Life-Long Learning and HKUST, Quo Vadis?

Nelson Cue, AVP-AA & Director of OCPE

Life-long learning (LLL) is a buzz phrase in the Government's current efforts on education reform. LLL is not new since it is a fact of life since the beginning of civilization. But the explosive advances in IT have given new meaning to LLL because the time from discovery to dissemination of knowledge has shortened dramatically, useful information now can be accessed by anyone anytime anywhere, and our awareness of LLL opportunities is heightened. The private sector is quick to recognize the significance of these developments and has seized the opportunity to try to make profits using the internet for the delivery of online courses and education programs.

How should a research university like UST respond to this new challenge?

First and foremost, we should continue to do what we do best. These are research to add to the storehouse of knowing and knowhow and teaching to pass these on to future generations. It is hard to better the master-apprentice model for teaching because of its built-in feature of immediate feedback and reinforcement. Thus, in today's mass education, we would be remiss if we do not adopt available technologies to provide immediate feedback and reinforcement in our teaching. That is why PRS (Personal Response System) is made available campus wide for interactive engagement in any classroom. Next is the adoption of the internet that is increasingly broadband, multimedia, interactive, accessible and user friendly. Properly developed, interactive online courses are ideal for asynchronous instruction or self-paced learning. Because different students learn with different approaches and different paces, online courses are particularly helpful to those ill adapted to the classroom pace. Also, subjects like languages and computer science are inherently more suited for self-paced learning.

What are the incentives and support?

The development and implementation of online courses augur well with our commitment to quality teaching and learning. Also, they will allow us to accommodate more students without building additional classrooms. Strong inertia for faculty participation may be expected. Incentives planned to get them involved include technical and financial support for course development.

A few years ago, the University responded to the community's needs for LLL by offering an EMBA degree and other professional enhancement programs on a self-financed basis. The successes of these earlier undertakings have fuelled new offerings that include several tracks in Master in Technology Management (MTM). The attraction is clearly the revenue surpluses that can be used for new initiatives. In a steady state, these revenue streams assume increasing importance for the institution. For this reason, the Office of Continuing and Professional Education (OCPE) was established recently under the VPAAO to oversee all existing self-financed programs and assist in the development of new ones.

What about Distance Learning?

An expansion of self-financed programs to distance learning (DL) becomes natural with the availability of online courses. DL is not new. But the traditional form of printed materials has evolved to videotapes, CDs and web pages, while the snail's mail has migrated to TV broadcast, phone, fax, e-mail, and the internet. The most recent incarnation of online courses makes self-paced learning practical anytime anywhere. Online courses will be limited for some time to come because their development takes significant time and money. Meanwhile demands for LLL programs are growing. One way to meet these now is to adopt the current best practices in the DL field - putting instructional materials with video-streamed lectures on the web or CD's and supplementing these by e-mail and e-chat.

It should be noted that successful DL programs have superior student support services - easy access to study materials, immediate feedback and reinforcement, schemes to maintain their paces and complete their assignments, and convenient procedures for course assessments. In these connections, partnering with outside local institutions may be the only practical approach. Perhaps the diverse needs are best met by a separate HKUST company. Not only can different types of partnerships be formed, diverse offerings can be provided which can include English languages and Associate degrees.

I should emphasize in closing that nurturing excellence in our academic programs is still overriding. But our commitment to quality teaching and learning makes the adoption of online education unavoidable. The same is true for our involvement with distance learning because of the need to meet societal demands for LLL. The active participation of all of you some of the time and some of you all the time will be crucial to the success of the outreach programs described here.
Research Assessment Exercise 1999

The University Grants Committee (UGC) has recently advised the University of the outcome of the Research Assessment Exercise (RAE) 1999. Thanks to the support of 465 full-time-equivalent eligible staff members of the University, who had submitted a total of 2,143 research output items for assessment in this Exercise. Despite a more stringent interpretation of the definition of the quality threshold compared with the previous exercise conducted in 1996, there has been a remarkable growth in the proportion of academic staff who have attained the threshold standard in RAE 1999. This impressive outcome reflects the quality of our faculty. But credits should also go to the hard work of our deans, department heads and faculty, many of whom had labored many long hours to select appropriate publications and other research output items for assessment by specialist panels established by the UGC.

To maintain the impetus on research development and improvement in the institutions, and to fit in with the next triennial recurrent planning and funding cycle, the UGC expects that the next RAE will be conducted in 2002.

Getting ready for the next TLQPR

Some newer faculty may not be familiar with the acronym above, which stands for Teaching and Learning Quality Process Review. This is a periodic review conducted by UGC, our granting agency, aimed at evaluating the effectiveness of our processes for ensuring and improving the quality of learning. Performance in the review is used by UGC to “inform funding” and the tie to funding is likely to become stronger in future reviews.

The UGC has decided that next round of TLQPR will be conducted in late 2001/early 2002. The scope, approach and arrangements for this round will be mapped out by a Task Force comprising UGC members and local academics. Initial input for these decisions was gathered on 8 April 2000 at a workshop on “Preparing for the Next Round of TLQPRs,” at which academic and administrative staff and students of the institutions were consulted. The workshop was divided into ten discussion groups that examined aspects of the purpose, focus, ownership, and implementation arrangements for the quality process reviews. All ten group reports can be found at the UGC Virtual Library at http://www.ugc.edu.hk/.

We must be well prepared for the next TLQPR, and activities will be developed over the coming months to help departments, schools and relevant support units position themselves for the exercise. In the meantime, everyone should think about what they and their colleagues do, both individually and collectively, that fits the definition of what the former chairman of the TLQPR Panel calls “quality work;” that is, work related to ensuring and improving the quality of teaching and learning.

Class/Examination arrangements in time of typhoon or heavy rain

Summer is approaching; and local weather conditions are at times so adverse that the University’s normal teaching activities can be affected. Below is a summary of the arrangements:

<table>
<thead>
<tr>
<th>Weather condition</th>
<th>Class/Exam arrangements</th>
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</thead>
<tbody>
<tr>
<td>Typhoon no. 3 or below</td>
<td>Classes/Exams are to be held as usual.</td>
</tr>
<tr>
<td>Rainstorm Amber or Red Warning</td>
<td></td>
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<tr>
<td>Typhoon no. 8 or above</td>
<td>- Scheduled exams and classes are to be cancelled.</td>
</tr>
<tr>
<td>Rainstorm Black Warning</td>
<td>- Classes and Exams in progress should continued until the end.</td>
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<table>
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<tr>
<th>Typhoon no. 8 or Rainstorm Black Warning is lowered on or before</th>
<th>Class/Exam resumption time</th>
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<tbody>
<tr>
<td>6:30 am</td>
<td>8:30 am</td>
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<tr>
<td>12:00 nn</td>
<td>2:00 pm</td>
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<tr>
<td>4:00 pm</td>
<td>6:00 pm</td>
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University general requirements for UG admission - further revised

As a measure to respond to the concern of the University Grants Committee that institutions should not admit students without a pass in both AS Use of English (AS UE) and AS Chinese Language and Culture (AS CLC), the Senate has approved to further revise the undergraduate general admission requirements, by taking out all alternative requirements to AS CLC (i.e. AS Liberal Studies and AL Chinese Literature) and removing the statement containing the University’s provision to consider applicants without a pass in AS CLC or Liberal Studies.

Revised admission requirements (in regard to the Hong Kong Advanced Level Examination) effective from the 2000-01 admission exercise:

i. Passes at the same sitting in either one Advanced Level (AL) subject plus two Advanced Supplementary (AS) subjects, or two AL subjects;
ii. Pass in AS Chinese Language and Culture (1); and
iii. Pass in AS Use of English (UE).

(1) For applicants who use an alternative language, rather than Chinese, to satisfy the language requirements in the HKCEE, an AL/AS subject may be used as a substitute for the Chinese Language and Culture requirement.
Two new minor programs at ENGG

In attending to the interests of the students to broaden themselves out beyond their own major, more and more minor programs are being introduced. The latest two, coming on board next Fall, are the Minor Program in Information Technology and the Minor Program in Technology Management, which will be offered by the School of Engineering. The objectives of these two minor programs are to broaden the horizon and insights of the engineering students; and to equip those in the engineering field with IT skills, and those in the IT field with management skills.

Constrained by resources, these two minor programs can only be offered to Engineering students at the initial launch.

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<thead>
<tr>
<th>Minor</th>
<th>Target students</th>
<th>CGA requirement</th>
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<tbody>
<tr>
<td>Information Technology</td>
<td>ENGG UGs except those in COMP and ELEC depts</td>
<td>8.5 (B+) or above</td>
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<tr>
<td>Technology Management</td>
<td>ENGG UGs except those in IEEM</td>
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Add-drop deadlines, effective from Fall 2000-01:

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<tr>
<th>Courses</th>
<th>Deadline (Working days from start of semester)</th>
<th>Drop</th>
<th>Add</th>
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<tbody>
<tr>
<td>PG courses</td>
<td>24</td>
<td>12</td>
<td></td>
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<tr>
<td>UG courses</td>
<td>12</td>
<td>12</td>
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On-arrival guide for non-local PG students' http://www.ust.hk/~webaa/nlpsguide.htm

In the past few years, new PG students from outside Hong Kong who had accepted the admission offer were sent an information booklet entitled 'On-arrival Guide for Non-local PG Students' to help them get to know Hong Kong and the things they need to do when they first arrive at the campus. This year, in an effort to save paper and postage, the 'On-arrival Guide for Non-local PG Students' will be posted on the Web instead of being printed. Those who do not have access to the Internet can send a request to ARRO for a photocopy of the Guide to be mailed to them.

The information contained in the Guide has been specially prepared for students who come from outside Hong Kong. The Guide not only aims at helping newcomers to Hong Kong understand the place better but also providing information on the things new-comers need to do or know about when they first arrive at the University.

Extension of PG course ‘Drop’ period

As some of the PG classes may only be held once a week, many PG students may in the past have only one chance to attend a PG course before they have to make a decision on whether or not they want to continue their enrollment on the course.

In April, Senate approved to extend the deadline for dropping PG courses to 24 working days from the start of a semester.

Requests for early and late program registration for PG students

From time to time students may, due to circumstances beyond their control, not be able to arrive in time at the University to register for their program of study. Such students may apply through the PG Coordinator of their department for their registration deadline to be deferred at most to the end of Week Four of a semester. In other cases, due to visa expiration or program requirement, students have to arrive earlier than the normal period of registration. Students may also apply to arrive early at the campus. Beginning May 2000, these requests for early or late registration will be considered and dealt with by the Registration Section of ARRO instead of the PG Secretariat of VPAAO. Procedural guidelines on early and late program registration matters have been issued to schools and departments in mid-May.

First UST Honorary Fellows

At the presentation ceremony on 26 May, the university community showed great appreciation to the first Honorary Fellows, Mr Yuk-Lam Lo and Mr Hans Michael Jebsen. Both are very successful business leaders who have made significant contributions to Hong Kong and to the University.

Mr Yuk-Lam Lo, President of Bio-Rad Pacific Ltd, is a Special Advisor of HKUST. He has a passion for science and technology, a passion for Asia and a passion for the growth of biotechnology industry in Asia. Based on the great passion that he has, he made tremendous contributions to the continuous development of biotechnology in Hong Kong and Asia.

Mr Hans Michael Jebsen, Managing Director of Jebsen & Co Ltd, is a corporate advisor to our School of Business and Management. Sustainable development and protection of our natural resources is always close to his heart. He also set up an education foundation to help students from the Chinese mainland and Hong Kong to pursue their postgraduate studies in Hong Kong.

The next issue of the Academic Affairs Newsletter will be in print in September 2000.
Using Web to enhance face-to-face teaching

On May 8, more than 20 faculty and staff members gathered at the video classroom to attend to the sharing session of Prof John Cha (Chemistry) and Prof T.K. Ng (Physics). During the meeting, the two early web-adopters presented snapshots of their on-line teaching materials and showed how they used the web in helping their students learn. Participants were amazed of their creativity in the course design, the simple but impressive outlook and the interactivity shown.

Mr. Tak S. Ha, Teaching Development Officer at the Center for Enhanced Learning & Teaching (CELT) who is in-charge of the Web-Based Instruction Project showed no surprise to the enthusiasm from the participants. “UST faculty members have started using web and its resources in teaching four to five years ago. In a survey conducted early this year, we found that 56.8% of our respondents (190 out of 409 faculty members, response rate was 46.5%) have engaged in some forms of web-based teaching (web-adopters) and more than half of the ‘non-web-adopters’ had set timeline of when they would embark on the same direction.”

According to Tak, the web was used predominantly for distributing course information and materials at the moment while some faculty members were making good use of the on-line discussion to strengthen the communications between instructor and students, and among students. Another group of instructors, including those from the Language Center, used the new tool to encourage active and collaborative learning among their students.

What motivated instructors to spend hours in re-designing their courses, digitalizing their teaching materials, and in responding to students’ mid-night emails?

“I believe that the Web is an effective tool to help my students learn,” said Prof T.K. Ng.

“I simply want to try and find out if it [on-line education] works,” remarked Prof John Cha.

“They believe that teaching is a scholarly activity that demands on-going improvement. They want to experiment, to exercise their inquisitive minds as every scientist does.” Tak added.

Would the limited computing skills of an instructor be a major barrier to the use of Web and its resources in one’s teaching? Tak said “no”. The Project Team is well aware of this possible barrier and has ways to help.

Assistance that CELT offers to instructors:

Technical assistance
- Consultation on instructors’ technical needs
- Setting up course accounts for WebCT or Learning Space (WebCT and LearningSpace are user-friendly on-line course development tools for instructors who do not have programming skills)
- Student helpers to digitalize the learning materials and provide technical help

Instructional design assistance
- Consultation on assessing your general instructional needs
- Collaboration in designing appropriate solutions to meet your needs
- References of different levels of on-line instructional frameworks

Production assistance
- Student helpers
- Consultation in multimedia content production needs
- Implementation of content production for special needs

Do you want to try this tool to enhance your teaching in the coming Fall? Contact Lettice AuYeung at ext. 8913 or “ctlett”. 
Achievement Highlights

- UST has received funding totaling almost 10 million — the biggest share among its competitors — from the Research Grants Council (RGC) to establish the following university/industry cooperative research centers.
  - Center for Co-operative Research in Active Matrix Organic Light Emitting Diode Displays led by Prof Hoi Sing Kwok (ELEC)
  - Advanced Composite Materials for Infrastructure Repair Co-operative Research Center led by Mr Stephen Lee of the Advanced Engineering Materials Facility
  - Internet Switching Technology Center led by Prof Chin-Tau Lea (ELEC)
  - Co-operative Research Center for Soluble Receptor Biology led by Prof Hong Xue (BICH)

- Our Business School is the only Asian school on the Financial Times World List, which was released in January. We entered this prestigious list based on (i) value and quality of our MBA, (ii) diversity and (iii) research.

- Our research in MPEG-4 sets international standards! HKUST is the only institution from Hong Kong and China, which has done considerable research in video coding and made significant contributions to the international standardization process. The algorithm on “fast search motion estimation” has in April become a part of MPEG-4 standards, the most recent international standards for multimedia applications. The algorithm was sponsored by the Motion Picture Experts Group of International Standards Organization (MPEG/ISO).

- Prof Ting Pang-Hsin, Dean of H&SS, was elected an Honorary member of the Linguistic Society of America in January. This is an exceptional honor for himself and for the entire world of Chinese Linguistics.

- The Croucher Foundation has awarded $1M to support the following Advanced Study Institutes:
  - Molecular Genetic Basis of Cancer (ASI Director: Prof Maria Lung of Biology)
  - Remediation of the Aquatic and Atmospheric Environments by Advanced Oxidation (ASI Director: Prof Po Lock Yue of Chemical Engineering).

- Prof Justin Lin of Economics won the 1999 Best Article Award by the Australian Journal of Agricultural and Resource Economics

- Prof James Kung (SOSC) has received “The 1999 Special Ministry-Level Science and Technology Development Award First Honor” from the Ministry of Agriculture of China. Prof Kung is the 13th person who is recognized under the scheme for his outstanding research on the Chinese agriculture basic management system.

- Prof Barry Sautman in Social Science, has won an award of US$20,000 from the Japan Foundation Asia Center for an ethnic autonomy conference in Beijing.

- Prof Alvin So, Head of SOSC, has received for his book titled “Asia's Environmental Movement” the 2000 Harold and Margaret Sprout Award given by the International Studies Association (ISA) for the best book published on environmental affairs during the previous two years.

- Prof Alvin So has also been elected Chair of the Asia/Asian Section of the American Sociological Association in 2000.

- Prof Chris Westland, Head of ISMT, was the invited keynote speaker in the Business Week CIO Forum in March.

- Prof Yundong Wu (CHEM) has recently been elected a Member of the Scientific Board of the World Association of Theory Oriented Chemistry (WATOC). He is one of the 16 members worldwide and the only Member representing China.

- Prof Mingjie Zhang (BICH) has recently been awarded a grant by the prestigious Human Frontier Science Program Organization for an international research project on nitric oxide that could lead to more effective treatments for stroke and muscular dystrophy.

- Prof Gregory James, Director of Language Center, has been selected as a winner in the Laurence Urdang international competition for the best proposals for new lexicographical projects (European category) for the year 1999. This is the only award worldwide devoted exclusively to lexicography.

- Liu Jiangchuan, a PhD student in Computer Science, was awarded a Microsoft Fellowship. UST is the only university in Hong Kong invited to present nominees to compete with those from other top universities/research institutes in China for a total of 10 awards.

- Vincent Sin-Luen Cheung, Mahender Kumar and Yue Tan (ELEC postgraduates) have been invited to present two papers at the International Solid-State Circuits Conference — also known as the “Chip Olympics” — held in San Francisco in February. This is the third time, and second year running, the research works of Hong Kong researchers are presented at the Conference.

- An MBA team had for their innovative ideas won the Diamond Award in Advertising Competition Express, a local marketing competition.

- Our Debate Team, comprised of 4 SB&M undergraduates and coached by Mr Alban Furness of the Language Center, came first at the 2000 Joint University English Debating Team Championship held in early April.

- In the inter-university Putonghua speaking competitions, UST teams, coached by Chiang Chichung and Tam Shing-chu, bagged seven prizes.
You Are Responsible!

Following an employee injury accident at HKUST, the Government’s Labor Department issued a letter to the University, addressing it by name, to the concerned Unit Head.

Judging from the content and the tone of this letter, it is apparent that the Government is committed to ensuring that responsible parties will fulfill their safety management responsibilities and is likely to prosecute those who do not meet this obligation. (Current penalty for violations includes fines and imprisonment.)

Under the current Occupational Safety and Health Ordinance, all parties (proprieters, managers, supervisors, workers) have the responsibility towards ensuring safe operations. “Management” must ensure that a safety management system is in place whereby potentially hazardous operations are assessed and proper controls are implemented. Specifically, supervisors need to conduct risk assessment of operations, identify the nature and severity of the concerned hazards and implement appropriate control measures such as enclosures, ventilation, interlocks and other engineering measures; training of personnel, proper warning signs, and specifying protective equipment.

Other important aspects are periodic inspections, reviews and monitoring by supervisors to ensure proper implementation of safety requirements. Employees are obligated to follow safety directive and adhere to safe work protocols. All these efforts must be properly documented and be ready for auditing review by the Government.

We have a sound safety management program at HKUST. Nevertheless, the sustainability of our program depends on our continued effort in fulfilling safety management responsibility. The Government is working hard on impacting a positive safety culture for the community. As one of the leading educational institutions, let’s help by providing an exemplary model!

On the light side - IT for Executives

It’s amazing how many high level officials and business executives have gotten on the IT bandwagon lately. Everybody talks about the importance of IT. Unfortunately, it is obvious from their glazed eyeballs when they talk about this that many of them secretly wonder why it is has become so fashionable to spell the word when you say “it” and just why “it” is so darned important, whatever “it” is.

Hence this brief Primer on IT for the Confused Executive. Of course, this column is very short, but then so is the attention span of the high official or executive. At least when it comes to things like IT. So we will have to oversimplify a few things.

First and foremost, IT is not “it” but an abbreviation for Information Technology. Since Information Technology is so fashionable these days, you could say IT is “it”. But I digress. Information Technology is just the latest jargon for what used to be called things like “automation” and “computer technology”. However, it has the advantage of being broader, so that things the bosses can understand, like those yellow Post-It stick-on notes, can also be classified as IT.

These days the big thing in IT is, of course, the Net or the Web (the nicknames for the Internet and World Wide Web used by us insiders). We power users employ computer technology to “crawl” all over the “web” to get “information”, and there we are back to information + technology again. Pretty cool, huh? Naturally this means “information” now includes stuff like auctions for used saxophones, instructions for making fertilizer bombs, and naughty pictures, but that just shows how “open” the Net has become. So open, in fact, that anyone who wants to do so can use technology to find out information about us that we’d rather they not know. As you may have heard, this is done by bribing your computer with a “cookie”.

The technical details of IT are not all that important (to an executive) but in order not to sound stupid at a cocktail party you better know that “digital” information is transmitted in a binary code consisting only of 0’s and 1’s. Whoever thought this up probably had only one finger (digit) on each hand. Talk about being all thumbs!

That brings us to the issue of “bandwidth”; which relates to how fast we can push those 0’s and 1’s around the Net. Talking about bandwidth is a sure fire way to appear knowledgeable at the aforementioned party. The hot technology today is known as data compression. Obviously, the best thing would be just to use 1s, since they are so much thinner than 0’s, but it is hard to convey much information that way. So people have devised ways to compress

01100100111011

... into

0110010

0111011

This way twice as many digits can be squeezed into a band of the same width. You can really impress your colleagues over their third martinis with this little tidbit of inside technical knowledge.