, should suffice.

Conclusion

DPO has great potential and can become a useful tool for staff development in any institution which highly regards qualitative teaching. If implemented properly in spirit and letter, the net benefits of DPO for the students, staff and university are obvious in this win-win formula. ■

continued on page 12

Welcome!

CDTL would like to welcome as Affiliates the following:

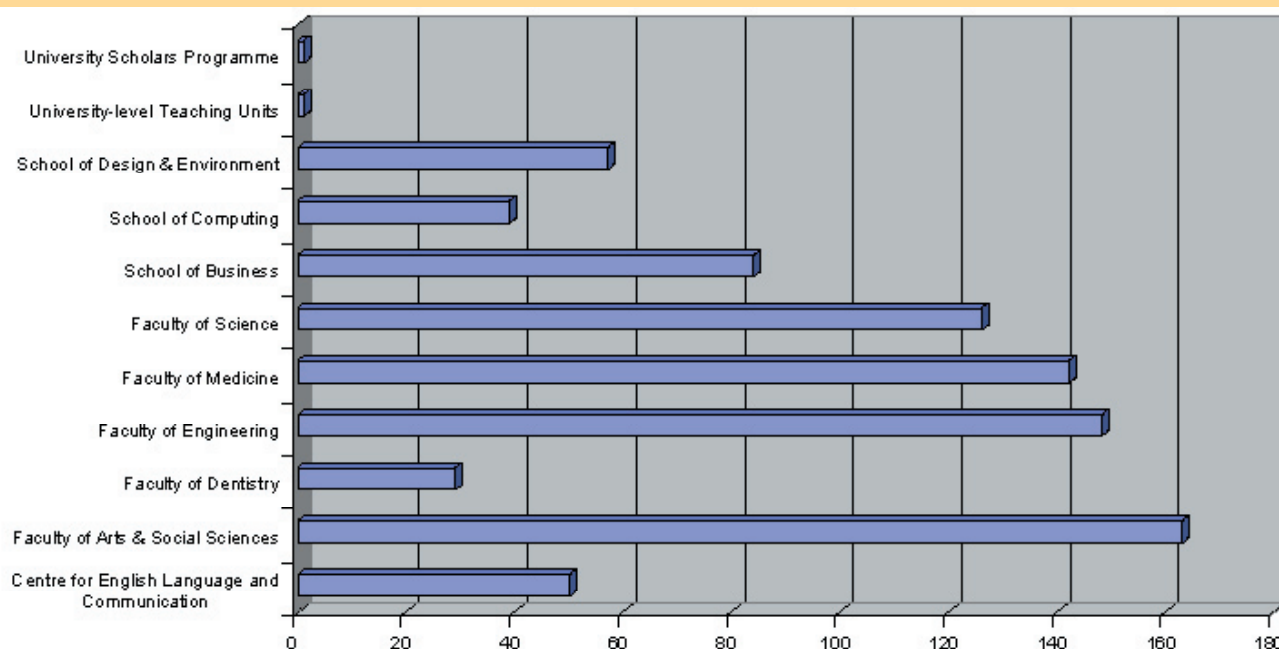
- Professor Khoo Hoon Eng,
Faculty of Medicine
- Associate Professor Zubair Amin,
Faculty of Medicine

Goodbye!

We would also like to thank:

Dr Kevin S. Carlson,
Educational Development Specialist,
who left in February 2004 for all his invaluable support. ■

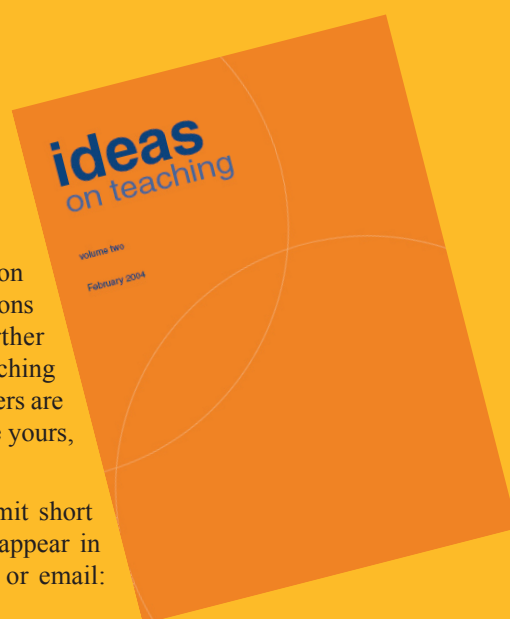
2003 Statistics: Who attended CDTL's Staff Workshops & Seminars?



Ideas on Teaching

Ideas on Teaching Vol 2, published by CDTL in December 2003 is a compilation of papers written by practising teachers based on their own experiences in university teaching. It contains discussions on specific topics in teaching and learning to generate further thought and discussion as well as tips and perspectives on teaching to encourage improvement in teaching. All NUS faculty members are entitled to a free copy of the booklet. If you have yet to receive yours, please contact your faculty's Dean Office immediately.

For further enquiries or if you (teachers) would like to submit short articles (about 500 words) for the next volume targetted to appear in early 2005, please contact Ms Teo Siok Tuan at 6874 8047 or email: cdttst@nus.edu.sg. ■



Call for Registration



International Conference on Teaching and Learning in Higher Education

1–3 December 2004

Theme: Individual and Institutional Self-assessment in Higher Education

CDTL will be conducting its third conference on Teaching and Learning in Higher Education. The conference aims to examine the problems of self-assessment from the points of view of both teachers and institutions. The conference will also cover related topics such as:

- Facilitating Independent Inquiry and Understanding Modes of Inquiry
- Constructivist Learning
- Evidence Based Knowledge
- Critical Thinking
- Enhancing Creativity
- Facilitating Interconnectivity
- Student Assessment
- Teacher Appraisal and Teacher Education
- Active/Interactive Learning
- Problem-based Learning and Inquiry-based Learning
- Project-based Learning and Case-study Based Learning
- e-Learning and Distance Learning

Two pre-symposium workshops (<http://www.cdtl.nus.edu.sg/tlhe/preconf.htm>) will be conducted respectively by Brenda Smith and Peggy Maki on 30 November 2004.

Keynote Speakers

Brenda Smith, *Learning Teaching Support Network Generic Centre, United Kingdom*

Peggy Maki, *former Senior Scholar, American Association for Higher Education.*

Invited Speakers

Caroline Baillie, *Queens University, Canada*

Jean Michel, *Ecole Nationale des Ponts et Chauss, France*

Joan Collinge, *Simon Fraser University, Canada*

Lewis Elton, *University College London, UK*

Lynne Baldwin, *Brunel University, Uxbridge, UK*

Michael Wald, *Dublin Institute of Technology, Ireland*

Ora Kwo, *The University of Hong Kong, Hong Kong*

Peck Cho, *Michigan Technological University*

Registration

Registration for the conference is S\$500 if payment is made on or before 1 October 2004 and S\$550 if payment is made after this date. The fee will cover a copy of the conference proceedings, admission to all sessions, conference banquet, lunches and refreshments.

For more information and/or to register online, please refer to <http://www.cdtl.nus.edu.sg/tlhe/default.htm> or contact:

Ms Rita Roop

Centre for Development of Teaching & Learning

National University of Singapore

10 Kent Ridge Crescent, Singapore 119260

Email: cdtrrk@nus.edu.sg

Tel: 65-6874 2071 Fax: 65-6777 0342 ■

Calling All Writers...

CDTL invites articles on any teaching and learning topic for the following two newsletters:

- *CDTLink* (700 words maximum per article; photos & illustrations in hard/digital copy are welcomed)
- *CDTL Brief* (text-only newsletter; 1000 words maximum per article)

To submit articles for consideration or to obtain more information,

please contact: Ms Teo Siok Tuan

Email: cdttst@nus.edu.sg

Tel: (65)-6874 8047 • Fax: (65)-6777 0342 ■

Teaching & Learning HIGHLIGHTS

Faculty of Arts & Social Sciences

SC1101E

At what point do we consider a class ‘large’? Years ago, we held our breath when class size topped 400. Nowadays, we maintain our composure when we routinely encounter more than a thousand students trying to get into SC1101E. This comes about through several years of the Department’s experience in handling such huge numbers, without ‘dumbing down’ and compromising quality.

We have learned that preparation, communication and a willingness to ‘play by ear’ are key ingredients for managing a large class. Long before the students troop in, the people driving the module have to develop a ‘user-friendly’ (not the same thing as ‘easy’) road map with clear objectives, eye-catching topics and moderately challenging readings. This road map is mounted in the module IVLE by the eve

of the registration exercise. At the same time, various steps are taken to ensure that the course text and course pack of authorised photocopied readings are ready by Lecture 1. All these pre-registration tasks would come to nothing if we did not assemble a ‘winning team’ of lecturers, teaching assistants and research scholars. We pick lecturers who can introduce difficult theories and concepts in simple language and discuss their relevance with humorous observations of everyday life. We also handpick tutors who are not only competent, but can also get discussion group members animated about what they have learned in lectures, the readings and their personal experience.

As teaching and learning gather momentum during the semester, the lecturers keep their ears and eyes open for problems, but more importantly for ways to improve teaching and learning. This is done through regular email exchanges, short coordination meetings, sharing best practices, and gathering ‘intelligence’ from IVLE chat-rooms, forums and putting our ears to the ground. The teaching team members also communicate regularly with students through the IVLE and in class, trying always to pre-empt problems, rather than solve them. ■



An SC1101E lecture

Faculty of Engineering

Automating the Final Year project allocation using Computational Intelligence

The Department of Electrical & Computer Engineering has implemented a hybrid computational-intelligence-based method for allocating final year projects to students. Every year, the Department offers around 700 projects in six areas. Each of the Department’s 600 students (approximately) submits a list of eight projects which he/she would like to be assigned, in order of preference. The Department’s challenge then is to assign a suitable project to each student with the maximum combination of the following criteria including: student preferences, project pre-requisites, and balancing ‘self-proposed’ and ‘industrial collaboration’ projects. In addition, there are multiple objectives that stem from the students’ perspective, project requirements as specified by the staff, and load balancing of staff commitments. Therefore, the problem in allocating the projects is a complex multi-objective problem with multiple constraints. The aim is to balance all these with the number of students who vie for a particular project. Due to the complexity of this problem, the heuristic method used previously took a long time to find a good match between students and projects.

A computational intelligence-based project allocation system has recently been developed and implemented to automate the process and to improve the matching of students to their desired projects. The core of the project allocation system is a database containing details on all projects offered. This database is both maintained and viewed using the World Wide Web. The allocation method employs evolutionary computation and knowledge based techniques for simultaneously exploring multiple solutions in the problem space. The solution which meets the highest number of objectives is then used for final project allocation. This new automated system is not only able to obtain very satisfactory solutions, but is also very time efficient. ■

Faculty of Medicine

Emerging Trends in Medical Education

The Medical Education Unit organised the first Asia Pacific Medical Education Conference in December 2003. Four plenary speakers highlighted the following emerging trends in medical education:

- In his speech, ‘Professionalism in Teaching and Best Evidence Medical Education’, Professor Ronald Harden talked about the move from *amateurism* to *professionalism* in teaching, where decisions about teaching and learning are informed by evidence.
- Professor Suzanne Stensaas elaborated on a ‘more balanced’ selection of the *Old* (experience and expertise of the clinical teacher), the *New* (all types of new computer technology), and the *Borrowed* (what is already available and reliable) to ensure a successful marriage of medical education and technology.
- Professor Geoff Norman touched on the significant role of ‘non-analytic’ (exemplar-based) in addition to analytic reasoning in the development of clinical expertise and thus, “Deliberate practice with case examples...[is]...a critical component of learning but...largely neglected in conventional teaching”.
- Professor Thomas Aretz stressed that a *content expert* is not necessarily a *good educator, educational manager or leader* and that explicit goals of *professionalism* in medical education are only just emerging and hence, *faculty development* is not only a moral obligation, but makes *good business sense*. ■



Front row, L to R: Prof Ken Cox, (University of New South Wales, Australia); Prof Geoff Norman (McMaster University); Prof John Wong (Dean, Faculty of Medicine, NUS), Prof M Gwee (Chairman, Organising Committee), A/Prof Koh Dow Rhoon (Vice-Dean, Faculty of Medicine, NUS) & Prof Grace Tang (University of Hong Kong).

School of Computing

Tips for First-time Lecturers

After my first semester (Semester 1, AY 2003/2004) of teaching in NUS, I would like to share some teaching ‘tips’ that may be helpful for first-time lecturers:

- *Be well-prepared.* This includes preparing yourself well before the lecture, making sure that you know clearly what you are going to teach.
- *Stay with the familiar.* If you are teaching in NUS for the first time, it may be better to use the teaching methods that you are familiar with to boost your confidence. If you have a choice, teach a subject that you are familiar with.
- *Consult your colleagues.* It is important to consult colleagues who are more experienced in teaching in NUS. Find out how things are normally done here, the students’ expectations and any common practices that may be specific to your faculty.
- *Listen to feedback.* Always consider your students’ feedback and be willing to change. ■

Faculty of Science

Putting Knowledge and Skills to work!

Learning should be fun and it certainly is for first year students taking FST 1011 “Science and Technology of Foods”. As well as learning what foods are composed of and how food processing affects the composition and nutritional value of foods, the students are required to create a new food product!

Working as part of a small team, the students were required to conceive a new snack with market and export potential for Singapore. Examples of such products developed by past students included soy-based ice-cream, lotus roots chips, avocado biscuits, savoury konnyako jelly, chocolate and cheese spread and tofu cheesecake. Making a new food product is definitely not easy. Students need to know how the ingredients will behave during processing in order to invent a safe and nutritious project. In addition, the product’s package design and labelling must meet legislative requirements. Most importantly, the product must taste good!

The assessment for the best product was a joint effort involving assessments by peers, the Food Science and Technology (FST) staff and an invited Food Scientist from Industry. This year (2003), the external assessor from International Flavours and Fragrances (Asia Pacific) Pte Ltd gave a prize of S\$700 to the winning team. ■



The winning team for 2003 with their new product ‘Eramisu’ a special type of tiramisu cheese cake. The winning team comprises Tan Yanfang Mabelyn (missing), Ng Wan-Ting, Vivi Handaya, Lee Lu Yi, Ang Jia Xi, Ho Hoang Oanh and Hoe Pei Yeng. Also shown is Prof P J Barlow the Module co-ordinator.

School of Design & Environment

Teaching Development Seminar at School of Design and Environment

Together with the Department of Building, the Department of Real Estate held a joint Teaching Development Seminar on 17 October 2003 at Executive Room 4, 1–2 pm.

The speaker, Associate Professor Krishnan V. Pagalthivarthi, from the Department of Applied Mechanics at the Indian Institute of Technology, New Delhi, spoke on “A Vision for Effective Teaching”. According to Associate Professor Krishnan, “effective teaching goes beyond... attributes such as mastery of subject, enthusiasm... effective voice control, friendly mannerisms, organised lecturing and appropriate audience management. [Instead, emphasis should also be placed on] ...*commitment, setting a good example and effective communication.*” Dr Krishnan likened effective teaching to “watering the root of a tree to *nourish* its branches and leaves”. He went on to develop his theme to help teachers identify the ‘root’ of effective teaching and how to ‘water’ it.

A vibrant question and answer session followed the presentation. Participants commented that Associate Professor Krishnan’s fresh and sometimes controversial perspective on teaching had stimulated interest and discussion among them. Some of the feedback included: “the seminar was very insightful”, “a very enlightening talk” and “the coverage of the presentation was holistic.” ■

Enhancing Teaching and Learning through Developmental Peer Observation (DPO)

continued from page 7

Table 1: Summary of timing, proposed design and guidelines for the DPO process

When	Proposed Design	Guidelines
Beginning of semester	<i>Pre-Observation Dialogue (Pre-conferencing)</i> <ul style="list-style-type: none"> The observed writes memo on his/her teaching objectives and the means to achieve them Observers and the observed discuss teaching goals and approaches and the schedule for observation Establish rapport between observers and observed 	<i>What is to be observed?</i> <ul style="list-style-type: none"> Not just content but also teaching process (e.g. how the teacher reviews the efficacy of student group work, teacher’s ability to question students effectively)
	<i>Identify the Observers and Observed</i>	<i>Who should observe?</i> <ul style="list-style-type: none"> One or more colleagues from within and without the department
During semester	<i>Observation</i> <ul style="list-style-type: none"> Observers study the teaching activities of the observed 	<i>What Criteria to use for observation?</i> <ul style="list-style-type: none"> Common criteria such as: <ul style="list-style-type: none"> Clarity of learning objectives Content Organisation of the lecture Teaching and learning strategies Personal communication skills Use of teaching materials Level of student participation
Close of semester	<i>*Post-observation Dialogue (Post-conferencing)</i> <ul style="list-style-type: none"> Observers discuss with the observed on: <ul style="list-style-type: none"> Areas of Achievement (AOAs) Areas for Improvement (AFIs) 	<i>What should happen as a consequence of observation?</i> <ul style="list-style-type: none"> The observed prepares a post-observation action plan to consolidate teaching method and focus on the AFIs On a wider level, DPO should feed into departmental discussions on teaching developmental activities without highlighting particular observations

* Whether the feedback is positive or negative, strict confidentiality should be maintained

Use of Analogies to Teach General Biology to Non-Biology Majors

continued from page 6

References

- Ruhl, T.S. ‘The Altoona List of Medical Analogies’. Altoona Family Physicians Residency of Altoona Hospital Center for Medicine <http://www.altoonafp.org/analogies.htm> (Last accessed: 28 June 2003).
- Lakoff, G. & Johnson M. (1981). *Metaphors We Live By*. Chicago: University of Chicago Press.
- Glynn, S.; Russell, A.; & Noah, D. (1997). *Teaching Science Concepts to Children: The Role of Analogies*. <http://www.coe.uga.edu/edpsych/faculty/glynn/twa.html> (Last accessed: 28 June 2003).
- Glynn, S.; Duit, R.; & Thiele, R. (1995). ‘Teaching Science with Analogies: A Strategy for Constructing Knowledge’. In Glynn, S. & Duit, R. (Eds.), *Learning Science in the Schools: Research Reforming Practice*. Mahwah, NJ: Erlbaum, pp. 247–273. [As cited in Glynn, S.; Russell, A. & Noah, D. (1997).]
- Ruhl, T.S. ‘Analogies Coming Out Our Ears!’. Altoona Family Physicians Residency of Altoona Hospital Center for Medicine http://www.altoonafp.org/special_analogies.htm (Last accessed: 28 June 2003). ■

Student Feedback Collection Tools that can Help to Continuously Improve Your Teaching

continued from page 1

feedback: (1) Module feedback collected in the last lecture of a module, and (2) Topic or session-specific feedback collected at the end of a particular class.

Module Feedback. In the last session of every term, I ask students to give anonymous and candid written feedback, which is then submitted at the end of the class. A sample slide I show students for this feedback exercise is provided in Exhibit 1. The feedback obtained is usually extremely detailed and actionable as I ask specific questions on my course and on issues for which I seek feedback. For example, if I had introduced a new type of assignment, I would specifically include this in the list of items for feedback.

I go through the following process in this feedback exercise: First, I position the feedback as developmental (i.e. I listen to my students and seek their views on how to improve), and I explain why I solicit feedback in addition to the university-organised student evaluation exercise (i.e. I need more detailed and specific feedback to truly know how to develop this module further). Next, I specifically ask the students to keep the feedback anonymous; otherwise I could neither take positive nor negative feedback at face value. Then I ask them to write down the three points they liked best and least about this course. Answers to these questions show me clearly what the strengths of the module are, and the key weaknesses that I should address. Next, I talk the students through various specific aspects of the module I would like to receive feedback on. These items change each time depending on what I did differently in a particular year (e.g. a new type of project).

Exhibit 1— Sample Slide for End-of-Module Student Feedback Exercise

Course Feedback - Candid & Anonymous, Please!

Overall:

- What are the three best points of this course?
- What are the three worst points of this course?

Specific feedback on:

- Readings & text used
- Cases & group presentations
- Content - did you learn what was expected?
- Instructor - class, lecture, facilitation style
- Workload, difficulty

→ **Suggested Improvements**

All Rights Reserved © Dr. Jochen Wirtz, 2004 Wrap-up - Page 1

NUS BUSINESS SCHOOL

Topic/or Session-specific Feedback. I also regularly collect topic or session-specific feedback to better understand what the value-added parts in a particular lecture are, or which aspects are less valuable to students. This is typically conducted informally perhaps for three to five sessions per term, and I only ask five to eight students in a particular lecture for this feedback. The feedback usually comprises

the three best liked and least liked aspects of that session, and how the students liked the readings, cases, exercises and specific topics for a particular class. It is mainly a tool to guide my work on specific topics or lectures, and to sensitise me to student perceptions and concerns related to that lecture. Examples of such feedback I received in the past is that certain topics have already been covered in other modules (which means I can spend less time on such topics), or I assume knowledge that actually is not there (which means I either have to go through this material or ask students to read up on it before they come to class).

Are There Other Important Feedback Tools?

I personally find the two tools described in this article highly effective. They have given me immediate, actionable items that can be used at any time and frequency, and are cost effective and non-threatening. Having said this, there are other potential feedback collection tools, such as peer-reviews, or hiring a communications consultant to come and sit through one of your lectures and give you professional feedback. Other tools I find useful are benchmarking of course structure, contents, etc. against similar courses at the top universities in my field, or engaging in special interest groups in my field (there are special groups organised by academics in many fields with websites, email services, etc). Such feedback and benchmarking tools can be used periodically and offer excellent complementary feedback that might give you insights from a non-student perspective and avoid blind spots in your quest for improvement.

Conclusions

Seeking feedback is an important and an integral part of guiding your improvement efforts, working on your teaching style, and designing a module or a lecture. We need to know how good we are, and where we are on our road towards teaching excellence. While the current university-administered student feedback system does a good job in answering those questions, we need more qualitative and in-depth feedback to truly know (1) the strengths of our teaching and courses, and (2) the weaknesses that need to be addressed either via redesign, change of teaching style or simply managing student expectations. I have described two simple tools you can use for obtaining student feedback for the entire module, or even for a specific session or lecture. ■

A more technical paper on customer-driven learning is provided in: Jochen Wirtz and Monica Tomlin (2000). 'Institutionalizing Customer-driven Learning Through Fully Integrated Customer Feedback Systems.' Managing Service Quality. Vol. 10, No. 4, pp. 205–215. The article can be downloaded from Business Sources Premier available at the NUS Digital Library.

Designing Interdisciplinary Modules

Kenneth Paul Tan, Assistant Professor

University Scholars Programme & Department of Political Science

A strong interdisciplinary component in University education is important for a number of, by now, familiar reasons. Getting into the habit of drawing connections among ideas, concepts, theories, assumptions, instruments, media, practices, histories and mindsets associated with different disciplinary paradigms is not only intellectually challenging and rewarding, but also profoundly useful in a practical sense. 'Real world' problems are nearly always multifaceted and interconnected. To solve such problems effectively, one needs to have an interdisciplinary mind that is well equipped with knowledge, cognitive skills and the ability to see the bigger picture. Applying narrow and specialised solutions to 'real world' problems can set off unexpected consequences and create other, perhaps worse problems. Effective leaders and decision-makers should therefore have interdisciplinary minds. The University Scholars Programme, whose primary objectives include the nurturing of leadership abilities, provides mostly interdisciplinary curriculum. In what follows, I will discuss some simple strategies that I have adopted in developing and teaching interdisciplinary courses, using examples drawn from two modules: a first-tier module called 'Democratic Possibilities in Singapore' (<http://www.scholars.nus.edu.sg/sep/use2302/intro.html>) and an advanced module called 'Civil Society: Theory & Practice' (<http://www.scholars.nus.edu.sg/advanced/uas3005/intro.html>).

Course Development

Single concept, problem, or issue

One effective strategy to construct an interdisciplinary course is to organise the course material around a single concept, problem or issue that can be interrogated broadly using specific analytical tools and assumptions from different disciplinary paradigms. In 'Civil Society: Theory & Practice' for instance, the concept *civil society* is interrogated at the following three levels:

- Theoretical level

Students approach the concept of civil society through analytical tools and concerns that traditionally originate from political theory (e.g. power, security, legitimacy, freedom), social theory (e.g. social capital, the public/private, communitarianism, liberalism, cosmopolitanism), literary and cultural studies (e.g. hegemony), history (e.g. colonialism, post colonialism) and law (e.g. law-making, jurisdiction, internationalism).

- Empirical level

Students reflect on case studies that are used to foreground the concepts learnt for critical discussion. For example, students consider the relationship between civil society and the state through a case study of the National Rifle Association of America (NRA), case

studies of The Big Issue (UK) and BBC Watchdog (UK) help students ponder the relationship between civil society and the capitalist market, and case studies of religious cults and the Presidential Summit on Voluntarism (US) help students think about the relationship between civil society and community.

- Practical level

Students go on flexible ten-week project attachments to a civil society organisation. By participating in the organisation's activities and carrying out meaningful projects for it, students learn to negotiate with the often discouraging realities of civil society and their own personal talents and limitations. So far, the organisations that have participated in this module included Action for AIDS (AFA), Association of Women for Action and Research (AWARE), Consumer Association of Singapore (CASE), Nature Society (Singapore), Singapore International Foundation (SIF), The Necessary Stage and TheatreWorks.

Modes of inquiry

For modules whose primary concern is interdisciplinary learning, the teacher needs always to foreground the specific approaches, instruments and assumptions of each discipline, all in ways that will elicit critical reflections from the students. The content of such modules should be treated mainly as raw material for analysis, not as primary matter to be mastered by students. The temptation to develop comprehensive content for these kinds of modules should be resisted. It is more important to give students a sense of the academic terrain, on which lie similarities, interconnections, interpenetrations and even hybrid formations among the disciplines.

Expertise

Course designers should not shy away from bringing their non-academic interests into the curriculum. My involvements in the local theatre scene have enabled me to provide my students with many opportunities to experience the arts directly. In 'Democratic Possibilities in Singapore', I used a concert format discussion to encourage the students to think about the relationship between neo-Marxist aesthetics and democracy. Through a carefully selected programme of classical, avant-garde, pop and even local patriotic music, I was able to generate discussion around some rather abstract concepts without needing to resort to music theory.

It is also a good idea to co-teach modules with colleagues from different departments and academic backgrounds. Not only does this enable the course designer to tap on a much wider range of expertise, it also allows the modules to be structured as an interdisciplinary dialogue which, if handled with skill, can be a highly stimulating mode of learning.

Teaching and Learning

Interdisciplinary learning requires and promotes an adventuresome mind that is willing and able to proceed from the familiar into the unfamiliar, while trying to make sense of new situations by critically applying all the knowledge one possesses. To achieve this, it is important to get to know one's students well so that their diverse academic backgrounds and personal interests can be used to generate problems and contradictions for interdisciplinary debate. I make it a point to encourage students to become comfortable with the fact that knowledge is messy and understanding will never be complete. I encourage them not to think about the different components of their knowledge and experiences as neat, distinct and self-contained entities. And I always urge them to use their intuitions and not to

discount the power of personal experiences, even the most seemingly mundane examples from everyday life.

Using student debates designed to help students articulate the kinds of arguments that one might expect from different intellectual disciplines is one effective way of 'demonstrating' the logics of interdisciplinary thinking. Secondly, experiential exercises are also effective not only to promote active learning, but also to ensure that students arrive at a critical understanding of the various concepts and ideas. Otherwise, interdisciplinary learning can easily turn students into intellectual 'tourists' with a shallow understanding of the different disciplines they have visited. My article 'Building upon the Socratic Method' (<http://www.cdtl.nus.edu.sg/link/mar2003/tsm1.htm>) gives

continued on page 16

Encouraging Deep Learning

continued from page 2

objectives for taking the course. To reinforce these goals, the students were asked every now and then to re-examine them.

- We matched the level of the subject and the pace at which the module was presented with the students' prior knowledge, and kept the workload to a level that allowed students to explore ideas widely and develop a level of interest that characterises a deep approach to learning. Materials and resources for such exploration (e.g. web resources, videos) were made available and accessible.
- We modified our teaching to show our own enthusiasm and interest in the subject matter and to demonstrate our interest in helping students to gain the same intrinsic interest and curiosity.

The results of the latest survey (conducted at the end of Semester 2, Academic Year 2002–03) revealed that significantly higher proportions of students had used and achieved deep learning strategies and a significant higher proportion of these students had scored better grades than those adopting surface learning approaches. Thus, the teaching team was able to make a difference by acting on the determinants that were within our control.

References

1. Leong, L.P. & Bettens, R.P.A. (2002). 'NUS Students and Biggs' Learning Process Questionnaire'. *CDTL Brief*, Vol. 5, No. 7, p. 3–6. <http://www.cdtl.nus.edu.sg/brief/v5n7/sec2.htm> (Last accessed: 17 July 2003).
2. Biggs, J.B. (1993). 'What do Inventories of Students' Learning Processes Really Measure?: A Theoretical Review and Clarification'. *British Journal of Educational Psychology*, Vol. 63, No. 1, pp. 3–19.
3. Biggs, J.B. (1999). *Teaching for Quality Learning at University*. Buckingham: Society for Research into Higher Education and Open University Press (UK).
4. Prosser, M. & Trigwell, K. (1999). *Understanding Learning and Teaching: The Experience in Higher Education*. Buckingham: Society for Research into Higher Education and Open University Press (UK). ■

Mind Your Pedagogy and Questions

continued from page 3

Finally, for most subjects, there is an examination paper at the end of the course, and we need to formulate questions that fairly reflect the syllabus and its highlights. One of the pitfalls to avoid is to ask a question that can be answered with a simple 'Yes' or 'No', which a cheeky student may then claim to have fully answered! It is sometimes useful to start with a stimulating quotation, and to base our questions upon it, bearing in mind the time constraints for a fitting response.

The constant challenge is to update our course materials, and to find and formulate fresh questions, for lectures, tutorials and exams. The more we mind our pedagogy and questions, the more will we, along with our students, find our teaching and learning experiences rewarding and refreshing. ■

Endnotes

1. 'Dean's Message: Minding Our P's and Q's'. (February 1992). *Ascent*, Vol. 2, No. 1, pp. 1. Singapore: Faculty of Arts & Social Sciences, National University of Singapore.
2. See example in John E. Wills Jr. (1994). *Mountain of Fame: Portraits in Chinese History*. New Jersey: Princeton University Press, Ch. 2.
3. *The Gospel of St. Mark*, 4:33–34.
4. In the Sermon on the Mount, Jesus teaches his disciples, "You are the salt of the earth. But if the salt loses its saltiness, how can it be made salty again?" He asked them, "If you love those who love you, what reward will you get? Are not even the tax collectors doing that? And if you greet only your brothers, what are you doing more than others? Do not even pagans do that?" (*The Gospel of St. Matthew*, 5:13, 46, 47).
5. Ernest Chew. (1991). In E.C.T. Chew & Edwin Lee (eds.), *A History of Singapore*. Singapore: Oxford University Press, pp. 357.
6. 'A Chat with Mr Tharman Shanmugaratnam'. (April-May 2003). *ACS Echo*, pp. 20.
7. Rudyard Kipling. (1902). 'The Elephant's Child'. *Just So Stories*. London: Macmillan.



Students of 'Civil Society: Theory & Practice' who were attached to the Association of Women for Action and Research (AWARE) worked through the complicated tasks of making sense of their interdisciplinary theoretical knowledge, relevant case studies and the practical challenges associated with civil society work. In the 'Gender Awareness Week' that they organised at NUS on 22–26 September 2003, students put up an exhibition on campus and had to deal with a range of responses (some very difficult) from the NUS community.



Students also invited experts to speak on important topics like 'rape'.

an account of a simple first-day-of-semester exercise aimed at getting students to experience and articulate key dynamics that correspond to more complex theories and assumptions to be learnt and 'named' in the rest of the semester.

Finally, it is important to not simply throw students into the deep end of the pool and expect them to 'survive' somehow. My students are given much guidance for class preparation mainly through questions that orientate their reading of complex texts and through the structured use of IVLE discussion forums (<http://www.scholars.nus.edu.sg/advanced/uas3005/rpq1.html>). In addition, my students are directed to web resources that I have written for the modules (<http://www.scholars.nus.edu.sg/resources/civilsoc/theory/theoryov.html>) as well as for students that I do not teach (<http://www.cdtl.nus.edu.sg/success/sl29.htm>). ■



The Centre for Development of Teaching and Learning (CDTL) provides a wide range of services and facilities to promote the teaching, learning and research programmes of the National University of Singapore. These include teaching and learning support, research on educational development issues, as well as instructional design and development.

editorial information

Guest Writers Jochen Wirtz, Chew Fook Tim, Ernest C.T. Chew, Kenneth Paul Tan, Singh Bilveer, L.A. Snider.

Contributors to 'From the Faculties: Teaching & Learning Highlights': Faculty of Arts & Social Sciences; Ashraf Kassim; Gwee Choon Eng, Matthew; Ng Boon Yuen; Philip John Barlow; Alice Christudason.

Advisor Daphne Pan

Editor Teo Siok Tuan

Graphic Design Ma Lin Lin

Photography Frederick Chew & Teo Siok Tuan (unless provided by authors)

© 2004 **CDTLink** is a triannual publication of the Centre for Development of Teaching and Learning. An online version is available through the CDTL website.

The views and opinions expressed or implied in **CDTLink** are solely those of the writers and are not necessarily endorsed by CDTL. The reproduction in whole or in part of any material in this publication without the written permission of CDTL is expressly prohibited.

Contributions on teaching and learning topics, as well as feedback on this issue, are welcome and should be addressed to:

The Editor, CDTLink
 Centre for Development of Teaching and Learning
 National University of Singapore
 Central Library Annexe, Level 6
 10 Kent Ridge Crescent, Singapore 119260
 Tel: (65) 6874-3052 • Fax: (65) 6777-0342
 Email: cdtpost@nus.edu.sg
<http://www.cdtl.nus.edu.sg>



Students organised film screenings and dramatised readings that were followed by facilitated discussions.