Presenters

Abstracts

1. Virtual Microbiology Laboratory –
Impact on undergraduate nursing studies and the way forward

Prof Mamie Hui[1], Prof Lisa Low[2], & Prof Lai-wah Lam[2]
[1]Department of Microbiology, Faculty of Medicine
[2]The Nethersole School of Nursing

The subject of Microbiology was perceived by the undergraduate nursing students to be difficult. To overcome this, a Virtual Microbiology Laboratory with a series of online microscopic pictures and videos was set up. The material was available throughout the course (from Jan to May 2008). Teaching tool assessment: The class size was 174. A total of 58 images and 19 videos were used. Student usage was logged. Results: A total of 592 hits on videos, and 2740 hits on images were recorded. On average, each student visited 3.38 videos and 15.75 images. The number of hits were significantly higher during the first week when compared to the last week ($p < 0.05$), with a general trend of steady fall. Discussion: Students had demonstrated enthusiasms during the start of the course; however, this was not sustained. The general trend of fall suggested that they may not find them useful. In particular, the low hit rate at the end of the course, although it was then close to the examination, suggested that the students perceived them as unhelpful for examination purposes. In future, clear and specific guidance on these images and videos will be required to enhance their interest.

2. Animated courseware improves eLearning
in selected Physiology courses

Dr Isabel S. S. Hwang[1] & Prof Paul Lam[2]
[1]Department of Physiology, Faculty of Medicine,
[2]Centre for Learning Enhancement And Research

A graphic-rich courseware titled "Human Physiology: Membrane Excitability and Muscle Contraction" has been developed to enrich and facilitate eLearning for medical and science students in selected physiology topics. Mechanisms that explain the underlying functions and properties of action potential and skeletal muscle contraction very often involve description of sequential events in microscopic structures in nerve cells and in muscle fibers. In order to improve understanding of concepts and to encourage self-learning through the online learning environment, the courseware was designed to have the following useful features:

1. Step by step animated video with clear explanatory voice and run along text for students to follow with ease
2. Step by step flash animations with interactive game activities to encourage students' engagement

Presenters

3.   A glossary of terms for students' easy reference
4.   Auto-marking quiz for testing understanding

The resources are integrated into WebCT. An evaluation form has been distributed to users of the courseware for feedback and comments. Comments received from students have been mostly positive and encouraging. The evaluation will be completed in mid-October 2008 and more results will be available by then.

3. USING VIDEO-TAPING TO IMPROVING STUDENT LEARNING IN BIOCHEMISTRY/ BIOTECHNOLOGY

Prof Mary Waye
Department of Biochemistry, Faculty of Science

A group of undergraduate students were given an opportunity to be video-taped while they presented a literature review on a topic related to their course – PHA1422 Biochemistry and Biotechnology. The purpose of this exercise was to achieve: enhanced learning motivation, better understanding of the topics, improved team-work skills and improved English presentation skills. The evaluation of this exercise included

a)   student survey (paper-based) that asks about students' frequency of use, how/when/where they view the videos, and their perceived usefulness of the videos.
b)   logs of the use of the videos in WebCT
c)   teachers' reflection of the process in a meeting
d)   students' performance in exam contrasted with the earlier cohort(s).
e)   a focus-group meeting with 8–10 students organized at the end of the course to talk about usefulness and usage.

On the whole, it appears that the exercise improved learning a great deal, as students are much more engaged in learning at times before and after the presentations. They were also much more able to take ownership of the knowledge they learn.

4. THE USE OF A WEBSITE FOR SHARING GOOD PRACTICES ON TEACHING AND LEARNING IN THE FACULTY OF SCIENCE

Prof Poon Wai Yin
Department of Statistics, Faculty of Science

We showcase an online website developed by the Faculty of Science at The Chinese University of Hong Kong (CUHK). CUHK aspires to produce graduates who have depth in a specialty, breath in general knowledge, bilingual proficiency, a basket of learning skills, and personal attributes including honesty and integrity. To achieve these learning outcomes, teaching and learning together with its quality

Presenters

assurance system at CUHK shift gradually from subject knowledge as central focus to an outcomes-based approach (OBA). All programmes in the Science Faculty are encouraged to take ownership of the OBA. Many new ideas, innovative initiatives, eLearning strategies and good practices emerge in the light of this development. It is against this background that the Science Faculty has developed an online website for better dissemination and promotion of all the initiatives in the Faculty of Science. The website consists of an electronic staff handbook on teaching quality assurance, OBA literature and current state-of-the-art of OBA development in other institutions as well as latest progress of OBA implementation in the Science Faculty, summary of activities for sharing experiences and disseminating good practices in teaching and learning, and other useful links. Many of the good practices are related to eLearning. Specifically, it includes information and online tools in relation to the TDG project "Engaging Science Student in the Design & Enactment of Assessment". The project is one of the recent initiatives for promoting the use of assessment as a learning activity, which in turn fosters the development of learning outcomes.

5. Evaluation for the web teaching and learning experience - Mental Health Nursing

Prof Sally Chan[1], Prof Paul Lam[2], & Prof Carmel McNaught[2]
[1]The Nethersole School of Nursing
[2]Centre for Learning Enhancement And Research

This was an evaluation study of a three-year project (2003–2005) which involved revamping an existing website of the Mental Health Nursing course held by the teacher. This project was powered by the e3Learning project. Between years 2003 to 2005, a total of 345 of Bachelor of Nursing students had used this website. The site had been significantly improved and has attracted a relatively high level of usage. Most students had high regard for the website and felt that the materials it provided had helped them in understanding the course better. The quizzes, videos and concept net were particularly helpful. Factors like the quality of visit to the website, the length of visit and the aim of visit could have influenced the outcome of this study.

6. Wikis for professional sharing

Dr Paul Sze
Department of Curriculum and Instruction, Faculty of Education

As we have taught or researched a topic for some time, we will have accumulated a wealth of related reference materials and resources in our computer. This collection may have taken years to build up, and it will be a waste if the materials lie quietly in our own computer.

Presenters

How can we easily share our bank of materials with our professional peers and students to facilitate exchange of knowledge?

In this poster presentation, I sketch the way I use wikis for professional sharing. Wikis are websites or webpages which can be easily created and edited. They can also store many kinds of digital materials such as documents, ppts, sound files, and videos. These features make wikis an ideal channel for organising the materials we have on a topic, and sharing them with others by providing them with the URLs of our wikis. Using a couple of my own wikis as examples, I will highlight the convenience and benefits of using wikis for the sharing of knowledge with our professional colleagues and students.

7. THE USE OF FACS TO TRAIN MEDICAL STUDENTS
TO DEVELOP PATTERN RECOGNITION

Prof Shekhar Kumta
Teaching and Learning Resource Centre, Faculty of Medicine

Expertise in clinical reasoning is attained through deliberate practice with multiple examples and feedback. Experts soon learn to recognize "patterns" in clinical presentations, radiographic images and other test results. While "pattern recognition" alone is insufficient for addressing complex clinical problems, it is nevertheless an essential skill that greatly facilitates clinical decision-making.

Training students to read ECGs is best accomplished in the context of real clinical cases. However, understanding the fundamentals of reading an ECG requires students to develop a skill quite similar to that of "pattern recognition".

We have used an online multimedia software engine (FACS) to support medical students in their attempt to learn ECGs in a systematic manner.

A series of 20 online ECG cases have been developed for medical (years 3–5) students who are required to fill in a check-list detailing the essential components of the ECG in each of the cases presented. Between January to May 2008, 277 Medical students (Years 3–5) had 4026 logins on the FACS-ECG study site. Pre- and post-test scores showed significant improvement.

The checklist-based response format makes it difficult for students to guess, and encourages them to think and develop a systematic style for interpreting ECGs. Student feedback has been very positive and teachers have been able to identify students who had difficulties in understanding basic concepts.

Presenters

8. Developing the Electronic Physical Education Portfolio approach by the use of WebCT

Dr Chan Wan Ka
Department of Sports Science and Physical Education, Faculty of Education

The learning portfolio is a primary teaching approach in authentic assessment. This approach communicates assessment standards to teachers, students, family members, and administrators and accurately shows how well children are performing. There are many functions related to the use of portfolio such as keeping track of student's progress; providing students with an opportunity to assess their own accomplishments; determining the extent to which established learning objectives have been achieved; serving as a basis for program evaluation; and so on.

This project is supported by the Courseware Development Grant Scheme (2007–08). The core functions for the electronic PEP are as following:

a) Student can review skill performance or demonstration video for teaching and learning skill items in different levels
b) Student can review past students' learning experience or related to the teaching courses
c) Student can develop their own learning portfolio through the WebCT, in which
   i. Students' portfolio can be visited by other classmates
   ii. Students can give feedbacks after reviewing their classmates' portfolio and so on.

9. ELearning support for independent English study at ILC

Mr Tim Roskams
Independent Learning Centre (English Section)

It is the mission of ILC to provide resources and coaching for students to become capable, independent life-long learners. An important part of the ILC strategy is to deliver eLearning as part of this mission, both to provide learning flexibility and cost-effectiveness.

ELearning also will allow ILC to deliver instruction in areas that students need, but which are not usually offered in a classroom setting, such as additional language and communications skills practice, and life skills such as time management, study and reading skills, and critical and creative thinking skills.

In this poster presentation, the English section of ILC will highlight its eLearning focus and provide an overview of some of our eLearning facilities and resources, as well as showcase some of the newer eLearning programs These programs aim to develop language and communication skills, key academic success skills and life skills. They are supported with live help and online help to allow students to better plan their online learning and reinforce classroom instruction.

Presenters

10. MOBILE LEARNING - PHYSICAL EXAMINATION SKILLS

Prof LK Hung, Mr Patrick PL Tsang, & Prof TP Lam
Department of Orthopaedics and Traumatology, Faculty of Medicine

The objective of the project "Mobile learning - Physical examination skills" is to develop and refine a series of clinical videos for incorporation into a fully indexed and user-friendly web-based platform.

The clinical videos help students to master physical examination skills (PES) which are essential for making a diagnosis. They are delivered in the traditional desktop PC format as well as the hand-held electronic device formats for use with the popular PDA, iPod, mobile phone and MP3 devices. These characteristic highly mobile teaching materials are catered for self-studying. Students are expected to gain this background knowledge through active and critical learning before coming to mentor-led bedside teaching sessions when interactive discussion or direct patient examination is carried out.

These PES videos include the specific examination techniques for various bones and joints of the musculoskeletal system, as well as generic clinical approaches. Since there are multiple steps and named signs that students are expected to master, the electronic indexing is engineered to the sub-topical level so that details of a particular step and physical sign can be accessed just by the click of the mouse. This facility will significantly enhance and facilitate downloading and makes learning more efficient. Once established, it is self-running. As a result, it is an extremely cost-effective educational tool in the long run.

11. ONLINE ROLE-PLAYING - SECOND THOUGHTS AFTER A FIRST ATTEMPT

Dr Brian Thompson
Department of Music, Faculty of Arts

This presentation recounts my first experience in using role-playing in the classroom and online. Following the inaugural EXPO: Excellence Online, and inspired by the keynote address by Professor Sandra Wills, I dropped the usual term paper required in a second-term course (Western Music History IV), in favour of a group project. The goal was to have students explore controversial topics in music history. I began by randomly assigning each student a character in one of four groups and providing a list of recommended readings. Students were then to research 'their' views on the given topic and undertake intensive discussion online, gradually assuming their roles before finally meeting in class for a live debate. Although the assignment proved effective in some ways, the results were not quite as I hoped. In this presentation, I will discuss the outcome of the project, explore some of the problems encountered and perhaps suggest some ways forward.

Presenters

12. Learn Putonghua online

Dr Vivian Chan Yin Ha
Independent Learning Centre

It is the mission of ILC to create the opportunities and experience necessary for students to become capable, independent and life-long learners. To better facilitate independent learning, besides offering language workshops and counselling sessions, developing online materials is crucial.

Online learning has been an integral part of one's tertiary education experience. Advantages of online learning, or eLearning, have been widely discussed. They include flexibility and convenience for the learner, catering to a learner's needs, and more variety in learning experience with the use of multimedia and the non-verbal presentation of teaching material. These advantages are particularly true to students' language enhancement at CUHK. Online language materials will make language learning more flexible especially when students have other academic commitments. Online learning with interactive multimedia learning activities can also supplement face-to-face classroom teaching. It consolidates and reinforces what students have learned in class and further extend their learning beyond formal classroom teaching.

In the light of the above-mentioned mission of ILC and the advantages of e-learning, we started to develop a Putonghua platform with three levels of online Putonghua learning modules in late 2007. The first level is now ready for trial use. We will introduce the content of the platform, highlight some important features and explain the concepts behind.

13. Application of a virtual patient scenario to undergraduate Anaesthesia teaching

Prof Lester AH Critchley[1], Mr Joseph YC Leung[1], & Prof Shekhar M Kumta[2]
[1]Department of Anaesthesia and Intensive Care, Faculty of Medicine
[2]Department of Orthopaedics and Traumatology, Faculty of Medicine

Virtual patient scenarios provide a detailed account of a patient's illness and care using multimedia and computing technology. They allow the student to follow a patient's progress from beginning to end, which is often not possible with real patients and the time constraints of modern-day medical curricula. They can also be formative and interactive by embedding questions and feedback within their web pages. An anaesthesia scenario involving a middle-aged hypertensive and diabetic woman requiring a routine abdominal hysterectomy for uterine fibroids was written. It was divided into preoperative assessment, anaesthesia, (induction, maintenance and recovery) and post-operative care sections. Multimedia applications (photos, text resources) and questions with feedback were added. The

Presenters

package was uploaded onto our faculty server and accessed by groups of 8–10 students rotating through our 2-week anaesthesia module. To assess and develop the site, our students attended a 3-hour session where they worked through the scenario and participated in a debriefing interview. The virtual patient supplemented operating room sessions and filled in gaps in understanding. Questions and feedback triggered in depth thinking about issues raised in the scenario. Thus, it supplemented our teaching in several different ways. It scored favorably in end of module evaluations (4.8/6.0).

14. The new eLearning Assistant Service

Prof Paul Lam[1] & Ms Eva Cheung[2]
[1]Centre for Learning Enhancement And Research,
[2]Information Technology Services Centre

The eLearning Service have recruited and trained a team of student helpers (eLearning assistants) to closely work with teachers and assist them in planning and implementing their eLearning strategies. The eLearning assistants' responsibilities include:

- advising teachers on eLearning strategies that might support expected learning outcomes;
- providing practical skills and tips in using the strategies;
- assisting teachers in developing the teaching materials and setting up the course websites in the learning management platforms (Moodle and WebCT);
- answering teachers' questions during the actual implementation of the strategies;
- suggesting to teachers the methods to collect feedback and data for evaluation; and
- informing teachers about basic skills so that teachers can do simple upgrades to the materials and independently use the sites in the future.

In this short talk, we will further explain the rationale and details of the service. A few ongoing projects will be highlighted.

15. IOWA: Development of a computer-based teaching system for the IELTS

Ms Olive Cheung, Mr Allen Ho, Ms Ella Leung, Mr Kevin Chong, Dr Peter Clarke, & Mr George Jor
English Language Teaching Unit

IOWA is a computer-based teaching system designed for CUHK students in support of their preparation for the writing part of the International English Language Testing System (IELTS). The IELTS Online Writing Assistant (or IOWA) is a two-year project funded by a Teaching Development Grant (TDG). It is led by Dr Peter Clarke and a team of five ELT teachers including Ella Leung, Allen Ho, Olive Cheung, Kelvin Chong and George Jor who have run IELTS workshops and have a good understanding of students' writing problems. This seminar will present the project in the CUHK context, literature review of IELTS, analysis

Presenters

of typical error types of CUHK students based on 295 authentic writing scripts (147 scripts of IELTS Task 1 plus 148 scripts of Task 2), the design of IOWA, how it addresses localized and global errors, and the challenges and limitations of Moodle as an online platform for delivery of the system. The presenters will also demonstrate the IOWA system and share with the audience possibilities of how it might be used by ELT teachers and benefit CU students who plan to better equip themselves for the IELTS.

16. Integration of an eLearning platform in French curricula at CUHK

Mr Philip Fung, Miss Nathalie Iseli, & Miss Christèle Joly
Department of Linguistics and Modern Languages, Faculty of Arts

In 2008, the French programme has been working closely with ITSC in order to develop the platform FRE0000 for students of all French classes. The project aims at:

- Enhancing the communication between teachers–students, students–students and teachers–teachers.
- Transmitting information and exposing students to French language and culture.
- Providing resources and thus improving students' learning process.
- Creating a community's spirit among students from all faculties taking French courses.
- Modifying students' learning habits and developing their sense of autonomy.

In this regard, we focused on 3 strategies:

- *Interactions and change of roles (Nathalie):*
  The use of communication tools such as teachers' and students' forums, forums with specific purposes, chat and messages affects students' and teachers' roles and behaviors. This student-oriented approach develops learning communities and increase students' sense of autonomy.
- *Use of web 2.0 technologies and enhancement of attractiveness and effectiveness in learning (Christèle):*
  Introduction of blogs, gong, hotpot exercises, animated gifs for games/events, slideshows and wiki gives a new dimension to learning a foreign language.
- *Content for learning and feedbacks (Philip):*
  The platform plays the role of a resources center with complementary (audio clips, notes about grammar …) and supplementary (video clips and; dictations …) materials. To a certain extent, it allows feedback and assessment.

Presenters

17. PLATFORMS FOR LANGUAGE TEACHER EDUCATION

Prof Eunice Tang, Dr Eric Ng, & Mr Eddy Li
Department of Curriculum and Instruction, Faculty of Education

In this presentation, a blog-based eLearning environment and learning community for pre-service and in-service language teachers will be introduced. After 2 years of development, Platforms for Language Teacher Education (PLaTE) is set up with the support of the Teaching Development Grant under the project "Research-based and Data-driven Approach to Student-teacher Development". It aims to provide academic and professional support to students, graduates and teaching professionals through a variety of online reference and learning tools.

PLaTE includes:

1. databases of self-developed teaching and learning materials and videos of exemplar teaching, available at English Teacher Education on the Net (ETENet) and Chinese Teacher Education on the Net (CTENet);
2. online platforms for exchanges of insights on current issues of language teaching, available at Netter and Bo Yu; and,
3. blog-based teaching portfolios of students.

In particular, PLaTE could possibly be the pioneer in developing a personalized blog-based learning portfolio for each student. This blog-based personalized portfolio would not only serve as a means to record the professional growth of each student throughout their undergraduate study, but could also function as an interactive channel for collaborative professional development, as well as the establishment of an academic learning community.

18. WIKIS FOR BUILDING A COLLABORATIVE EDUCATION ENVIRONMENT

Prof Irwin King, Prof Jimmy Lee, & Mr Patrick Lau
Department of Computer Science and Engineering, Faculty of Engineering

In the Web 2.0 era, wikis are being used widely in a collaborative environment due to their efficient content processing properties, version control capabilities, distributed structures, flexible add-ons, user management features, etc. Can wikis be easily adapted in the education environment? In this talk, we investigate how we can use wikis for collecting, sharing, processing, managing, and disseminating information. Moreover, we will show how easily we can perform these tasks through a simple web-based user interface. We will cite and provide more in-depth information on several case studies that we have done at The Chinese University of Hong Kong on where and how these wikis are being used to demonstrate their effectiveness.

Presenters

19. Using You-Tube, e-maps and e-photos as props
for interactive lectures

Prof Yap Foong Ha
Department of Linguistics and Modern Languages, Faculty of Arts

I'll demonstrate a Q&A activity on sociolinguistics in which students are asked differences in degree of language diversity in a distant place like Papua New Guinea. More specifically, students are asked why the pattern in Papua New Guinea differs from that seen in China. To help them answer the question, I provide them with background information on Papua New Guinea using e-maps and e-photos and a YOU-Tube presentation on this distant land. It's a fun exercise in the middle of a lecture, and the students not only learn about sociolinguistics, they come to appreciate the natural beauty of the land and the universal appeal of Papuan music as well.

20. Respondus - A tool for managing online quizzes

Ms Judy Lo
Information Technology Services Centre

Respondus is a powerful tool for creating and managing quizzes that can be published directly to WebCT. Question items can be created offline and then transferred to the eLearning platform. The tool thus allows faster setting up of the questions. It even reads Word documents and converts them into interactive online questions. The tool currently supports up to 15 question types, including calculated and algorithmic formats.

The tool particularly suits the teachers who would like to build a relatively big question pool. The fact that the original set of the questions are locally archived in the teachers' computers means that maintenance and updating of the question items can be more convenient.

CUHK has obtained a campus-wide license of the software. In this short session, I will demonstrate:

a) How questions can be created and formatted with Respondus;
b) How questions can be published onto WebCT with Respondus; and
c) How questions in MS Word format can be imported into Respondus for further use.

Presenters

21. SHARING OF ELEARNING EXPERIENCE WITH COURSEWARE AND WEB-BASED FORUMS

Dr Tong Shiu-sing
Department of Physics, Faculty of Science

The use of 3D visualization softwares and web-based interactive programs can enhance students understanding of abstract science concepts in general education courses. Such softwares are also used in home assignments for students to explore various interesting scenarios related to their daily life experience. A few examples of these context-rich assignments will be discussed. Using a customized web-forum, students are also allowed to comment very freely on the contents and presentation of the course, and the difficulties they encounter in learning. The pros and cons of using such a forum will be discussed.

22. ONLINE SYSTEM TO FACILITATE COLLABORATIVE CONSTRUCTION AND MAPPING OF LEARNING OUTCOMES IN THE MEDICAL CURRICULUM

Mrs Jenny Fang[1], Mr Francis Wong[1], Mr Raymond Chu[1], & Prof Paul Lam[2]
[1] Medical Information Technology,
[2] Centre for Learning Enhancement And Research

The Faculty of Medicine is moving towards outcomes-based teaching and learning and is the process of planning and constructing learning outcomes at the various levels of the curriculum. It is a challenge to find a mechanism that allows teachers to effectively communicate and collaboratively construct students' learning outcomes, and to effectively map the learning outcomes of the individual courses and topics with the overall objectives of the programme.

In this paper, we report on a web-based development to facilitate these collaboration and mapping processes. The system aims to enable teachers to write and comment on the learning outcomes on any of the various teaching modules in the medical programme. There is also a way to visualize the mapping of the topic/ course-level learning outcomes with the programme-level ones. The visualization will greatly assist curriculum planning.