

## **1. Development of a photo-based knowledge sharing platform for collaborative learning (P1)**

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Isolated learners of biodiversity courses often feel frustrated as they are required to, through limited in-class activities, absorb and organise large amounts of information in order to recognise the adaptive features of a wide-range of organisms. To help in overcoming this frustration, BioPhotoSharing@cuhk (biophotosharing.com), a photo-based knowledge sharing platform in which the efforts from teachers and students are integrated through Web2.0 technologies, has been developed to engage students in active, participative and collaborative learning.

To begin with, a seed database has been launched with a set of featured photos for each chosen biodiversity topic by teachers. Then, through the platform, students can

1. contribute to database development by uploading their own photos collected during or/and outside the class, tag the structures shown and write notes for them;
2. rate any of the photos and share the photo pages with friends through social media (like facebook) plugins;
3. organise the information in a multi-dimensional data structure by using customizable tags plus searching and sorting functions.

It is expected that BioPhotoSharing@cuhk will not only become an informative, comprehensive and sustainable photobank belonging to the biodiversity learning group in CUHK but will also help students develop the habit of knowledge sharing, thus generating a climate of collaborative learning for whole classes.

In the poster presentation, I would like to explain the design and features of the platform and discuss the difficulties encountered during the development and implementation phases.

## **2. Animated Biochemistry courseware for students of heterogeneous backgrounds (P2)**

*Dr Ann Sin Nga Lau<sup>1</sup>, Dr Rebecca Kit Ying Lee<sup>1</sup>, Ray Lee<sup>2</sup>, Judy Lo<sup>2</sup> &  
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Teaching students of heterogeneous backgrounds is always challenging. Topics like biochemistry usually involve mechanistic processes at a molecular level that cannot be seen by eyes and can hardly be explained in simple words. As a biochemistry course for Pharmacy and Biomedical Engineering programmes, students' prior knowledge of biochemistry 'jargon' can no doubt facilitate their understanding of different topics. Classes of this kind are, however, heterogeneous in terms of students' biology and chemistry backgrounds, leading to a big challenge for both the teachers and the students in particular at the beginning of the course. Students usually find the technical terms difficult and hard to follow, while the time allowed for elaborating the concepts in the lecture is always limited. 'Biochem-is-try' is an interactive and a user-friendly form of courseware which focuses on the terminology used in selected topics which the students usually encounter difficulties with when they start to learn the biochemical pathways. The e-Pub of the courseware and the e-book developed in conjunction with the courseware not only allow students to download the materials to their

mobile devices, but with the increase in convenience to access the materials we also hope to motivate students' self-learning and to have the courseware supplement those elements cannot be elaborated on in the lectures.

### **3. MyCloudLab: An interactive web-based management system for cloud computing administration (P3, T16)**

*Hoi-Wan Chan<sup>1</sup>, Min Xu<sup>2</sup>, Chung-Pan Tang<sup>1</sup>, Prof. Patrick P. C. Lee<sup>1</sup> & Dr Tsz-Yeung Wong<sup>1</sup>*

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We would like to present MyCloudLab, a web-based management system for the cloud computing administration. It provides a platform for students to easily experience the environment of cloud computing platform and learn essential techniques of administering a cloud computing system. We deployed MyCloudLab in the Introduction to the Cloud Computing course in autumn 2012. (Please read short paper)

### **4. Using mobile devices to conduct pre-laboratory exercises (P4, T10)**

*Dr Kin Wah Kendrew Mak*

*Department of Chemistry*

Our undergraduate chemistry laboratory courses have adopted the general practice of requiring students to complete a short quiz at the beginning of the laboratory classes. This is to ensure that they have made the appropriate preparations for the lab sessions and have adequate understanding of the nature of the experiments before they come to the lab to perform them. Traditionally, the quizzes are conducted with pen and paper at the beginning of the lab sessions. A major limitation of this is that the instructors and teaching assistants cannot get the students' quiz results before the experiments start. So the TAs and teachers have difficulties in knowing whether students have some common misconceptions about the experiments, and in providing the corresponding elaborations for the pre-lab briefing.

We are developing an online quiz system for the laboratory courses on the newly implemented e-learning system – Blackboard Learn. Students can use their mobile devices such as tablet PCs or smartphones to complete the quizzes on the e-learning system. By utilizing the e-learning system and mainstream mobile devices, we can streamline the pre-laboratory quiz process. From the quiz results collected on the e-learning system, teachers can address the learning needs of students in a more accurate and timely manner.

### **5. Development of the problem-based learning model for transitioning undergraduate students from classroom to research (P5, T14)**

*Prof. Wing Por Leung, Dr Kendrew Kin Wah Mak, Dr Wing Fat Chan & Prof. Yu San*

*Cheung*

*Department of Chemistry*

Besides the subject-dependent professional skills and knowledge, generic skills such as critical thinking, problem solving, self-motivated learning, and interpersonal and communicative skills are always perceived by both educators and employers as important capabilities that students should possess.

Problem-based Learning (PBL) has been introduced into the Chemistry Undergraduate curriculum as a compulsory research-based final-year project to enrich students' learning and to allow them to gain intensive experience of independent scientific research. With the support provided by the Teaching Development Grants, we have developed a comprehensive teaching model and supporting teaching & learning platforms and materials to support and facilitate the implementation of this problem-based learning course.

A comprehensive set of teaching and learning activities and assessment methods has been designed and implemented to help students achieve the core learning goals. We have also blended some learning environments of the research-based postgraduate study into this PBL course to train the students to become researcher.

In order to enhance students' learning effectiveness and facilitate the conduction of the research-based student projects, a specific e-learning platform (running on Moodle) and some relevant on-line teaching materials have been developed. The on-line materials have the aim of improving students' research skills such as literature searching, advanced laboratory techniques, professional oral and written presentation skills, and project planning and management skills.

## **6. Interactive self-learning exercises (P6, T9)**

*Dr Chun Yip Yau*  
*Department of Statistics*

Carrying out exercises is an essential way of learning mathematical and statistical concepts. An interesting and easy-access platform for doing exercises will be attractive and beneficial for students. By working on the exercises, students can consolidate abstract and complex statistical concepts through engaging in interactive computer exercises. In this project, we will develop some interactive online self-learning exercises for students to practise at home. The useful features of these exercises include:

1. They are readily available from the instructor's website, without having to download any programs.
2. The exercises are interactive in the sense that
  - a. According to the ability of the students (judged by the percentage of correct answers currently achieved), specially tailored questions will be assigned to them. The level of the questions will appropriately match the students' abilities and the content of the questions will target the weaknesses of the student.
  - b. Detailed solutions and explanations for the wrong answers will be given immediately after each answer is submitted.
  - c. For each question, students can refer directly to the corresponding pages of the lecture notes for the relevant materials.

The template of the proposed project can be shared with other instructors in CUHK so that interactive exercises for other courses can be readily available once the corresponding exercises are inputted.

**7. The effects of web-enriched resources in enhancing baccalaureate-nursing students' learning of clinical nursing skills (P7)**

*Prof. Janita Pak-Chun Chau<sup>1</sup>, Ms Suzanne Lo<sup>1</sup>, Prof. Carmel McNaught<sup>2</sup>, Prof. Wan Yim Ip<sup>1</sup>, Prof. Iris Lee<sup>1</sup> & Prof. Carmen Chan<sup>1</sup>*

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A major goal of nursing education is to enable students to develop and apply higher-order cognitive reasoning and problem-solving skills in their roles as nursing professionals. The ability of nurses to adopt reasoning skills can improve the accuracy of nursing diagnoses and the quality of care. Six modules covering aspects of health maintenance and promotion, safety and comfort, holistic care and care coordination were developed. A two-hour classroom session and a two to seven-hour web-based learning experience were offered for each module. A qualitative descriptive study was conducted among a purposive sample of 75 students to determine whether this learning design had enhanced learning. The majority of the students reported that the web-enriched resources were helpful in facilitating their learning of clinical nursing skills and the development of their critical-thinking skills. They also found that classroom discussions helped to consolidate the key messages learnt from the modules. The exercises and quizzes were helpful for them in reviewing the content. Some suggestions to improve the use of web-enriched resources included adding subtitles or captions to the videos to highlight critical actions or alerts. The results showed that engaging students in higher-order cognitive reasoning exercises promotes life-long learning skills and deep approaches to learning.

**8. Developing an integrative teaching strategy for large class students to learn Cell Biology and beyond (P8)**

*Prof. Liwen Jiang, Dr Chi Ming Lawrence Chiu, Siu Chung Ivan Cheung, Kin Pan Chung, Ching Man Lai, Ho Yin Angus Law, Juan Wang, Xiangfeng Wang, Cheuk Hang Woo, Yonglun Zeng & Xiaohong Zhuang*

*School of Life Sciences*

This project aims to develop an integrated teaching strategy for a large class (~270 students) learning cell biology. In lectures with large classes, interaction between students and teacher is usually difficult and insufficient, which hinders active learning. Since 2009, our team has been trying to use and test different approaches to teaching cell biology, including the use of electronic voting systems (clickers) for answering questions in the lectures, weekly online assessments on WebCT/ Blackboard for self-learning and problem-based learning for in-depth discussion. The results showed that the performance and satisfaction of the students taking this course have significantly improved over the past three years. With the integration of multiple approaches and timely improvement of teaching strategies based on students' feedback, we have worked out the major integrative approaches that need to be used in teaching the large-class Cell Biology course in the coming years with updated modifications.

## **9. Critical reflection and web-enhanced pedagogy: Consolidating international learning (P9, T1)**

*Prof. Jane Jackson  
Department of English*

This presentation reviews the design and delivery of a credit-bearing, web-enhanced course designed for undergraduates with recent or current international experience (e.g., international exchange programmes, service-learning, internships, language immersion programmes). In a supportive environment, the participants are introduced to theories and models of intercultural (communicative) competence and intercultural transitions. In relation to their own and others' international experience, they explore: language/culture shock, intercultural (re)adjustment, identity expansion, global/intercultural citizenship, and intercultural competence in a second language. Through structured and critical reflection, reading, discussion, and writing (e.g., chat forums, blogs, reflective essays), students deepen their understanding of their international/L2 experience and discover ways to integrate it into their campus life and post-graduation plans. After providing an overview of the course, this presentation centres on the ways in which the first two offerings informed the 2012–13 session. The development and monitoring of the intercultural transitions course have benefited from a generous Teaching Development Grant (#4170338) as well as data generated by a General Research Fund project (#2110167), which tracks the developmental trajectories of outgoing semester and year-long international exchange students. This session underscores the benefits of designing a research-driven, learner-centred curriculum to scaffold the deeper intellectual consolidation and integration of international experience.

## **10. Fusion of traditional wisdom and modern technology: Application of augmented reality in teaching of acupuncture (P10)**

*Simon Sai Hau Ho<sup>1</sup>, Michael Wai Yeung Chung<sup>2</sup>, Justine Ho Lam Chui<sup>1</sup>, Wendy Hing Wan Fan<sup>1</sup> & Ken Wai Kin Lee<sup>1</sup>*

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Acupuncture, an UNESCO Intangible Cultural Heritage, is one of the key healing methodologies of Chinese Medicine. Locating the 'acupoints' on the human body is an essential element in the training of students in Chinese medicine. Bringing a model to the class or a using real body of students are the usual ways for teachers to teach the techniques of locating acupoints. However, these methods are rather inconvenient and students are not generally able to practise these skills at home by themselves. However, thanks to Augmented Reality (AR), traditional wisdom and modern technology can be fused. AR integrates the real world with computer generated graphics. By scanning a printed marker with a camera, three dimensional graphics (which are fully controllable by the user) can be merged and shown on top of the real objects captured by the camera. Teachers can now simply bring a marker to the class and show students how acupoints are located. Acupoints can be projected onto a real human body and students can use the same marker on their own computer so as to practise these skills.

## **11. Proposing a Knowledge Building Community (KBC) for differentiation, development, dissemination in a learning module (P11)**

*Dr Sally Wai-Yan Wan*

*Department of Curriculum and Instruction*

Regarding new challenges in the 21st century, learning is no longer restricted to classrooms. Instead, learning can occur anytime and anywhere. This poster aims to present how a knowledge building community (KBC) can be established to teach a Bachelor of Education module, namely Curricular Strategies for Tackling Individual Differences. A group of prospective teachers taking the captioned module will jointly participate in the following learning activities. There will be an online discussion on a social networking platform for build-ons over the key topics and case studies, whereas prospective teachers may need to raise questions about differentiation and continue independent inquiry project. Working in groups, prospective teachers will design a learning unit using differentiation strategies, whereas during the process they will get feedback through peer review through the use of wikis. The learning unit will be shared with partner university students who take similar modules in their own universities. A school visit will also be arranged for the prospective teachers, who will investigate the reality of the school context and how school teachers cope with differentiation issues. At the end of the visit, they will present their key findings and implications to their future profession via Web2.0 technologies such as Animoto and Prezi in order to share and disseminate their ideas to their partner learners in the other regions.

## **12. Experiential learning in a new law faculty: A blueprint for social transformation (P12)**

*Prof. Luke Marsh & Prof. Michael Ramsden*

*Faculty of Law*

In 2001, a major inquiry conducted by Professors Paul Redmond and Chris Roper was held into the quality of legal education and training in Hong Kong. It was prompted by a growing consensus that law schools were unfit for purpose. The Redmond-Roper Report identified numerous pedagogical concerns: (1) Legal education was dominated by a 'black-letter' approach. Rules were taught devoid of the social context in which they were formed and applied; (2) Too much emphasis was placed on traditional classroom teaching so that students sat passively in lectures, rather than being at the centre of a pedagogical experience; (3) It proved impossible to equip graduates with the skills and values necessary to address the dynamic challenges of Hong Kong's legal market.

There was a need for change. The CUHK law faculty was established to help deliver on the Redmond-Roper package of reforms, to bring the law faculty into the community and the community into the law faculty. Since its inception, the law faculty has been committed to experiential learning. The authors behind this poster (Professors Luke Marsh and Michael Ramsden) have, at various points since 2007, collaborated to deliver two key methods of experiential learning: (1) a student law clinic and (2) student advocacy.

This poster is divided into two parts. First, it will state our teaching philosophy in developing these two initiatives, in particular our commitment to a course design that (1) integrates theory with practice, (2) promotes professional responsibility and civic engagement and (3) puts students in the 'driving seat' of their own learning experience. It will showcase our achievements over the past five years and demonstrate how our methods address the

pedagogical concerns raised by Redmond-Roper. Secondly, it will propose the creation of the Clinic for Public Interest Advocacy. The Clinic will pioneer an innovative teaching pedagogy combining clinical education geared towards public interest issues with student advocacy.

**13. Students' performance at a glance: A handy matrix to summarise students' choices in a problem set with tens of MCQs – A useful tool for an effective tutorial class of over 200 (P13, T11)**

*Kwan Mei Yam<sup>1</sup> & Siu Ling Eva Cheung<sup>2</sup>*

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*<sup>2</sup>Information Technology Services Centre*

Problems sets with multiple choice questions (MCQs) and short-answer questions are often given to students as assignments to check their own progress. After students have submitted their answers, tutorials are often arranged to address students' questions. Due to different constraints, some tutorials need to be conducted with a large class within normal class hours. However, some students are often too shy to ask questions, while some others are too eager to do so. To avoid the class being dominated by a few individuals and to utilise the limited tutorial time more effectively, a matrix has been developed to summarise students' choices of any problem set with tens of multiple choice questions answered through the CU elearning system (Blackboard Learn). Using the matrix, teachers and students can see with ease and objectivity what the problematic questions are and discussions will first be focused on those.

During the talk, I will demonstrate how to use the CU elearning system to generate statistics for feeding into the matrix and how I will use the matrix to drive effective discussions during my tutorials.

**14. Case sharing – Useful tips on how to use new features of the new CU eLearning System to better support your teaching at the University (P14, T17)**

*Eva Cheung, Daisy Chen & Prinporn Lau*

*Information Technology Services Centre*

With the successful launch of the CU eLearning System in 2012, teachers are now exploring the new system in order to find useful features for designing learning activities, implementing teaching strategies and enhancing student communications.

In this presentation, you will see:

1. Case sharing with teachers who have been using the new system on teaching and learning by making full use of new tools in the system.
2. New features and FAQs that eLearning support team has collected from daily work to help you become more familiar with the new system easily and quickly.

### **15. Architectural narratives with digital manga (P15, T3)**

*Prof. Marc Aurel Schnabel, Sky Lo & Dr Yingge Qu  
School of Architecture*

Non-photorealistic architectural depictions can be employed to develop a narrative that engages the reader not only with the visual aspects, but also with other emotional reactions. Architecture is subsequently not only represented through its factual dimensions of length, width and height, but is also extended to intangible sensorial realms, which gains special value in the Asian context. This paper presents a rendering system of a graphical depiction method to communicate design akin to Japanese cartoon (manga) style. The modified visualisation can be used for storytelling and developing a narrative that professionals and laypersons alike can easily access, understand and interact. The bi-tonal depictions offer users the chance to experience both the visual richness of the original design as well as enhanced architectural design communications that have their heritage deeply rooted in Asian culture. In this paper, we will showcase some digital manga architecture to demonstrate how design intention and ideas can be represented differently yet subsequently seamlessly connect cultural aspects of storytelling with architectural design, allowing for an intuitive discourse with architecture.

### **16. Share-mind approach to motivate active learning in Chinese medicine (P16)**

*Prof. Yuanan Jiang & Chi SunNg  
School of Chinese Medicine*

Chinese medicine is very traditional in its concepts and theories, which are almost interlaced with the sophisticated traditional Chinese philosophies. It is not an easy thing for students who are born and educated in the modern culture environment, especially in the western style, to learn and master the essence of Chinese medicine, and to apply it to a clinic in the future.

The non-credit bearing student-centred tutorial sessions, of two hours long and once every week, are introduced into the teaching and learning activities in the Programme of Chinese Medicine. In the tutorials, the students are encouraged to initiate the questions relating to the subject they are learning and share their different ways of trying to solve the problems, while the tutor(s) will act as navigator(s) to direct their ways of thinking. This special mind-sharing among students, with the help of tutor(s) to consolidate the learned knowledge and to explore and expand unknown fields, it is a quite effective way of motivating students' active learning, and furthermore, their interest in learning about Chinese medicine.

### **17. German through fairy tales (P17, T6)**

*Annette Frömel  
Department of Linguistics and Modern Languages*

For my MA thesis 2005 a study was conducted to find out the effects of incorporating language arts activities into the German classroom. The focus of the study was on how language arts activities affect students' learning, such as their motivation and enjoyment of the classes, their learning efforts and their learning outcomes. An increase in motivation and enjoyment can be observed with regard to both fairy tales and poetry and improved output became evident in students' assignments. The findings of this study motivated the



development of a new course ‘German through Fairy Tales’, which has been offered in CUHK since 2005.

This talk will outline the learning outcomes, methodology and content of this course, which involves the teaching of language while making use of Language Arts while at the same time teaching students about German culture.

### **18. We are not students, but users (P18, T7)**

*Celia Carracedo Manzanera*

*Department of Linguistics and Modern Languages*

Culturema is a marriage between culture and cinema and is the name of an on-line magazine created by and for Spanish learners. In the first stages of the project, learners are just users and content consumers, but eventually they will become writers, generating the magazine’s contents.

Culture and film are the basis of our course ‘Spanish Through Film’, within which this project has been carried out.

The main idea behind this project is to reach further than just contextualizing a situation inside the classroom. We don’t want to just practise the L2, we aspire to use it in a natural and useful way. We are making our effort real, relevant and helpful, for us and for anyone who wants to learn Spanish: a magazine for other Spanish students.

‘Spanish through Film’ tries to be an open window to show us a big picture from point of view of the reality of Spanish speaking countries and their idiosyncrasies. But it is also a language and content integrated learning (CLIL) course. The content is provided by film and movies. The language of instruction is Spanish, the students’ L2, and the teacher’s L1, and therefore all the materials and resources (film, internet, Facebook and handouts) are provided in Spanish. The students learn content and language simultaneously while creating content (audio, video, texts) that other students will consume.

Take a look: [www.celiacarracedo.com/culturema](http://www.celiacarracedo.com/culturema)

### **19. Mobile aid for enhancing self-appraisal of clinical learning (P19)**

*Dr Howan Leung, Prof. Thomas Leung, Prof. Vincent Mok & Prof. Lawrence KS Wong*

*Department of Medicine & Therapeutics*

Undergraduate medical teaching is often affiliated with the bedside experience of students' interaction with their patients and colleagues. This consists of acquiring clinical information through communication with patients, followed by assimilation and presentation in a structured manner. A critique of the individual components of information retrieval may help individualise the learning approach during the bedside tutorial.

A bedside tutorial takes the form of real-time history-taking and the appropriate clinical examination. This may be undertaken in groups of 2–3 individual students, or it may be performed as part of a tutorial with clinical teachers. The leading student is required to perform the clerkship in a structured manner so that his/her fellow colleagues may provide

comments on the individual parts of his/her clinical performance with the use of the 'Blackboard' application. In a larger group, the mobile comments promote a clinical appraisal without interrupting the student-patient communication. At the end of clerking session, the leading student may take heed of the feedback from his colleagues before making the final summary. The teacher reflects on the student's performance in conjunction with his colleagues' comments. For other participating students, giving appraisal may provide an opportunity to understand the perspective of a clinical teacher.

## **20. Jyutping Dictation Tutor (P20)**

*Prof. Yanhui Zhang, Prof. Peggy Mok & Robert Xu  
Department of Linguistics and Modern Languages*

The Jyutping Dictation Tutor is primarily used to train the students in the Linguistics Department to master the basics of the Cantonese sound system by providing sufficient opportunities for students to drill and practise the Cantonese Romanisation system after the in-class introduction of Jyutping knowledge.

The design of Jyutping Dictation Tutor is based on a renowned cognitive model on language learning – the Unified Model (MacWhinney, 1987, 2005, 2007). Translating the model's language learning mechanisms into practice, the browser-based dictation program Jyutping Tutor sharpens the sensibility to perceptual categories of Cantonese by sound teaching methods, such as cue focusing, graduated interval recall, and resonance co-training. The program traces spelling errors from training sessions and thus identifies Jyutping segments that are commonly seen as difficult for all the users and uniquely difficult for an individual learner. This kind of research-based, data-driven training method is expected to help learners achieve marked improvements in fluency and robustness of Jyutping mastery with an efficient timeline.

In the near future, with appropriate adjustments, the Jyutping Dictation Tutor's user population will be further extended to learners of Cantonese as a second language, so that more learners will be able to effectively master the Romanisation system designed by Hong Kong linguists.

## **21. Mapping Hong Kong politics (P21)**

*Dr Hok Wui Wong  
Department of Government and Public Administration*

In this project, which is tailored to the course 'Political Research Methodology', a required course in my department, I developed an interactive map kit that allows students to understand and explore local politics from a geographical dimension. Specifically, I provided Web-based digital Hong Kong maps demarcated with political boundaries (for example, a District Council boundary). Then I asked students to use the maps in their analysis of various political, social, and economic data. I also extended the idea of electoral geography to develop an iPhone app that allows students and the general public to track district casework supplied by legislators, along with other political data.

## **22. Training graduating medical students to develop the non-technical domains necessary for holistic competence in practical procedural skills (P22)**

*Prof. Shekhar Kumta<sup>1</sup>, Prof. Andrew Burd<sup>2</sup>, Prof. Simon Ng<sup>2</sup>, Dr Lex Vlantis<sup>3</sup>, Dr Yan Jin<sup>4</sup>, Alex Yung<sup>4</sup> & Joseph Leung<sup>4</sup>*

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Clinical procedures performed on conscious patients are a crucial part of the duties of newly qualified medical graduates. Although technical skill is obviously an essential part of such procedures, effective interaction with the patient and with other health-care workers is just as important. Often, the technical aspects of a procedure present less of a challenge than managing a wider clinical situation. At present, many procedures are taught on bench-top models in skills centres. Although such simulations offer a useful introduction for beginners, practicing these skills out of context may give an oversimplified and misleading picture of the non-technical skills necessary. A promising alternative is the combination of real human beings with high-fidelity simulated environments, or patient-focused simulation (PFS). Relating to a 'patient' while performing a procedural task evokes a range of professional behaviour in trainees. In this study we assessed the impact of Patient-Focussed Simulation on the development of the non-technical holistic behaviour necessary for performing practical procedures.

Methods: 380 Students in their clinical years (3–5) were asked to perform 6–8 practical procedures on simulated patients (SP's). The procedures included wound dressing and assessment, wound suturing, removal of foreign bodies, splinting of dislocations and fractures, reduction of shoulder dislocation, assessment of friction burns and compartmental syndrome, setting up an IV drip and the withdrawal of blood from an HIV positive patient. All procedures were performed on trained simulated patients using wearable devices and the scenario was embedded into the clinical environment so as to make it indistinguishable from the real encounter. SP's were trained to ask questions that elicited student responses and explanations. Students were assessed by the tutors, other SPs and experienced ward nurse practitioners. The assessment provided was a formative one. Students were rated using a simple and practical scale as follows:

- A. Good: Is likely to perform very well as an intern in the future.
- B. Acceptable: Performance is satisfactory and the person would be acceptable as an intern
- C. Unacceptable: The performance is below the standard expected.

### Findings and Discussion:

Students as well as SPs found that the project was meaningful and that it made them reflect on their manual dexterity and the manner in which they 'handled' patients and provided them explanations. The feedback provided allowed students to understand and immediately identify deficiencies in the explanations given to patients. Critical feedback on body-language, unacceptable mannerisms, over-confidence or lack of confidence, lack of empathy was deeply appreciated by students.

Student performance improved over time. During their first intervention in Year-3 only 30% of students were rated as A, 30% as B, and 40% as C; in the second intervention (Year-5), performance improved significantly (60% A, 35% B, 5% C).

Indeed holistic competence in performing common practical procedures is one of the key Learning Outcomes expected of graduating students. We expect this project will lead to an improvement in the practical procedural skills of our students, which was particularly noticeable during their internship. A first quarter assessment of Interns in the Prince of Wales Hospital indicated a 31% reduction of intern related errors in practical procedures in the current cohort.

### **23. Helping students to develop a better understanding of spatial anatomy (P23)**

*Prof. Shekhar Kumta<sup>1</sup>, Prof. Sun-on Chan<sup>1</sup>, Prof. Andrew Burd<sup>1</sup>, Dr Lex Vlantis<sup>1</sup>, Dr Yan Jin<sup>2</sup>, Alex Yung<sup>2</sup> & Joseph Leung<sup>2</sup>*

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Understanding spatial relationships is a key requirement for the interpretation of modern radiographic investigations all of which are based on trans-axial or cross-sectional studies. However, novice medical students often find it difficult to relate gross anatomical organ/structure relationships to their cross sectional representations in axial images obtained from current radiological imaging modalities such as CT and MRI scans.

Three-dimensional anatomical imagery matched with simultaneous cross-sectional anatomic images from radiographic investigations allows the learner to develop a better understanding of spatial relationships. This may be combined with the use of 3D projection onto volunteers or mannequins further enabling students to understand the surface projection and appropriate cross-sectional representation of key organs and structures within the body.

Methods: We developed 3D anatomical reconstructions from patients CT and MR images and developed self-study resources for students to navigate and use as a supplement to clinical encounters. During their clinical modules in Orthopaedics, Plastic and Head-Neck Surgery students were also given the opportunity to use 3D anatomical presentation superimposed on volunteers, willing patients and or mannequins. A total of 312 Year 3 and Year 5 students made use of these learning resources and we reinforced this intervention with case-discussions and clinical-radiological interpretations at the bedside.

Analysis: Student performance at End-of-Year OSCE examinations (Radiology stations) was better for the group of students (mean 7.8 SD +1.2) compared to those who were not exposed to this intervention (Mean 6.0 SD +1.8).

We also assessed performance of 40 interns exposed to this study and found a better ability to discuss, interpret and order CT and MR investigations than in those who were not.

Self-study resources using 3D modelling software and volumetric data-generated 3D movies, allowing students to visualise patient-specific anatomical structures in 3D. The use of Multi-Planar Reformatting allows simultaneous interpretation of axial images thus enabling students to develop spatial sense in the context of normal and pathological organ investigations.

## **24. The mobile revolution: Are teachers missing out? (P24, T8)**

*Prof. Shekhar Kumta, Prof. Lester Critchley, Dr Yan Jin, Alex Yung & Joseph Leung  
Faculty of Medicine*

Information communication technology allows us to transcend physical space constraints and enables us to provide wide access to educational materials, thereby improving the quality of education. Mobile and smart devices penetrate almost every aspect of our life, and conventional classroom teaching is being replaced by a learner-centred learn-anywhere paradigm.

However, individual teachers often find it difficult, if not impossible, to deliver their teaching content through the mobile platform. Teaching content can often become merely consists of a transfer of content from one repository to another. Teachers also find difficulties in understanding how they might utilise ICT in order to implement a learner-centred teaching strategy in their own discipline.

We need to work towards a strategic plan that allows us to build E & M Learning capacity within the institution, and educate teachers on how they may utilise this capacity towards its successful implementation within the scope of their teaching.

## **25. Mobile learning @ CUHK (P25)**

*Prof. Paul Lam, Kevin Wong, Henry Chiu & Tracy Tai  
Centre for Learning Enhancement And Research*

Mobile Learning @ CUHK project supports our teachers in using a number of mobile learning strategies at our University. In 2012, the project advanced a number of key developments and services.

Major developments included:

- uReply: a classroom communication system for use with mobile devices, and
- uDraw: a classroom communication system for editing and exchanges of graphics on tablets or notebook computers.

Major services included:

- introduction of an eBook-making service which was used by teachers in more than eight disciplines, and
- introduction of the uPodium solution to teachers. Teachers were able to control the classroom computer wirelessly on their own mobile devices and thus taught in any locations they liked in the classroom.

A redesigned Mobile Learning @ CUHK website was also launched in 2012 for teachers and students to obtain ideas and resources concerning mobile devices and for teaching and learning. Evaluations of the mobile learning strategies were conducted through various methods. In the presentation, we will show user records and feedback that strongly suggest that mobile learning has attracted much attention of our teachers and students nowadays.

## **26. Instant classroom response system on mobile devices – uReply user experiences (P26, T15)**

*Kevin Wong, Tracy Tai & Prof. Paul Lam  
Centre for Learning Enhancement And Research*

Encouraging interactions in class is likely to be one of the most common challenges of teachers, particularly in a big class. The latest advance in mobile and cloud-based technology has made it possible for us to develop a uReply solution for our fellow teachers in this University. uReply is a classroom communication system for use with mobile devices. In other words, the teacher asks a question using the classroom computer and students input answers via their own mobile devices such as mobile phones, or tablet/ notebook computers. The system supports multiple-choice type of questions and short questions which require students to input text. Students' feedback is collected and analysed in the format of graphs or tables. Teachers then have the option to show performance back to the class right there in the classroom for enhanced learning effect. Records of the class activities are also retrievable by teachers at a later time.

In the presentation, we would like to demonstrate that the system does not confine classroom communications merely to the virtual space; but that also facilitates many types of engaging follow-up activities and face-to-face discussions which would have been less effective without the technology. A number of teacher-users will share their experiences.

## **27. A picture is worth a thousand words – Learn visually using uDraw (P27)**

*Kevin Wong, Henry Chiu & Prof. Paul Lam  
Centre for Learning Enhancement And Research*

The Mobile Learning @ CUHK Project is proud to present a new graphic-based classroom responses system – uDraw. uDraw allows teachers and students to draw or edit images on mobile devices and then share them instantaneously in the classroom for teacher or peer commentary. There are two main features: 1) students draw on a blank white space and then upload their drawings to a certain storage place to be displayed in front of the classroom for everyone to see; or 2) students add markings to pre-installed images and then submit their edited images for sharing.

Such visual learning can be useful in many contexts. Below are some of the possibilities.

- Mind-maps: the platform can be a good place for students to share their representations of concepts in the form of concept maps. Concept maps capture students' construction of knowledge through representing the interrelationship between the ideas and concepts on the maps.
- Naming of parts: teacher gives students an image to work on and students need to write or type the names of the various important parts on the image.
- Identification of parts: instead of testing students' knowledge of the terminology, students are tested on their ability to identify areas of interest (e.g. fractures on an x-ray image).
- Music: students can write music scores and share their songs in class.
- Formulae: students can easily hand-write formulae on the system and share them in mathematics lessons.

**28. Self-study courseware packages to enable students attain key-learning outcomes specific to a compulsory PRS module (P28, T4)**

*Prof. Andrew Burd, Yijun Cai & Dr Lin Huang*

*Division of Plastic, Reconstructive and Aesthetic Surgery, Department of Surgery*

There is a world wide trend to review time honoured teaching methods for their relevance to contemporary learning. The traditional lecture format which disseminates didactic knowledge must be in its final death throes. What we envisage is the packaging of knowledge in smaller, shorter, presentation formats that can be controlled by the student. This strategy is exemplified by the Khan Academy, which is gaining in popularity and support. We are looking at this approach to fill a significant gap in the current syllabus for medical students. There is no room in the current curriculum to address this deficiency. Our hope is that taking a pro-active step in new models of teaching will inspire those who design and implement the curriculum to allow traditional ways to fade in order to make way for models more appropriate to our technological environment. (Please read short paper)

**29. A new taxonomy of four ‘knows’ under the three five-year strategies on information technology (IT) in education (P29, T12)**

*Chung Hong Tam*

*School of Continuing and Professional Studies*

The Hong Kong Government has launched three five-year strategies on Information Technology in Education (ITEd) since 1998. However, some obstacles have yet to be overcome under these strategies, such as the problems of ‘Information Overflow’ and ‘Islands of Information’. Challenges have also emerged during the education reform process in Hong Kong, such as issues of ‘richness’ versus ‘reach’ and the effectiveness and efficiency of IT in education strategies. A new taxonomy of four ‘Knows’ – ‘Know Who’, ‘Know What’, ‘Know How’ and ‘Know Why’ – have been redefined, based on four different kinds of knowledge. The first three ‘Knows’ of the new taxonomy have been developed to identify some obstacles encountered under the previous Hong Kong ITEd strategies from the viewpoint of Knowledge Management (KM). The fourth ‘Know’ - ‘Know Why’ is treated as the driving force to explain the reasons for initiating any KM project. Based on analysing the findings in the strategies from KM perspective, some results – considered to be significant – can be used to tackle the challenges of, or obstacles to education reform under the three ITEd strategies.

Keywords – ITEd strategy, taxonomy of Four ‘Knows’, knowledge management, information overflow, islands of information

**30. Turning student video projects into reusable learning modules more effective than common textbook explanations (P30)**

*Dr Kei Tat Fred Ku & Cindy Lau*

*Department of Decision Sciences and Managerial Economics*

In 2010–2011, we initiated a video project approach in the Economics for Business Studies course to encourage active learning and creativity as well as the application of knowledge by using local real-life scenarios. The video project required students to produce short films in which they incorporated macroeconomic theories in class. We found students were able to

produce video clips which were very high in quality and the idea of compiling a database of learning resources created by the students themselves began to form. In 2011–2012, apart from asking students to create their own videos, we also turned selected video clips made in the first cohort into learning modules and interactive learning activities through the addition of relevant exercises and follow-up tasks. We called these resources Multimedia Cases. The Multimedia Cases which have been compiled to date include 10 videos which were turned into cases in the domain of Microeconomics and 8 in Macroeconomics.

Students who used the new learning materials remarked that the peer videos demonstrated the applications of economic theories in their daily life. As for the motivation to learn, students felt that the videos attracted their attention in class. There were in-class discussions after the watching of past videos. Students were required to answer group questions related to the previous videos. Students remarked that supplementing the videos with exercises, discussion topics and learning activities was a good idea.

### **31. Online delivery of pre-captured lectures via Echo360 for student learning (P31, T13)**

*Dr Isabel Hwang<sup>1</sup>, Dr WS Chan<sup>2</sup> & Prof. Paul Lam<sup>3</sup>*

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Learning Biomedical Sciences can potentially be enhanced by allowing students to revisit dynamic events with both visual and audio captures of the lectures. Echo360 is an automated recording system for digitally capturing real-time lectures or pre-recording lectures in a well-controlled setting. 29%–70% of physiology lectures in six Bachelor and Master's programmes were pre-captured in a professional grade studio room at ITSC in 2011. Both the audio and visual files of the pre-recorded lectures could then be downloaded and saved to a computer (rich media) or mobile digital devices (vodcast) such as ipads and android tablets from the university e-learning platform. The results showed that more students chose to view the lecture recordings on the computer. In terms of an average % of access rate, there were variations between courses. Most students who were interviewed expressed satisfaction with having access to visual and audio recordings of their lectures. However, some teachers were hesitant about the potential benefits of lecture capture, because some worried that student attendance may have been adversely affected.

### **32. Sound strategies: Fostering social and political awareness through music (P32, T2)**

*Prof. Victor Vicente*

*Department of Music*

Journalist Fareed Zakaria observed that, with 59 countries holding political contests affecting over half the world's population, 2012 was a 'year of elections'. Noting that Hong Kong and China would be among them, I decided to teach a course on music in world politics in the spring semester of 2012 at the Chinese University of Hong Kong that would foster a greater sense of socio-political awareness among students, who I had found to be alarmingly more apolitical than the university students I had taught elsewhere in the world. This presentation outlines my strategies and successes in promoting direct and long-term engagement with the political and musical mechanisms that shape society. My approach was learner and subject centred and involved instruction from within students' realms of musical, social, and political



experience. Thus, I relied heavily on popular music and on social media and on electronic educational platforms like YouTube, Weblogs, and Moodle to teach about socio-political circumstances, not only in Hong Kong and China, but around the world. The presentation covers matters related to developing an effective curriculum, establishing conducive classroom conditions, and creating meaningful projects and assignments. It concludes by highlighting some of the ongoing impact on students beyond the classroom setting.

### **33. A dialogic perspective on film in the foreign language classroom (P33, T5)**

*Lone Petersen*

*Department of Linguistics and Modern Languages*

Authentic materials, rather than pedagogically designed materials, have been highlighted as being particularly valuable in bridging the gap between language and content instruction in foreign language programmes (Byrnes et al, 2006). This paper presents a curricular project that has sought to address this complex task of simultaneously fostering linguistic and cultural knowledge in the tertiary foreign language classroom through an exemplar of authentic text. This 'text', the film 'Jenseits der Stille (Beyond Silence)', was given the role of model text and the basis of discussion in one longer unit of the course in German V at CUHK.

Employing conceptual instruments associated with Dialogism (Holquist, 2002; Hall et al, 2005) in the demonstration of teaching materials and student work, this presentation will highlight a dialogic perspective on students' engagement with the narrative portrayed in the film as well as their engagement with the movie as a product of culture.

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### **34. The effectiveness of enhanced and unenhanced recasts on secondary school students' past tense usage in Hong Kong (P34)**

*Dr Ching Ching Lai*

*English Language Teaching Unit*

Hong Kong secondary school students often lack the procedural knowledge of using English grammar in speaking, though they possess the relevant declarative knowledge from their education. Students' tenseless L1 and lack of L2 exposure could have been the reasons. The present study therefore investigated if individualised feedback on students' use of past tense in their spoken narratives would facilitate their development. Recasts were chosen as the target feedback, because they intertwine with the ongoing speaking flow and provide model reformulation to ease learners' online cognitive load. However, controversies over the effectiveness of recasts may occur with reference to their variable explicitness and

implicitness. Moreover, the research to date has not sufficiently examined the explicit and implicit implementation of recasts in the context of Hong Kong.

As a result, the present study explores the immediate and overtime effectiveness of implicit and explicit recasts regarding there being no feedback on Hong Kong learners' use of the past tense in their spoken narratives elicited from cartoon strips. The comparative effectiveness of the two recasts was also probed. Investigation of some students' perceptions of the feedback was conducted through stimulated recalls, to suggest the causes behind the different types of effectiveness of recasts.

The study found that both recasts were more effective than no feedback on past tense in the short term. In opposition to what was hypothesized, only the effectiveness of implicit recasts were sustained overtime; and both recasts were not significantly different to each other at any particular time. From students' recalling of their thoughts, task demands, the online speaking mode, students' online cognitive constraints, students' deficient L2 mastery, the different effects of recasts and students' level of uptake may have been the underlying reasons prompting the variable effectiveness of recasts.

Overall, the present study suggested that recasts in any degrees of explicitness may be effective, depending on how controlled they are in their implementation. Explicit recasts may not be sustainable, possibly due to their potentially negative effects on learners. The suitability of recasts for students' online cognitive capacity and style may affect the explicitness and effectiveness of recasts. The online demand for a speaking task, students' L2 readiness for a specific task, and learners' different perception towards the function and their uptake of recasts may also affect the effectiveness of recasts.

**35. Careers E-Coach (P35)**  
*Samuel Hung & Raymond Leung*  
*Office of Student Affairs*

About Careers E-Coach

Funded by the Teaching Development Grant, the Careers E-coach aims at promoting early career preparation via self-learning on an easily accessible online platform for students of all disciplines.

The Modules and Page

<p>Career Planning</p> <ul style="list-style-type: none"> <li>- features a self-reflection exercise to identify career interest</li> <li>- maps out the essential career planning checkpoints that should be completed in respective study years</li> </ul> <p>(illustration/ screen)</p>	<p>Résumé Writing &amp; Covering Letter Writing</p> <ul style="list-style-type: none"> <li>- demonstrates the techniques and common mistakes through interactive exercises</li> </ul> <p>(illustration/ screen)</p>
<p>Interview Skill</p> <ul style="list-style-type: none"> <li>- lists typical interview question types</li> <li>- highlights essential skills</li> </ul> <p>(illustration/ screen)</p>	<p>'My Status' Page</p> <ul style="list-style-type: none"> <li>- enables students to select topics that are relevant to their development needs at different stages of university life</li> </ul> <p>(illustration/ screen)</p>

### Evaluation & Feedback

Since the launch of the platform in February 2011, Careers E-coach has recorded a hit rate of 38,223 (as of mid-October 2012). Students have given encouraging comments on the system being:

- flexible to complete the stages in own pace
- accessible anytime, anywhere
- interactive road-map compass offering essential credentials for job-hunting

### Way Forward

E-Coach will be further promoted through training and publicity to raise students' awareness and best utilise the online career resources.

Training: Training sessions targeting undergraduate and postgraduate students respectively were designed. More sessions have been arranged in 1st term of 2012/13, with two separate sessions tailored for non-local students.

Publicity: The Careers E-coach was introduced in orientation sessions for new students. It was also publicised to students through the OSA's website and newsletter.