ICOFE

Inaugural International Conference on Open and Flexible Education (ICOFE 2014)

Making Learning Open and Flexible

Emerging Modes and Approaches

PROGRAMME & ABSTRACTS OF PAPERS

16–17 January 2014

The Open University of Hong Kong
Hong Kong SAR

Organizer:

香港公開大學
THE OPEN UNIVERSITY OF HONG KONG

多元教育・潛力無限
Multi-mode education・Infinite potential

SilverJubilee
銀禧紀念

Contents

The organizers reserve the right to amend the programme as and when necessary.

Message from the President, The Open University of Hong Kong

Prof. John C Y Leong

President
The Open University of Hong Kong

We at the Open University of Hong Kong are very pleased to be organizing the Inaugural International Conference on Open and Flexible Education. It is an event that will serve as a powerful tool in advancing open and flexible education for the benefit of all learners.

The Conference theme, 'Making Learning Open and Flexible: Emerging Modes and Approaches', is of great interest to the Open University of Hong Kong. The OUHK began as a provider of distance learning to adults in Hong Kong but has since developed into a provider of multi-mode education: distance learning, face-to-face learning, e-learning, and blended learning. By expanding the modes that we offer, we have been able to open up education opportunities to a more diverse group of learners.

Delivering open and flexible learning is no easy task. Many students, despite using technology constantly in their daily lives, still prefer face-to-face teaching, as do many teachers. In order to succeed, we need to offer a learning experience that is more appealing and effective than the traditional learning experience. This requires us to keep up-to-date with the latest technologies, and to apply them effectively so that learners become engaged rather than frustrated. We also need to consider which modes of education are most suitable in a given situation: the most technologically advanced mode is not always the right choice.

I have no doubt that by sharing expertise and experience at this Conference, we will all leave better equipped to make education more open and flexible, and more effective.

As the OUHK is celebrating its Jubilee Anniversary this year, we are particularly pleased to be hosting this event. On the occasion of its 25th birthday, the OUHK has adopted the theme 'Multi-mode learning, Infinite Potential,' under which we will seek to continue to strive for further breakthroughs and greater achievements in teaching, scholarship and research. I believe events like this will help us to do so.

I wish all Conference participants a productive Conference and I hope you have a wonderful time exploring Hong Kong!

Message from the Chair, Conference Organizing Committee

Dr K S Yuen

Chair
Conference Organizing Committee

Director
Educational Technology and
Publishing Unit
The Open University of Hong Kong

Open and flexible education is being adopted by an increasing number of tertiary institutions that previously used only the traditional face-to-face mode of teaching. Similarly, some open universities, which have traditionally used print materials to offer distance learning, have added face-to-face or online programmes to their offerings. The organizing institution of this Conference, the OUHK, is one example. In all cases, the goal has been to make these institutions more open by offering greater choice of modes of learning.

The purpose of this Conference is to bring together all those involved in the pursuit of open and flexible education so that we can make learning more open and flexible by sharing experiences and practices, and, ideally, to develop opportunities for future collaboration. For this reason, we were very pleased at the range of participants who are joining the Conference and who will bring to it a diversity of unique experiences and perspectives.

Our four keynote speakers will be offering much food for thought on the topics of MOOCs, OERs, and blended learning, and a number of workshops, including a post-Conference workshop, will be held on these topics as well. In addition to our parallel paper presentations, the Conference includes a Best Practices of Flexible Learning Award Competition, in which teaching staff, academic units, course designers and relevant personnel participants will showcase their exemplary practices for flexible learning.

I believe you will find that there is a lot on offer in the programme. I would like to thank our Conference sponsor, the Croucher Foundation, for supporting this inaugural Conference.

We hope that delegates from overseas will enjoy Hong Kong while you are with us. A dynamic yet safe city with very convenient public transportation, Hong Kong is a great place to wander about. It offers the pleasures of both traditional Chinese culture and the dizzying diversity of a modern international city.

We look forward to getting to know you and we welcome you to the Conference and Hong Kong.

Message from the Chair, Conference Programme Committee

Dr K C Li

Chair
Conference Programme Committee

Director
University Research Centre
The Open University of Hong Kong

Welcome to the Inaugural International Conference on Open and Flexible Education (ICOFE 2014).

Openness and flexibility characterize two intimately associated education trends on which this Conference focuses. Having flourished for decades, open learning has been broadly recognized as a highly effective educational mode. There has been remarkable growth in the number of open universities and open and distance learning students. Features of open learning have increasingly been adopted by conventional higher education institutions, and openness is no longer unique to open and distance learning institutions. The recent phenomenon of massive open online courses (MOOCs) is an example of this trend.

Related to openness and modern developments in education, flexibility has emerged as one focus that no educator can afford to ignore. With improving knowledge about human learning and learner diversity, students are increasingly being offered flexibility in terms of curricular options; the means and the media to go through course contents; the learning resources available; and the ways of engaging physically, cognitively and emotionally with their study programmes. This trend highlights the importance of conferences like this one for the international exchange of analyses, empirical study results and good practices, as well as for the development of theory.

The Open University of Hong Kong (OUHK) has been evolving in line with global trends in open learning and flexible education. We take pride in organizing this Conference, especially as it coincides with our Silver Jubilee celebrations.

This 2014 event is the first in a series of ICOFE annual conferences. The OUHK plans to keep ICOFE as a platform for (1) sharing research, practices and views relevant to open and flexible education using the latest technologies and innovations, (2) facilitating networking and cross-institutional collaboration among researchers and educators in the field, and (3) promoting open and flexible education to enhance educational access and quality. We hope you will enjoy this Conference and will take part annually.

In closing, I should like to extend my sincere gratitude to members of the Programme Committee for their diligent and professional support which ensured that we have a rich, useful and inspiring programme.

Theme of the Conference — Making Learning Open and Flexible: Emerging Modes and Approaches

The theme for the Inaugural International Conference on Open and Flexible Education is 'Making Learning Open and Flexible: Emerging Modes and Approaches'. It will focus primarily on exploring which of the latest technologies and innovations can facilitate the further development of open learning towards a more flexible and personalized mode of education catering for the diverse needs of different learning communities and how these technologies can do so.

Subthemes include the following:

1   new trends in teaching and learning in technology-rich environments;

2   institutional changes towards more open and flexible learning;

3   the use of technologies to enhance teaching and learning;

4   innovations in curriculum development and pedagogy;

5   technology-mediated learning communities; and

6   the use of Web-based open educational resources, e.g. massive open online courses and other large-population courses.

The Open University of Hong Kong (OUHK)

A2 A1 B1 B2
旺角東站
Mong Kok East Station
Argyle Street
亞皆老街
九龍維景酒店
Metropark Hotel Kowloon
Princess Margaret Road
C2 C1 D1 D2
D3
C3 C4
旺角站
Mong Kok Station
E1 E2
Waterloo Road
詩正道
Pui Ching Road
佛光街
彌敦道
Nathan Road
公主道
香港公開大學
OUHK
牧愛街 Good Shepherd Street
Fat Kwong Street
富多老道
A1 A2
油麻地站
Yau Ma Tei Station
B2 B1
D

- Registration
- Opening Ceremony
- Keynote Sessions
- Light Breakfasts
- Conference Lunches
- Refreshments
- Welcome Reception
- Award Presentation
- Closing Ceremony

Multi-Purpose Hall

Block C 10/F
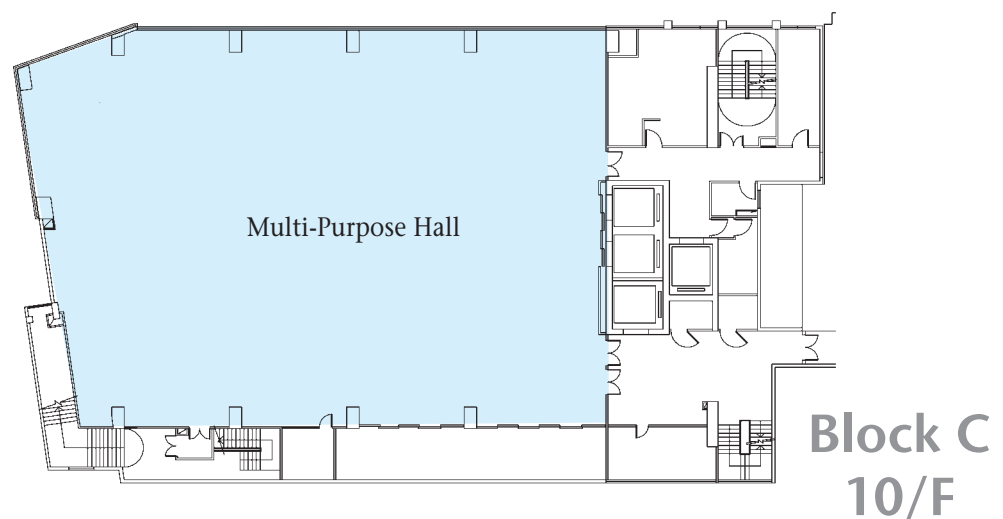
WiFi Wi-Fi Internet access is available throughout the OUHK campus.
Wi-Fi Username: ICOFE   Password: OUHK2014
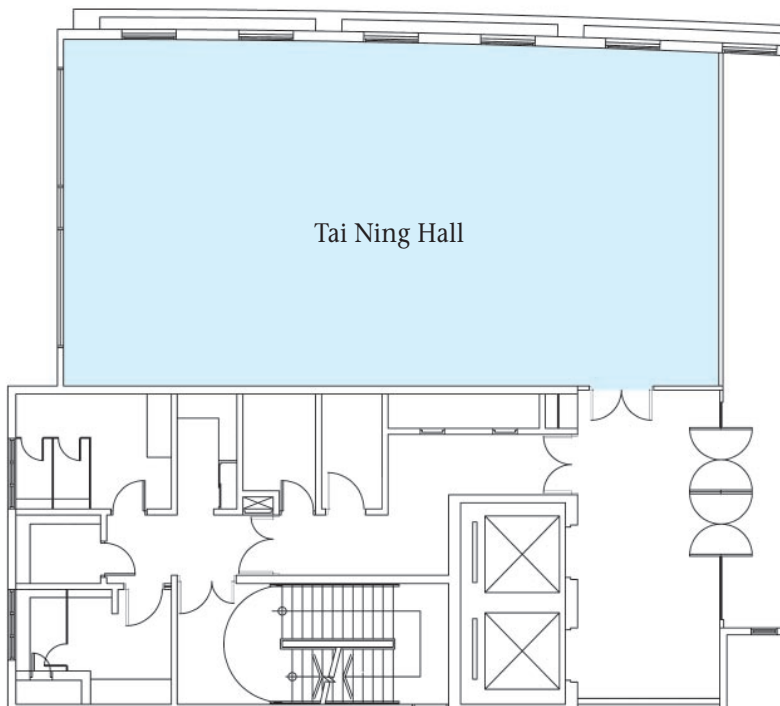
C0610, C0611, C0612, C0613, C0614, C0619

- Parallel Paper Presentations
- Sharing Session
- Workshops
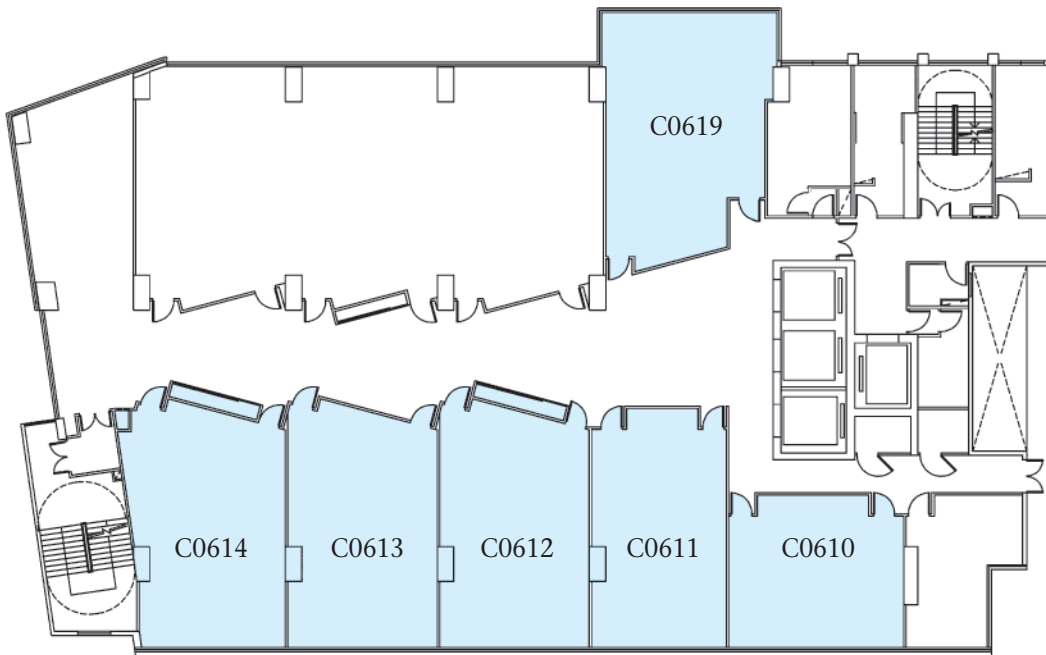
Block C 6/F

Tai Ning Hall

- Post-Conference Workshop

Block A 12/F

Committees

Organizing Committee

Chair:	Dr K S Yuen	The Open University of Hong Kong
Vice-chair:	Dr K C Li	The Open University of Hong Kong
Members:	Dr Simon K S Cheung	The Open University of Hong Kong
	Dr Eva Y M Tsang	The Open University of Hong Kong
	Mr Alex J W Wong	The Open University of Hong Kong
	Dr Andrew K F Lui	The Open University of Hong Kong
	Dr Linda Y K Lee	The Open University of Hong Kong
	Dr Franklin S S Lam	The Open University of Hong Kong
	Dr Robin R W Yang	The Open University of Hong Kong

Programme Committee

Chair:	Dr K C Li	The Open University of Hong Kong
Vice-chair:	Dr K S Yuen	The Open University of Hong Kong
Members:	Prof. Mohamed Ally	Athabasca University, Canada
	Dr F T Chan	HKU School of Professional and Continuing Education
	Prof. Chen Li	Beijing Normal University
	Dr Simon K S Cheung	The Open University of Hong Kong
	Dr Giuliana Dettori	The Istituto per le Tecnologie Didattiche, Italy
	Prof. Wolfgang Halang	FernUniversität in Hagen, Germany
	Ms Baljit Kaur	The Open University of Hong Kong
	Prof. Reggie Kwan	Caritas Institute of Higher Education
	Dr Franklin S S Lam	The Open University of Hong Kong
	Dr Linda Y K Lee	The Open University of Hong Kong
	Dr Ruby P W Lee	The Open University of Hong Kong
	Dr Li Mei Kuen	The Open University of Hong Kong
	Prof. Li Yawan	The Open University of China
	Mr Lim Kin Chew	SIM University, Singapore
	Dr Andrew K F Lui	The Open University of Hong Kong
	Prof. Eric W T Ngai	The Hong Kong Polytechnic University
	Prof. Sun Fuwan	The Open University of China
	Dr Tam Chun Wai	The Open University of Hong Kong
	Dr Vincent Tam	The University of Hong Kong
	Dr William Tang Ko Wai	The Open University of Hong Kong
	Mr Tong Siu Hung	Hong Kong Baptist University
	Prof. Stefan Trausan-Matu	Politehnica University of Bucharest, Romania
	Dr Eva Y M Tsang	The Open University of Hong Kong
	Dr Philips Wang	Caritas Institute of Higher Education
	Prof. Bebo White	Stanford University
	Mr Alex J W Wong	The Open University of Hong Kong
	Ms Alisa Wong Ka Po	The Open University of Hong Kong
	Ms Wendy Wong	The Open University of Hong Kong
	Dr Robin R W Yang	The Open University of Hong Kong

Programme

DAY 1
16 JAN 2014
THURSDAY

08:00–09:00	Registration and Light Breakfast	10/F Multi-purpose Hall
09:00–09:30	Opening Ceremony	10/F Multi-Purpose Hall

09:00–09:30 — Opening Ceremony — 10/F Multi-Purpose Hall

Welcoming Remarks
Prof. John C Y Leong
President, The Open University of Hong Kong

Address by Guest of Honor
Ms Michelle Li
Acting Permanent Secretary for Education
Education Bureau, Hong Kong SAR

Opening Address
Dr K S Yuen
Chair, Organizing Committee

09:30–10:30 — Keynote Session I — 10/F Multi-Purpose Hall

The phenomenology of learning in the connected age: From democratization to searching for universal scaling laws

Chairperson
Dr K C Li   Chair, Programme Committee

Keynote Speaker
Prof. Leung Chun Ming
Vice President (Technology and Development)
The Open University of Hong Kong
Please refer to p.16 for details.

10:30–11:00	Coffee Break	10/F Multi-Purpose Hall
11:00–12:30	Parallel Paper Presentations *Please refer to p.12 for details.*	6/F Block C: C0610, C0612, C0613, C0614, C0619
12:30–14:00	Conference Lunch	10/F Multi-Purpose Hall
14:00–15:30	Parallel Paper Presentations *Please refer to p.13 for details.*	6/F Block C: C0610, C0612, C0613, C0614
	Sharing Session: Best Practices of Flexible Learning *Please refer to p.21 for details.*	6/F Block C: C0619
15:30–16:00	Coffee Break	10/F Multi-Purpose Hall
16:00–17:00	Parallel Paper Presentations *Please refer to p.14 for details.*	6/F Block C: C0610, C0612, C0613, C0614, C0619

17:00–18:00 — Keynote Session II — 10/F Multi-Purpose Hall

In the trenches: Delivering on the promise of open educational resources

Chairperson
Dr K S Yuen   Chair, Organizing Committee

Keynote Speaker
Prof. David Wiley
Brigham Young University, USA
Please refer to p.17 for details.

18:00–18:30	Welcome Reception	10/F Multi-Purpose Hall

Programme

DAY 2 **17 JAN 2014** **FRIDAY**	08:00–09:00	Registration and Light Breakfast

Time	Event	Location
08:00–09:00	Registration and Light Breakfast	10/F Multi-Purpose Hall
09:00–10:00	Keynote Session III **The online revolution: Education for everyone** Chairperson Dr Andrew Lui The Open University of Hong Kong Keynote Speaker **Prof. Andrew Ng** Stanford University, USA & Coursera *Please refer to p.18 for details.*	10/F Multi-Purpose Hall **Video-conferencing**
10:00–10:30	Coffee Break	10/F Multi-Purpose Hall
10:30–12:00	Parallel Workshops: Conference Workshop I **Best practices for designing mobile content** **Dr Eva Tsang** The Open University of Hong Kong Conference Workshop II **Creating and adopting open textbooks** **Prof. David Wiley** Brigham Young University, USA Conference Workshop III **OER curation and search: The issues at hand** **Mr Ishan Sudeera Abeywardena** Wawasan Open University, Malaysia Conference Workshop IV **Offering massive open online courses (MOOCs)** **Prof. Louis Lee** The Chinese University of Hong Kong *Please refer to p.20 for details.*	6/F Block C: C0610, C0611, C0612, C0613
12:00–13:30	Conference Lunch	10/F Multi-Purpose Hall
13:30–15:30	Parallel Paper Presentations *Please refer to p.15 for details.*	6/F Block C: C0610, C0611, C0612
15:30–16:00	Coffee Break	10/F Multi-Purpose Hall

*If you wish to attend the Conference Dinner, you must register **before 12.00** at the registration counter to get your dinner coupon.*

Programme

DAY 2 **17 JAN 2014** **FRIDAY**	16:00–17:00	Keynote Session IV **Flexible futures: A framework to assure quality in blended learning** Chairperson Dr Linda Lee The Open University of Hong Kong Keynote Speaker **Prof. Bob Fox** University of New South Wales, Australia *Please refer to p.19 for details.*	10/F Multi-Purpose Hall
	17:00–17:30	Closing Ceremony with Award Presentation and Introduction to ICOFE 2015 Closing Remarks **Prof. Danny S N Wong** Vice President (Academic), The Open University of Hong Kong Closing Speech **Dr K C Li** Chair, Programme Committee	10/F Multi-Purpose Hall
	18:30–20:00	Conference Dinner	Star of Canton Restaurant, Tsim Sha Tsui

Post-Conference

18 JAN 2014 **SATURDAY**	09:00–09:30	Registration	A 12/F Foyer
	09:30 –11:00	Post-Conference Workshop **Using open textbooks in Hong Kong schools** **Dr K S Yuen** The Open University of Hong Kong *Please refer to p.21 for details.*	Tai Ning Hall (A1217)

Parallel Paper Presentations
<div align="right">11:00–12:30</div>

C0610	C0612	C0613	C0614	C0619
New trends in teaching and learning in technology-rich environments	The use of technologies to enhance teaching and learning	Innovations in curriculum development and pedagogy	The use of technologies to enhance teaching and learning	The use of technologies to enhance teaching and learning
Practice and exploration of physical modelling instruction **Yu He, Ping Wu and Xiao Zhang** Southwest Jiaotong University Chengdu, China p.23	**Towards building an adaptive educational hypermedia system for modern distance education** **Samuel Ping-Man Choi and Sze-Sing Lam** The Open University of Hong Kong, Hong Kong SAR, China p.30	**The development and practice of m-learning courses based on tutor-directed online teaching** **Jianjun Hou and Kuiyuan Zhang** Peking University Beijing, China p.46	**From Internet games centres towards e-community learning centres in Thailand** **Jomphong Mongkhonvanit** Siam University Bangkok, Thailand p.31	**Use of lecture-tutorial Web streaming in distance e-learning** **Luisa A Gelisan** University of the Philippines Open University Los Baños, Laguna, the Philippines p.33
Open education versus flexible education: Divergence and convergence **Kam Cheong Li and Helen Hoi Kuan Lam** The Open University of Hong Kong Hong Kong SAR, China p.23	**A new immersion platform for online English teaching** **Jun Shen** Jiangsu Radio and Television University Nanjing, China p.30	**The information literacy of foreign students in China and the training strategy** **Wang Yunwu** Jiangsu Normal University Xuzhou, China p.46	**Incidental vocabulary learning in reading contexts aided by mobile phones** **Gladwin George** Middle East College Sultanate of Oman p.32	**Use of technology to enhance teaching and learning in the National Open University of Nigeria** **Vincent Ado Tenebe and Rotimi Ogidan** National Open University of Nigeria Lagos, Nigeria p.34
Trends in distance examinations in an IT age **Kunchon Jeotee** Sukhothai Thammathirat Open University Nonthaburi, Thailand p.24	**Playing and learning in an 'arts and crafts' class through online social networking** **Soamshine Boonyananta** Chulalongkorn University Bangkok, Thailand p.31	**Cognitive apprenticeship: An effective pedagogy in open and flexible learning** **Yousaf Khan** Allama Iqbal Open University Islamabad, Pakistan p.47	**Use of instant messaging communication in teaching and learning** **Francis Yue** SCOPE, City University of Hong Kong Hong Kong SAR, China p.32	**Effective instructional design for mobile learning** **Eva Y M Tsang, K S Yuen and Belle P P Cheung** The Open University of Hong Kong Hong Kong SAR, China p.34
The use of social networking sites and social capital: The role of open university systems in Nigeria **Suleiman Alhaji Ahmad** Bauchi State University Azare, Nigeria p.24	**Institutional changes towards more open and flexible learning** **A study on the influence factors of educational outcomes in a 'third-tier' TV university** **Lu Shoudong** Zhongshan Radio & TV University Guangdong, China p.50	**Development of an instrument for programme evaluation: An illustration from a nursing programme** **Linda Yin King Lee, Alisa Ka Po Wong, Joseph Kok Long Lee, Wai Shun Yuen and Joey Che Yan Yip** The Open University of Hong Kong Hong Kong SAR, China **Yee Shan Wong** Queen Elizabeth Hospital Hong Kong SAR, China p.47	**An automatic approach for analysing online discussion forums via text mining** **Tak-Lam Wong, Wai Shing Ho, Jeff Tang and Fu Lee Wang** Caritas Institute of Higher Education Hong Kong SAR, China **Gary Cheng** The Hong Kong Institute of Education Hong Kong SAR, China p.33	**Cross-cultural comparison: The introduction of new technology with postgraduate students in Hong Kong and the United Kingdom** **Helen Boulton** Nottingham Trent University Nottingham, the United Kingdom p.35

			14:00–15:30
Parallel Paper Presentations			
C0610	**C0612**	**C0613**	**C0614**
New trends in teaching and learning in technology-rich environments	**Institutional changes towards more open and flexible learning**	**The use of technologies to enhance teaching and learning**	**The use of Web-based open educational resources**
Digital narratives and the teaching of writing **Mutuota Kigotho** University of New England Armidal, Australia p.25	The profiles, motivations and expectations among UPOU celebrity students **Emely M Amoloza and Elinor T Lopez** University of the Philippines Open University Los Baños, Laguna, the Philippines p.51	A study on the influence of the new media on college students' learning styles **Chen Weidong** Suzhou University of Science and Technology and Soochow University Suzhou, China **Ye Xindong** Wenzhou University Zhejiang, China p.36	Designed for cross-cultural communication — Research on instructional message design of the Confucius Institute Online **Xuelian Li** Shanghai International Studies University Shanghai, China p.55
Munici pality level predictive workforce analytics for continuous education **Jessie Cai** SAP Product & Innovations, SAP Asia Pte Ltd Regional Headquarters Mapletree Business City, Singapore p.25	Online student portal: Learners' support system in an open and distance e-learning environment **Percia V Secreto and Rhodora L Pamulaklakin** University of the Philippines Open University Los Baños, Laguna, the Philippines p.51	Enabling students to use toolkits in open and flexible learning **Yousaf Khan** Allama Iqbal Open University Islamabad, Pakistan p.36	Public opinion on OER and MOOCs: A sentiment analysis of Twitter data **Ishan Sudeera Abeywardena** Wawasan Open University Penang, Malaysia p.55
Research on students' learning behaviour based on social media **Hui Jin** Shanghai International Studies University Shanghai, China p.26	Moodle e-learning in higher education: A case study of its applications and impact in a university in Taiwan **Shu-Chiu Hung** Ming Chuan University Taiwan **Xiangyang Zhang** Jiangsu Open University Nanjing, China p.52	The design and implementation of a mobile app for language learning **Kenneth Wong, Wai-Shing Ho, Fu Lee Wang, Reggie Kwan, Kat Leung and Issac Cheung** Caritas Institute of Higher Education Hong Kong SAR, China p.37	Using web-based corpora for flexible language learning: Japanese student views and feedback **Yoko Hirata and Yoshihiro Hirata** Hokkai-Gakuen University Sapporo, Japan p.56
Institutional changes towards more open and flexible learning Towards a mobile learning environment at Caritas Institute of Higher Education **Lai-On Chun, Wing-Hang Yu, Wai-Man Pang and Jeff K T Tang** Caritas Institute of Higher Education Hong Kong SAR,China p.50	Openness: What it means to the support unit staff **Alvie Simonette Q Alip and Yasele Irene Angela M Yambao** University of the Philippines Open University Los Baños, Laguna, the Philippines p.52	Modification of respirator donning skill: Adopting the emerging technology of real time leakage monitoring in nursing education **Cathy Nga-yan Lee, Simon Ching Lam and Andrew Kwok-fai Lui** The Open University of Hong Kong Hong Kong SAR, China **Billy On-ying Pang** Tung Wah College Hong Kong SAR, China p.37	A study of guidelines for developing a Web information system for art teachers in Thailand **Ampai Tiranasar, Intira Phrompan, Nattakarn Anantrawan, Sarita Juaseekoon and Nuttida Pujeeb** Chulalongkorn University Bangkok, Thailand p.56

Parallel Paper Presentations   16:00–17:00

C0610	C0612	C0613	C0614	C0619
New trends in teaching and learning in technology-rich environments	**The use of technologies to enhance teaching and learning**	**Technology-mediated learning communities**	**The use of technologies to enhance teaching and learning**	**The use of technologies to enhance teaching and learning**
Developing a theoretical framework for research in open and flexible learning in an ICT-rich environment: A new trend in educational research **Yousaf Khan** Allama Iqbal Open University Islamabad, Pakistan p.26	**Different roles of digital video in ESL speaking instruction** **Tristan Currie** University of Technology Sydney, Australia p.38	**An empirical study on using web-based social media to build a learning community** **Ricky Yuk-kwan Ng and Cecilia Po-san Leung** Vocational Training Council Hong Kong SAR, China p.58	**Designing a 3D-based computer-assisted instruction tool for teaching orthographic projection** **Geeng-Neng You, Ming-Hsien Hung and Yung-Chou Hsu** National Taichung University of Science and Technology Taichung City, Taiwan p.40	**Students' use of Facebook in King Saud University** **Mohamed S H AL Moshaikeh** King Saud University Riyadh, Saudi Arabia p.41
A novel teaching model for web-based university physics courses **Hongyan Wang** Southwest Jiaotong University Chengdu, China **Yuexia Lin** Emei Campus, Southwest Jiaotong University Emei, China p.27	**Educating 'the Net generation': Enhancing student engagement with Web 2.0 tools and mobile technology in music education** **Naomi McGrath and Alana Blackburn** University of New England Armidale, Australia p.38	**Grouping dispersed learners with recommender systems** **Wolfgang A Halang and Maytiyanin Komkhao** FernUniversität Hagen, Germany **Sunantha Sodsee** King Mongkut's University of Technology North Bangkok Bangkok, Thailand p.58	**Catering for learners' diverse needs through blended learning** **Kam Cheong Li** The Open University of Hong Kong Hong Kong SAR, China p.40	**Meeting the higher education needs of mainland China** **Dave Towey** The University of Nottingham Ningbo, China p.42
Innovations in curriculum development and pedagogy **Innovation and social impact in Hong Kong higher education: Some lessons from Massachusetts Institute of Technology and Tohoku University** **Cheung Ching Yuen** The Chinese University of Hong Kong Hong Kong SAR, China **Carol Poon Man Wai** The Open University of Hong Kong Hong Kong, China p.48	**Developing mobile learning modules for the enhancement of language proficiency** **K S Yuen, Eva Y M Tsang and Belle P P Cheung** The Open University of Hong Kong Hong Kong, SAR, China p.39	**Enabling an interactive campus life using a marker-based augmented reality interface** **Jeff K T Tang and Wai-man Pang** Caritas Institute of Higher Education Hong Kong SAR, China **Pak Ping Wong, Tsan Sing Chan and Long Yin Ling** The Open University of Hong Kong Hong Kong SAR, China p.59	**The design and implementation of a pre-enrolment guide for students pursuing higher education** **Kenneth Wong, Wai-Shing Ho, Reggie Kwan, Fu Lee Wang, Louise Luk and Michael Cheung** Caritas Institute of Higher Education Hong Kong SAR, China p.41	**Mobile Sage Grapher for simulation of mathematics** **Shaowei Sun, Kyung-Won Kim and Sang-Gun Lee** Sungkyunkwan University Seoul, Korea p.42

Parallel Paper Presentations   13:30–15:30

C0610	C0611	C0612
New trends in teaching and learning in technology-rich environments	**Institutional changes towards more open and flexible learning**	**The use of technologies to enhance teaching and learning**
MOOC phenomena in Japan: jMOOC consortium and OUJ MOOC **Tsuneo Yamada** The Open University of Japan Chiba, Japan p.27	Partnering with a community to develop a technology-rich open access online unit: Melawhat? **Yoni Luxford, Rosalind James and Alan Wylie** University of New England Armidale, Australia **Maura Luxford** Melawhat? Australia p.53	Moving online: A best practice approach to achieving a quality learning experience for online education **Sue Whale, Naomi McGrath, Tim Cluley, Llara McClenaghan and Alana Blackburn** University of New England Armidale, Australia p.43
Timely feedback in online education: Are student expectations realistic? **Leopold Bayerlein** University of New England Armidale, Australia p.28	Teaching with 'post-PC' tablets: An ongoing study of teacher adoption of iPads in higher education **Tianchong Wang and Daniel Churchill** The University of Hong Kong Hong Kong SAR, China p.53	Affordances of digital media for building research capability online **Jean A Saludadez** University of the Philippines Open University Baños, Laguna, the Philippines p.43
Emergence in learning: Understanding the evolution of knowledge via complex networks **Albert C T Cheung and Leung Chun Ming** The Open University of Hong Kong Hong Kong SAR, China **Guanrong Chen** City University of Hong Kong Hong Kong SAR, China p.28	The use of videoconferencing: An evaluation of a partnership model in an Australian University **Christine Ure, Damian Blake and Bonnie Yim** Deakin University Australia **Marjory Ebbeck** University of South Australia Australia p.54	Analysis and appplication of Weixin in online interactive teaching **Xuan Zhang** Jiangsu Open University Nanjing, China p.44
	The impact of the Students Academic Records Information System (SARIS) on learning flexibility in ODL at the Open University of Tanzania **Tolly S A Mbwette, Kassimu A Nihuka and Regina Monyemangene** Open University of Tanzania Dar es Salaam, Tanzania p.54	The delivery of teacher education programmes in regional Victoria, Australia: Opportunities and challenges **Bonnie Yim, Louise Paatsch, Janet Moles, Bernadette Walker-Gibbs and Terri Redpath** Deakin University, Australia p.44
		The challenges of implementing an ICT curriculum in primary schools in Dar es Salaam, Tanzania **Kassimu A Nihuka and Florence Peter** Open University of Tanzania Dar es Salaam, Tanzania p.45
Innovations in curriculum development and pedagogy	**The use of Web-based open educational resources**	**Technology-mediated learning communities**
The impact of cross-year peer tutoring on developing a culture of excellence in an undergraduate computing programme **Andrew K Lui, Maria H M Poon, H W Go, Vanessa S C Ng and Terri W Y Wong** The Open University of Hong Kong Hong Kong SAR, China p.48	An investigation of China's national online excellent courses based on encounter theory **Beibei Zhang** South China Normal University Guangzhou, China p.57	Alphabet Soup: Developing game mechanics as open education resources **Dana Ruggiero** Bath Spa University Bath, England p.59
Turning learning: A case study of flipped learning at an Australian university **Ronald Kordyban and Trishita Mathew** Bond University Robina, Australia p.49		
Institutional changes towards more open and flexible learning	**Technology-mediated learning communities**	
Building capacity for open education at a large regional multi-campus university **Sarah Lambert and Eeva Leinonen** University of Wollongong Australia	The shift in the lecturers' role accompanying a move from classroom teaching to online teaching with media-rich discourse for open learning **Xiangyang Zhang** Jiangsu Open University Nanjing, China **Shu-Chiu Hung** Ming Chuan University Taiwan	

Prof. Leung Chun Ming
Vice President
(Technology and Development),
The Open University of Hong Kong

Prof. Leung Chun Ming is the Vice President (Technology & Development) at the Open University of Hong Kong (OUHK). Prior to joining the OUHK in 1998, he was a physics professor at the Rensselaer Polytechnic Institute in the US for 20 years. He received his PhD in Astronomy from the University of California at Berkeley. His professional interest is in computational astrophysics and technology-enhanced education. In 1995–97, he pioneered in Hong Kong studio teaching and synchronous distance learning using Internet and ISDN technology, and promoted Web-based instruction. At the OUHK he is responsible for the planning and development of physical facilities and technology infrastructure in teaching, administration and student support services. He oversees the operation of three units: Information Technology, Educational Technology and Publishing, and the Library. More recently, he directed the Centre for Innovation project (2007–2011). Its main objective was to develop a next-generation, student-centred, teaching and learning environment characterized by flexibility, connectivity, interactivity, personalization, and intelligence. Currently he is overseeing a project to develop an open textbook system for primary, secondary and tertiary education in Hong Kong.

Keynote address

The phenomenology of learning in the connected age: From democratization to searching for universal scaling laws

The Web has transformed the way people work, play, learn and do business. Its fundamental values — openness, freedom, transparency, participation, collaboration, collectivity, flexibility and meritocracy — have challenged many tradition-bound principles and practices in education. With social and participatory media and tools enabling open and collaborative practices, a democratization of learning and education is emerging that embodies these core values. Examples include the emergence of OERs and MOOCs; and the blurring of boundaries in teaching/learning/research and in formal/informal modes of learning, communication, and publication. Likewise, the convergence of three phenomena — proliferation of social networks, availability of large-scale data sets, and advancement of complexity sciences — is creating new opportunities for research in education, e.g. applying theories of complex systems to data-driven studies of collective phenomena of learning in a connected environment. Compared with hierarchical systems, complex systems are large networks of components characterized as being open, self-organized, nonlinear, dynamic, and emergent. Many natural and man-made systems, activities and phenomena can be described as complex systems and modelled as scale-free networks with power-law* properties, e.g. the Internet, power grids, cities, insect colonies, immune systems, and scientific collaboration. The search for universal scaling laws that govern human behavioural dynamics in learning communities is a grand quest of educational research that seeks to gain insight into learning in the connected age. This presentation delineates some emerging trends and issues in educational practices in an open and connected environment, and highlights areas in which complexity sciences are applied to studies of collective phenomena of learning in the networked ecosystem.

....

* Scaling or power laws express one variable as a nonlinear function of another raised to a power, $f(x) \propto x^{-\gamma}$, where γ is a positive constant.

Keynote Session II

Prof. David Wiley

Professor,
McKay School of Education
Brigham Young University

Professor David Wiley teaches in the McKay School of Education at Brigham Young University and is a Shuttleworth Fellow, working to lower the cost and improve the quality of education. He is currently leading Lumen Learning, an organization dedicated to supporting and improving the adoption of open educational resources by middle schools, high schools, community and state colleges, and universities. As an academic, Professor Wiley has received much recognition for his work, including an NSF CAREER grant and appointments as a Peery Social Entrepreneurship Research Fellow in the BYU Marriott School of Business, Senior Fellow for Strategy with the Saylor Foundation, and Nonresident Fellow in the Center for Internet and Society at Stanford Law School. As a social entrepreneur, Professor Wiley has founded or co-founded numerous entities including Lumen Learning, Degreed, and the Open High School of Utah. In 2009, Fast Company named Professor Wiley one of the 100 Most Creative People in Business.

Keynote address

In the trenches: Delivering on the promise of open educational resources

This talk provides a brief introduction to the concept and promise of open educational resources (OER), and moves directly into specific examples of using OER to decrease costs and improve the quality of education: the Utah Open Textbook Project, the Kaleidoscope Open Course Initiative, and the Textbook Zero model of 100% OER-based degree programmes. Research findings and implications for future directions will be presented.

Prof. Andrew Ng
Director,
Stanford Artificial Intelligence Lab,
Stanford University
Co-founder, Coursera

Andrew Ng is a Co-founder of Coursera, and a Computer Science faculty member at Stanford. In 2011, he led the development of Stanford University's main MOOC (Massive Open Online Courses) platform, and also taught an online Machine Learning class that was offered to over 100,000 students, leading to the founding of Coursera. Ng's goal is to give everyone in the world access to a high-quality education, for free. Today, Coursera partners with top universities to offer high-quality, free online courses. With 80 partners, nearly 400 courses, and more than 3.6 million students, Coursera is currently the largest MOOC platform in the world. Outside online education, Ng's research work is in machine learning; he is also the Director of the Stanford Artificial Intelligence Lab.

Keynote address

The online revolution: Education for everyone

In 2011, Stanford University offered three online courses, which anyone in the world could enrol in and take for free. Together, these three courses had enrolments of around 350,000 students, making this one of the largest experiments in online education ever performed. Since the beginning of 2012, we have transitioned this effort into a new venture, Coursera, a social entrepreneurship company whose mission is to make high-quality education accessible to everyone by allowing the best universities to offer courses to everyone around the world, for free. Coursera classes provide a real course experience to students, including video content, interactive exercises with meaningful feedback, using both auto-grading and peer-grading, and a rich peer-to-peer interaction around the course materials. Currently, Coursera has 80 universities and other partners, and over 3.6 million students enrolled in its nearly 400 courses. These courses span a range of topics including computer science, business, medicine, science, humanities, social sciences, and more. In this talk, I will report on this far-reaching experiment in education, and why we believe this model can provide both an improved classroom experience for our on-campus students, via a flipped classroom model, as well as a meaningful learning experience for the millions of students around the world who would otherwise never have access to education of this quality.

Prof. Bob Fox
Deputy Director,
Learning and Teaching Unit
University of New South Wales

Professor Bob Fox has over 30 years experience in teaching and research in Australia, Southeast Asia and Great Britain. He is a Professor and the Deputy Director of the Learning and Teaching Unit at the University of New South Wales (UNSW). His research interests focus on teacher professional development; technological practice and change in higher education; blended and mobile learning; e-leadership; innovative physical and virtual learning environments. He is a recipient of the University of Hong Kong (HKU) University Teaching Fellowship (UTF) for excellence in teaching. The UTF is awarded on average to four academic staff per year. He was an Associate Professor and the Deputy Director of the Centre for Information Technology in Education of the Faculty of Education at HKU for twelve years, serving in the last three years as Assistant Dean (Learning Environments) of the Faculty of Education. He has been involved extensively in international academic and professional communities. This includes sitting on international, regional and local editorial boards and on the programme and organizing committees of over twenty international conferences, and on thirty occasions giving keynotes or invited presentations or taking part in consultancies concerning technology in education. He holds a concurrent appointment as Honorary Professor in the Faculty of Education at HKU.

Keynote address

Flexible futures: A framework to assure quality in blended learning

There are compelling economic and social reasons to raise the quality of open and flexible learning. International evidence identifies links between levels of educational attainment and opportunities for employment. At the same time, higher education is faced with major challenges: increased numbers entering the system; changes in student demographics; and ubiquitous access to mobile and cloud-based technologies. Changing patterns of work also bring new demands and a much greater emphasis on lifelong learning and ongoing training. Much of what is needed is higher-order knowledge, which can only be acquired through higher education. In the face of these major challenges, we have an opportunity to transform education, to widen participation to include those previously excluded, to harness higher education to assure we have the necessary workforce to successfully address changing demands in knowledge-based economies. In the face of these challenges, new forms of flexible and blended learning entry, such as MOOCS in higher education, demand that we pay close attention to the quality of the education provided, whether it is delivered purely face-to-face, solely online or through a mix of the two modes. This presentation examines a framework for assuring a quality education, no matter what the mode of delivery.

Conference Workshops

Conference Workshop I

Best practices for designing mobile content

Dr Eva Tsang
The Open University of Hong Kong

This workshop focuses on the design process for mobile learning. It will include the essential elements of designing mobile content with an emphasis on creating user experiences and interaction in learning. Participants will be provided with examples to explore how to adapt print-based materials into mobile content that is simple, engaging, and highly effective.

Participants are suggested to bring their own iPad devices so that they can download and explore the features and usability of the mobile apps developed by the OUHK.

Conference Workshop II

Creating and adopting open textbooks

Prof. David Wiley
Brigham Young University

This workshop will introduce the ten-step process for open textbook creation and adoption pioneered in the state of Utah, USA. From identifying faculty and OER, to professional development, to the materials review process, this workshop provides an overview of how to create and adopt open science textbooks. See the whitepaper at http://www.lumenlearning.com/whitepapers.

Conference Workshop III

OER curation and search: The issues at hand

Mr Ishan Sudeera Abeywardena
Wawasan Open University

This technical workshop focuses on the current issues faced by the academic community, especially in Open and Distance Learning (ODL), with respect to searching for credible, relevant and academically useful open educational resources (OER). The workshop will cover four key aspects: (1) the current OER search dilemma; (2) the concept of metadata; (3) existing search methods; and (4) useful OER search tools. Among the topics covered will be the current problem within the context of OER search, the limitations of Google and native search mechanisms, federated search, semantic search, metadata standards and some large-scale solutions to the OER search dilemma. The last part of the workshop will introduce the *OERScout* search framework which uses text mining techniques and faceted search to recommend *Desirable* OER for teaching and learning.

Conference Workshop IV

Offering massive open online courses (MOOCs)

Prof. Louis Lee
The Chinese University of Hong Kong

Massively open online courses (MOOC) have been popular in recent years. While this course format may be flexible and efficient in science and engineering subjects, its effectiveness in the humanities, in which learning outcomes, and assessment criteria, are hard to standardise, is controversial. The speaker has been working on a humanities MOOC (Classics of Chinese Humanities: *Guided Readings* by Prof. Lee Ou-Fan Leo) at the Chinese University of Hong Kong, and he will discuss the challenges encountered during the building of the course in his presentation.

Post-Conference Workshop

Using open textbooks in Hong Kong schools

Dr K S Yuen
The Open University of Hong Kong

Presentation outline: The presentation will start with a brief introduction to open educational resources, particularly open textbooks, and how different countries around the world are developing and using open textbooks for learning and teaching at reduced cost. There will be a demonstration of various open textbook systems around the world, and how they are used by teachers, students and the general public. The presenter will then describe the Open Textbooks for Hong Kong project, which is an online collaborative environment containing open source textbooks which are free, flexible, current and directly available for use, adaptation and distribution by schools. The progress of the project will be reported, and the plan for the establishment of a consortium of open textbooks will be revealed. Some sample textbooks will be distributed during the workshop. The ways in which the system will be sustained in future will also be discussed.

Benefits to audience: The audience will be introduced to the novel concept of adopting open textbooks in the Hong Kong classroom, which is an alternative to traditional textbooks published by commercial publishers. Participants will be led to access an abundance of open educational resources and open textbooks already available on the Internet for adoption and adaptation in their daily learning and teaching. They will also be shown the Open Textbooks for Hong Kong project, which teachers will find of interest.

Medium of Presentation: English

Best Practices of Flexible Learning Award Competition

Submission I

A project and problem based flexible learning model to leverage education of information technology in business

Dr Ng Kwan Keung
Caritas Institute of Higher Education
Hong Kong SAR, China

Submission II

Augmentation of flexibility and consistency in language learning

Ms Norris Lau
HKU SPACE
Hong Kong SAR, China

Submission III

Balancing life: An alternate reality gaming platform for online undergraduate accounting education

Dr Bayerlein Leopold
University of New England Business School
Armidale, Australia

Submission IV

Flexible learning: A prospective application in delivering specifications of competency standards-based courses

Dr Philip Y L Wong
Caritas Institute of Higher Education
Hong Kong SAR, China

Submission V

Flexible learning for professional training: PCTME model and its application

Mr Duan Chenggui
HKU SPACE
Hong Kong SAR, China

Abstracts of Papers

An effort has been made to classify the abstracts under the conference sub-themes to which they primarily relate, although in some cases they obviously span more than one sub-theme.

Practice and exploration of physical modelling instruction

Yu He, Ping Wu and Xiao Zhang
Southwest Jiaotong University
Chengdu, China

Introducing modelling instruction into college physics helps the students to analyse and understand problems. Moreover, it contributes to students' understanding of the process of scientists' cognition of the real world, and the mode of constructing and applying knowledge. In the process of teaching, the teacher instructs the students on selecting, constructing, validating and analysing models. According to the characteristics of the first and second year students, we use Matlab to accomplish the numerical simulations, which can reduce programming intensity and motivates students to examine relevant phenomena and conceptions, and aim at modelling. In this paper, we introduce some examples of the practice of teaching physical modelling and examine the related research in this area.

Open education versus flexible education: Divergence and convergence

Kam Cheong Li and Helen Hoi Kuan Lam
The Open University of Hong Kong
Hong Kong SAR, China

The terms 'open education' and 'flexible education' have been closely associated for decades and often used in related contexts. Open education covers a group of educational beliefs, philosophies and practices, such as open admission and open commitment. While flexible education has generally been employed in a relatively less philosophical and technical sense, the key to flexibility has been recognized as the provision of choice.

This paper reviews the two terms by analysing their theoretical and semantic components as well as usage patterns in real-life practices. Though flexibility in educational provision is commonly considered as an integral part of open education, the two terms embody distinctive semantic senses. In addition, flexible education is practised not only in open education organizations but also institutions providing other modes of education. There has recently been a tendency to use flexible education in a more defined or technical sense, and flexibility has been applied to a variety of areas such as entry requirement, study time, syllabi, instructional approach and resources.

Taking into account the trends in both open learning and conventional institutions, this paper highlights the phenomenon that both types of educational establishments are enhancing their level of flexibility in a broad array of their teaching and learning provisions. The line between open and conventional education is becoming blurred. It is also argued that educational flexibility is where open and conventional educational modes converge.

Trends in distance examinations in an IT age

Kunchon Jeotee
Sukhothai Thammathirat Open University
Nonthaburi, Thailand

This paper aims to generalize about the revolutionary change in examinations from paper-and-pencil tests to technology-based tests, such as the e-examinations in Sukhothai Thammathirat Open University (STOU) and the online examinations in the University of the Philippines Open University (UPOU). Online learning/teaching has been implemented for a considerable time, and most open universities, and also residential universitities, now offer study programmes in this way. However, online examinations seem to be provided less often. The author explored this issue and observed the online examinations in UPOU. The experience of STOU and UPOU suggests that the trends of distance examinations in an IT age are as follows:

1 Students take a computer-based examination *at the same time* in a testing centre, and the university provides bootable CDs or USBs which include a set of tests for each student, which are distributed to the testing centre and the students are tested under invigilation.

2 Students take an online examination *at any time* in a testing centre. The test items are chosen at random in the main campus by computer and delivered through Internet encrytion; and the responses are sent back to the university immediately after the submission or the time-out.

3 Students take the examination *at any time and anywhere* with a camera, fingerprint sensor, and a special testing program. The test-items are chosen at random in the main campus by computer and sent to identified students through Internet encryption; and the students use a special program to see and respond to the examination. The testing time is controlled by a computer in the main campus and the responses are sent back to the university immediately after the submission or the time-out.

The use of social networking sites and social capital: The role of open university systems in Nigeria

Suleiman Alhaji Ahmad
Bauchi State University
Azare, Nigeria

Social networking sites (SNSs) such as Facebook, MySpace, YouTube, Twitter, Second Life, NigeriaDotCom, Hi5, Okcut and thousands of others are widely used among students nowadays. Social capital (SC) reflects those intangible resources embedded within interpersonal relationships or social institutions. In a mixed method approach, this study investigated the SNSs usage and its relevance for social capital, as well as the role played by the National Open University Nigerian (NOUN) system in catalyzing the former. The qualitative and quantitative methods employed interviews and questionnaires with 50 and 300 subjects respectively. The subjects from the Open University centres in Nigeria's six geo-political zones were selected. by snowball sampling for focus group interviews and purposive randomization for the questionnaire. The results indicated the extent of SNS usage and its influence on social capital among the students of the open university education system in Nigeria. It also showed the significant influence of this system on the use of SNSs among the NOUN students which also leads to social capital.

Digital narratives and the teaching of writing

Mutuota Kigotho
University of New England
Armidal, Australia

Technology can be used to make learning exciting and meaningful. Learners growing up with new forms of technology — including laptops, iphones, iPads, tablets, and related tools — have a better chance of remaining engaged if their teachers adopt tools their students use when they plan and implement programmes. The use of technology engages learners as educational platforms shift from the chalk-and-talk mode to technology-enhanced instruction. Increasingly, educational instruction relies more on mobile devices, bringing to life the concept of 'bring your own devices' (BYOD). Such a concept will continue to develop as technology continues to influence the way educational providers address the needs of the learner. This paper looks at several ways in which teachers across curriculum areas use the mobile phone and the iPad to create digital narratives and thus engage learners with tools that they already have and use.

The paper is based on an exploratory method where the researcher examined the tools available on the Internet, including iPad apps. The research was restricted to only apps that were free. Obtaining a tool that had access to the Internet was the only restriction. Once the learners acquired the skills, they could purchase inexpensive apps as required. In that way, there was no financial cost to learners.

The programme was very popular with learners as it gave them new skills in digital storytelling. They learned skills such as adding photos as well as audio to the digital stories. The project demonstrated that learners of all ages are capable of using technology to up-skill and make learning more engaging and exciting.

Munici pality level predictive workforce analytics for continuous education

Jessie Cai
SAP Product & Innovations, SAP Asia Pte Ltd
Regional Headquarters
Mapletree Business City, Singapore

Talent and workforce management is becoming more important — as Klaus Schwab, the founder and chairman of the World Economic Forum put it early this year: 'The world is moving from Capitalism to Talentism.' In the meantime, municipal governments are facing the problem of increasing mismatches between the job market demand and available talent resources, due to rapid changes in technological and economic trends. There is therefore a need to discover the root causes of such mismatches and come up with actionable interventions for better municipality-level workforce planning and development. The current practice of workforce management on the municipality level is to match the explicit needs of individual workers, employers and training or education agencies through various activities and programmes. Such activities and programmes are facing challenges, including limited participation, a lack of transparency and a lack of agility to support the sustainable growth and upgrading of the city workforce. Over the last few years, data relevant to human capita have dramatically increased, as well as advances in text data mining.

We propose to combine data sources — such as individual profiles from professional social networks, news feeds on the economic outlook, technological trends, the business environment and company strategies, and published openings from job portals — to feed into a predictive analytics model. In this way, we aim to arrive at the following: (1) supply, demand, gap and risk analyses for municipal government, education institutions and local employers; (2) root cause suggestions and intervention effectiveness analyses for the above stakeholders; and (3) outlook and competitiveness analysis for individuals.

The proposed solution will help the stakeholders to have more clarity about the local talent pool, to better balance the demand and supply of human capital through effective interventions, and to influence local residents who have already joined or will be joining the workforce. For individual users, this application will provide personalized insights on their skill sets, competency level and continuous education needs. We believe such an application will bring the necessary insights to all stakeholders for an open, flexible and sustainable education framework.

Research on students' learning behaviour based on social media

Hui Jin
Shanghai International Studies University
Shanghai, China

Developing a theoretical framework for research in open and flexible learning in an ICT-rich environment: A new trend in educational research

Yousaf Khan
Allama Iqbal Open University
Islamabad, Pakistan

In recent years, with the rapid development of social media based on Web 2.0 technologies, more and more undergraduate and graduate students are applying these technologies to enhance their attainment. It is important to examine the impact of such technologies on students' learning behaviour.

This paper discusses and evaluates empirically the effect on students' behaviour of using social media as a tool to facilitate learning. In this study, we considered four social media which are very popular among students in China — Sina microblogs, the public platform of Wechat, QQ instant chat tool and the Renren social network system — and are used as the main ways of communicating with others. The learning behaviour based on social media may occur in various learning contexts. Through both quantitative and qualitative analysis, this study examined the process and outcomes of students' use of social media for independent or group learning. This research concluded that students' perceptions of using social media were positive, and they adopted different social media to be engaged in different study situations and learning contexts. The results of the study provide some valuable insights into the learning performance and usability of social media, and the ways in which popular social media can be integrated into education.

The purpose of this research study is to develop a theoretical framework for research in open and flexible learning — a new dimension in the field of education. Developing a theoretical framework for any research study is the first and prime step towards reaching the distinctions set by the researcher. Given that open and flexible learning enriched with ICT-use is a new trend and a basicdemand of the 21st century generation in all parts of the globe, it requires a theoretical framework for its initiation, implementation, development and evaluation.

A novel teaching model for web-based university physics courses

Hongyan Wang
Southwest Jiaotong University
Chengdu, China

Yuexia Lin
Emei Campus, Southwest Jiaotong University
Emei, China

The rapid development of information technology and abundant online resources for education have created new dynamics for innovating models of teaching university physics courses. By diversifying curricula, scenarios and structures of classroom instructions, Internet technology plays an important role in helping students to enrich knowledge of the discipline and strengthen their capabilities for making independent enquiries, thus creating more effective cognitive learning methods. Through analysing the three stages in the 'light interference' teaching process — from class preparation and classroom instruction to after-class training — this paper introduces a novel student-focused' model for teaching college-level physics that integrates multimedia technology, in particular Internet technology, into the curricula. The model is built on an IT-based curriculum that integrates online teaching, a virtual experiment platform, online assignments, and online Q&A and testing; and it can successfully solve problems such as inadequate resources and difficulty in explaining and illustrating theory that cannot be dealt with effectively by traditional teaching methods.

MOOC phenomena in Japan: jMOOC consortium and OUJ MOOC

Tsuneo Yamada
The Open University of Japan
Chiba, Japan

While a limited number of Japanese conventional universities have provided their MOOCs from North-American MOOC platforms, the universities and corporations have launched a regional MOOC consortium called jMOOC.' As a founding member of jMOOC, the Open University of Japan (OUJ) has developed an online course on Japanese language education at the beginners' level. In the paper, various issues — such as philosophy and concepts, content/system development, sustainability, quality assurance and pedagogy — will be introduced.

Timely feedback in online education: Are student expectations realistic?

Leopold Bayerlein
University of New England
Armidale, Australia

Contemporary online activities are often associated with instant feedback/information tools akin to real-time progress tracking for online shopping or the instant help facilitates via one-on-one chat spaces. Students currently enrolled in tertiary education programmes in general, and tertiary online education programmes in particular, are digital natives with extensive online experience and the ability to distinguish high-quality feedback/information processes which lead to the provision of timely information from 'antiquated' processes.

Although tertiary education providers have committed considerable resources to the creation of study materials that are engaging and attractive, the processes used to provide students with feedback on learning activities and assessment tasks often reflects traditional (pre-online education) notions of timeliness. Students are likely to perceive a subject (or a lecturer) as being unresponsive because the timeliness with which feedback is provided does not match their other online experiences.

This paper discuses the development and implementation of two timely feedback tools in a tertiary accounting subject with an online teaching focus. In addition, the paper provides evidence of the extent to which the tools developed have increased feedback timeliness, as well as the extent to which these improvements have been acknowledged by students. The final part of this paper discusses the existence of a trade-off relationship between the provision of detailed/insightful feedback and the provision of more timely feedback. The results of this study indicate that students appear to be more concerned with feedback timeliness than feedback quality, and the features of contemporary online activities outside the education sector are identified as one potential reason for this finding.

Emergence in learning: Understanding the evolution of knowledge via complex networks

Albert C T Cheung and Leung Chun Ming
The Open University of Hong Kong
Hong Kong SAR, China
Guanrong Chen
City University of Hong Kong
Hong Kong SAR, China

The major outcome of discovery learning is the emergence of concepts at higher taxonomy levels. The process mimics the pursuit of knowledge in research. By studying the evolution of key concepts at research frontiers, one may discover formation patterns of new ideas and gain insights into emergence in learning and how it may be measured.

Many natural and manufactured systems and activities can be described as complex networks (i.e. large networks of components characterized as being open, self-organizing, scalable and emergent) and modelled as scale-free networks with power-law degree distribution, e.g. the Internet, cities, insect colonies, immune systems, and scientific collaborations. Complexity sciences can be applied to studies of the emergence of new concepts in learning and research. Here we explore the networking and creation of knowledge, using tools which have proved to be effective in network science and social learning.

We use keywords in research papers (archived in http://iopscience.iop.org/) in 76 journals in the period 1997 to 2013 as proxies for knowledge in a specific corpus of knowledge, viz. astronomy and astrophysics, diverse disciplines rich in discoveries and rapidly evolving. We use papers as one set of nodes and single keywords as another. Together, they form a bipartite network which is well-studied in mathematical graph theory. The fact that keywords represent a suitable component of knowledge and would lead to emergence is reasonable because the author would have selected them to incorporate his/her knowledge in a paper. As the frequency of such keywords being re-selected and re-cited increases, at some threshold new knowledge will emerge as a deeper understanding of an unknown subject and/or as a better presentation of a vague concept in the initial thinking. In this respect, the selected keywords indeed create a new advancement of knowledge in the form of a peer-reviewed research paper.

Our results indicate that the frequency of occurrence of keywords in this corpus follows a power-law degree distribution, suggesting that the identified bipartite network structure provides a scale-free network paradigm. We then connect keywords pair-wise with an additional edge (or link) if they appear in the same paper. The strengths of these edges are the number of papers that share the same two keywords. We can follow the evolution of such pairings

over time to explore the growth or mutation of keywords, which reflect the authors' ideas, theories, methodologies and instrumentation, as well as their interactions, which will produce emergences. By further exploring the associated network of authors, we can analyse the interaction of the knowledge-emerging network with the authorship network and gain insights into the ecology and dynamics of a research discipline.

Towards building an adaptive educational hypermedia system for modern distance education

Samuel Ping-Man Choi and Sze-Sing Lam
The Open University of Hong Kong,
Hong Kong SAR, China

A new immersion platform for online English teaching

Jun Shen
Jiangsu Radio and Television University
Nanjing, China

An adaptive educational hypermedia system (AEHS) is an e-learning system that offers learners a personalized learning experience through hypermedia. Rather than using a one-size-fits-all approach, an AEHS considers an individual learner's characteristics (such as prior knowledge, ability, interests, preferences and learning goals); and it utilizes the information to personalize the learning content and guide the learning process. The objective of AEHS is to maximize learner satisfaction, learning efficiency and educational effectiveness. AEHS is particularly beneficial for modern distance education due to its use of e-learning as a primary teaching method and the diverse backgrounds of distance learning (DL) students. While building a sophisticated AEHS requires tremendous effort, DL institutes typically have already established an abundance of teaching resources, including a complete set of course material and a tutoring system to support the students' learning. However, the same resources are offered to all students without considering their learning needs and this may lead to information overload and ineffective learning. In this paper, we will discuss how DL institutes can adapt and evolve the existing tutoring systems and course material into an AEHS. In particular, we will explore how to make use of well-established computational approaches and machine learning techniques to design and develop the three main components of AEHS, viz. the domain model, user model and adaptation model. The roles and participation of various stakeholders, including students, teachers, course developers and administrators, for implementing a successful AEHS will also be illustrated. We will then discuss how to apply the AEHS framework to identify further improvements for electronic tutoring systems developed in the Open University of Hong Kong.

With the high-speed development of computer technology, open education in English teaching and learning blending with new technologies has become one of the 'hotspots' in the area of teaching research. Compared with traditional English classes, it is more difficult for teachers to instruct the students and solve problems instantly in online English teaching; and so teachers find it hard to adjust the content and emphasis of their teaching materials, which leads to inefficiency in online English learning. Besides, it lacks effective methods for supervising and inspiring students' online learning in the open education mode. This paper will therefore focus on designing an immersion platform for open education in English teaching and learning. In this mode, the most popular technologies — including virtual reality, networks and multimedia, and virtual human and natural human machine interaction techniques — will be introduced to help address the defects in online English education. Also, the technologies introduced enhance the information technology of online English education which is not satisfied in the traditional English classroom. This open mode will be added in an immersion English environment, and make use of the information technology to trace and record students' learning process, in order to establish a reasonable evaluation system.

Playing and learning in an 'arts and crafts' class through online social networking

Soamshine Boonyananta
Chulalongkorn University
Bangkok, Thailand

This research project has the following two objectives: (1) to encourage students to play and learn at the same time in a course on arts and crafts through online social networking; and (2) to study the effects of using online social networking to support teaching and learning on this course. The research subjects were 44 undergraduate students from the Faculty of Education at Chulalongkorn University, enrolled in a course on arts and crafts for teachers in the first semester of the 2012 academic year. A qualitative research methodology was used, with the research instruments being an online social network interaction evaluation form; an online portfolio evaluation; a students' satisfaction evaluation form on the implementation of online social networking to support teaching and learning; and Chulalongkorn University's online teaching evaluation form.

The findings from the research were as follows:

- The teachers had significantly improved the communications between themselves and the students. Teacher can analyse students individually through reflection on each piece of their arts and crafts work. Through their online portfolio, teacher can also follow the progress of each student continuously.

- Using online social networking as a tool to evaluate students' performances in the course can contribute to joint learning and interaction among students from different classes and areas of specialism. Moreover, as an online display is another channel to show students' work on arts and crafts more openly to the public, it can also help to increase students' pride in their works and enjoy 'playing and learning' in the arts and crafts class at the same time.

From Internet games centres towards e-community learning centres in Thailand

Jomphong Mongkhonvanit
Siam University
Bangkok, Thailand

As Internet game centres have spread and become popular across Thailand, there are concerns about inappropriate content and misuse by young adults and other at-risk groups. This study examines the status, problems, threats and suggestions for the development of Internet game centres in Thailand. Through surveys, in-depth interviews, public hearings and focus groups, this research recommends that the government should transform Internet game centres into electronic community learning centres that promote learning, skills and human development, specifically on the basis of morality and culture. This study also features a model of an e-community learning centre with standards, rules and community participation. The three areas focused on are the (1) place and location, (2) entrepreneurs/ operators and (3) legal establishment and supporting policies. The transition of Internet game centres towards e-community learning centres will, however, require an emphasis on making learners eager to use them to develop their knowledge, capacities and skills, including physical, intellectual, societal and emotional facets. Accordingly, the arrangements in e-community learning centres' should fulfil the needs of players/learners, while providing them with both education and entertainment.

Incidental vocabulary learning in reading contexts aided by mobile phones

Gladwin George
Middle East College
Sultanate of Oman

Vocabulary acquisition is an integral part of language learning. In the age of 'digital natives,' abounding with technological devices for 'anywhere, anytime' learning, the opportunities for gaining knowledge of words are plentiful. Mobile-assisted language learning (MALL) has attained new heights in recent years and vocabulary acquisition is a key area which has reaped good dividends through this. Studies have investigated the effectiveness of mobile phones for vocabulary learning, but most of them have been based on the installation of specific applications on mobiles for activities related to words. Hence, the focus of this research on acquiring intentional vocabulary is quite evident in these studies. This paper intends to explore the efficacy of using mobile phones with Internet access for acquiring incidental vocabulary while learning intentional vocabulary quite naturally, with no applications installed in the mobile devices, by Arab ESL learners who belong to an environment where the significance of reading to gain richness in vocabulary is not taken seriously. The purpose is to view the mobile phone as a tool with Internet access and assess its impact on the students in learning incidental vocabulary devoid of constraints related to course assessments. It also aims to find out the extent to which Internet-enabled mobile phones have aided students in learning new words in comparison with the use of dictionaries in the classroom. The General Foundation Programme students, who were chosen for this research, were divided into two groups, one with total access to Internet-enabled mobile phones and the other with dictionaries for reading comprehension. Three tests were carried out — a vocabulary pretest, an immediate vocabulary post-test and a delayed vocabulary post-test — for analysis. The data examined through tables and figures show that incidental vocabulary learning does occur but at a relatively slower pace, irrespective of the medium used, compared to intentional vocabulary learning, though there is much less effort required in incidental vocabulary learning through MALL.

Use of instant messaging communication in teaching and learning

Francis Yue
SCOPE, City University of Hong Kong
Hong Kong SAR, China

The use of mobile digital devices among students studying in Hong Kong tertiary education institutions is very popular. In fact, many local undergraduate students possess their own mobile digital devices (such as smartphones) for communication purposes. It is widely known that instant messaging is one communication tool used heavily by undergraduate students in their daily lives. As a communication tool, the advantage of instant messaging over traditional electronic mail is that the latter does not occur in real time. Instant messaging is one type of synchronous communication.

Text messaging and electronic mail are currently employed in many local educational institutions. This paper examines the possibility of using instant messaging to enhance the teaching and learning experience of some undergraduate students. It explores the additional ways of using instant messaging in supervising undergraduate students who are working on their final-year dissertation projects.

This qualitative research study began by obtaining views from potential participants, and that led to the construction of a measuring instrument (a questionnaire) for the subsequent survey. In this study, the use of instant messaging will be compared with traditional methods of electronic mail and text messaging in teaching and learning. In addition, it will compare the views of two different groups of students (who are working on their dissertations in different business areas) on the use of instant messaging.

An automatic approach for analysing online discussion forums via text mining

Tak-Lam Wong, Wai Shing Hon Jeff Tang and Fu Lee Wang
Caritas Institute of Higher Education
Hong Kong SAR, China

Gary Cheng
The Hong Kong Institute of Education
Hong Kong SAR, China

Online discussion forums have been widely used in distance learning and blended learning for developing critical thinking and communication skills. To handle the increasing number of posts in discussion forums, we developed an automatic approach for analysing online discussion data based on a text mining technique. One characteristic of our approach is that text clustering was applied to automatically extract the arguments from posts on a discussion topic. Similar arguments from different users can be grouped together for better analysis by teachers or students. We have conducted a case study using a discussion forum on a course for in-service teachers to evaluate the effectiveness and usefulness of our approach.

Use of lecture-tutorial Web streaming in distance e-learning

Luisa A Gelisan
University of the Philippines Open University
Los Baños, Laguna, the Philippines

Developments in information and communication technologies (ICT) have provided new dimensions in the teaching and learning processes. Web streaming of lectures and tutorials makes it possible for distance e-learners, especially those who cannot attend face-to-face lectures/ tutorials, to view and review streamed sessions at any given time, wherever they are.

This study described the advantages/disadvantages and problems/issues encountered with regard to streaming of lectures and tutorials at the University of the Philippines Open University's three online non-formal course — New Enterprise Planning (NEP), Personal Entrepreneurial Development (PED), and Simplified Accounting for Entrepreneurs (SAfE). The study also looked into the teachers' teaching and learning experiences with regards to the use of Web streaming in their classes. Suggestions and recommendations on the improvement of the streaming of lecture and tutorials were also elicited from both online learners and teachers.

Data were gathered through face-to-face and/or online interviews with teachers and students of each nonformal course Preliminary results show that both the students and teachers responded positively to the streaming of lectures/tutorials but they mentioned that there should be improvements in various areas, such as real-time feedback, and various technical issues should be resolved.

Use of technology to enhance teaching and learning in the National Open University of Nigeria

Vincent Ado Tenebe and Rotimi Ogidan
National Open University of Nigeria
Lagos, Nigeria

The characteristics of open and distance education, among which is the separation of learners in terms of space and time, show that the use of technology is crucial for ensuring that teaching and learning are effective. The purpose of this paper, therefore, is to show how technology is used to enhance the teaching and learning processes in the National Open University of Nigeria, which is a good example of a single-mode distance learning institution. Learners in this University enjoy support services through constant linkage by e-mail, telephone, fax, video conferencing and interactive radio, in addition to print technology. However, some challenges in providing the needed level of technological support have been identified — an inadequate number of academic and technical staff, an inadequate supply of relevant software and electricity, and the fact that most learners are not very conversant with the use of computers. Adequate measures need to be initiated so that more qualified academic and technical staff are employed, and the basic infrastructure is put in place to surmount these limitations. Besides, it is suggested that students should be encouraged to familiarize themselves with the use of computers and Internet search engines. In addition, more course materials must be uploaded, and more audio/video tapes and video compact discs should be produced for the students, while radio and television should be utilized for teaching and learning. Efforts should also be intensified to discover how to collaborate with other open and distance learning (ODL) institutions on the best uses of modern technology to enhance teaching and learning.

Effective instructional design for mobile learning

Eva Y M Tsang, K S Yuen and Belle P P Cheung
The Open University of Hong Kong
Hong Kong SAR, China

Mobile learning contents can be developed in PDF format for a linear model of learning, or in ePub form, with multimedia functionalities. The iBooks format further allows the inclusion of many instructional design strategies so that effective and meaningful learning opportunities can be provided to learners, both within and outside school settings. In 2011, the Open University of Hong Kong started to develop four mobile learning modules for enhancing the language proficiency of its undergraduate students using iBooks Author.

This paper first discusses the architecture of an effective mobile learning module — that is, its user interface, learning design, content delivery, multimedia presentation and interactive activity, with reference to its capability for arousing learners' interest and motivating them to learn. Reference is also made to design principles of multimedia learning (Mayer and Moreno 2003) for effective learning. For example, in multimedia presentation there should be content segmentation, with verbal and pictorial materials well aligned to avoid cognitive overload.

The paper goes on to describe the formative development of the learning modules. All modules were developed based on a rapid prototype in which the instructional designers and content experts receive continual or formative feedback while creating instructional materials.

When the modules were completely developed, they were tried out on 60 students using their iPads to study language mobile modules. (The effectiveness of the trial is reported in a separate paper in the conference.) The students' comments on the modules' functionality and features, learner-content interaction, self-evaluation on interest and motivation given in the focus group interviews were recorded and analysed. In addition, groups of professional instructional designers were asked to give summative feedback on the mobile learning modules. Such advice and suggestions, together with the feedback from students, helped us to gain professional insights for the revision and future developments of the mobile learning modules.

The discussion on the interactive design effects of mobile learning modules contains two parts: (1) the effectiveness of the instructional design in helping learners to learn; and (2) the motivational effects and the degree to which mobile learning modules arouse learners' interest.

The conclusion of the paper consolidates the salient features of our mobile learning modules.

Cross-cultural comparison: The introduction of new technology with postgraduate students in Hong Kong and the United Kingdom

Helen Boulton
Nottingham Trent University
Nottingham, the United Kingdom

Universities in the United Kingdom are developing collaborations with partners in the East, often resulting in academic staff, with little understanding of Eastern cultures, imposing Western designed virtual learning environments (VLEs) and lacking consideration of the learning styles and educational experiences of Eastern students.

Nottingham Trent University (NTU) delivers a professional doctorate course collaboratively with Hong Kong College of Technology (HKCT). As part of the delivery, NTU's VLE is used and accessed by the students in Hong Kong. Initially, engagement with the VLE by HKCT students was almost non-existent. A recent visit to HKCT with the intention of engaging the students more thoroughly in the VLE revealed disengagement, not in the notion of using the VLE for learning but in the unconsciously ethno-centric bias of the design of course materials and use of the development of the VLE by academic staff. This paper presents interim findings of a research project to develop evidence-informed practice that will encourage HKCT students to engage more effectively with the material to enable a greater use of online learning, a deeper level of learning and a faster pace of progression.

A literature search revealed no specific guidance to academics in relation to this area of practice. Hofstede (1985) opened the debate and stimulated dialogue about cultural differences and the need for culture to be acknowledged in teaching and learning. Also, Carroll and Ryan (2005) assert that there is a need to be explicit about the purpose and structure of activities and assessment; and while this assertion is based on classroom-focused research, it has an impact on online learning. Brown (2004), drawing on Gestalt cognitive theory, states that the personal theories of learning and constructs of international students differ widely from the Western norm, which can hamper learning. Finally, Maclean and Ransome (2005) identify studying in a second language, adjusting to an unfamiliar educational context, and perceptions of workload, can impede international students.

Data are being collected over a one-year period by observations of the use of the VLE by HKCT students through metrics available via the VLE's software. Interviews are also being conducted with students and analysed thematically. To date, the emerging themes are the design and presentation of online course materials, and the use of images, format and layout. The paper addresses how the research is affecting the design of the VLE; the successes and challenges faced by the teaching team; and how the changes made to the VLE are engaging the students.

A study on the influence of the new media on college students' learning styles

Chen Weidong
Suzhou University of Science and Technology and
Soochow University
Suzhou, China

Ye Xindong
Wenzhou University
Zhejiang, China

The new media have gradually penetrated into the lives of students, affecting their learning styles; and their influence on ways of thinking about learning is significant. Ways of thinking include dimensions such as profound ways of thinking, flexibility, innovation and critical thinking. On the basis of an analysis of these four dimensions with college students who are using new media, we have given them some guidance on how to make their usage of these media more effective.

Educators should help students to be innovative and unique, and enhance interaction through the new media. They must guide the students to use these media for learning. The students need to understand and accept the advantages of using new media technology through communicating with other people. However, while new media provide a huge amount of information, students should not place undue reliance on them as they are just learning platforms. They should improve their innovativeness in the process of using the new media and maintain their uniqueness, not blindly rely on the convenience these media bring.

Enabling students to use toolkits in open and flexible learning

Yousaf Khan
Allama Iqbal Open University
Islamabad, Pakistan

E-learning, e-education, and Web-based and online training and education refer to the ways in which students use ICT toolkits in order to have self-regulated, lifelong, continuous, open, flexible, blended, collaborative and distance learning.

E-learning requires the application of learning theories in order to accommodate diverse learning styles for training and education through synchronous and asynchronous modes of delivery in ICT or online and web-based constructivist learning environments.

The purpose of this study is to analyse different learning theories available in the literature on psychology, educational psychology, cognitive psychology, pedagogy, curriculum and ICT to find their application in ICT-based pedagogy or e-learning.

The design and implementation of a mobile app for language learning

Kenneth Wong, Wai-Shing Ho, Fu Lee Wang, Reggie Kwan, Kat Leung and Issac Cheung
Caritas Institute of Higher Education
Hong Kong SAR, China

The growth and popularity of mobile applications have a profound impact on the learning environment. Students can use their mobile devices to enhance learning anywhere at any time, for example when waiting for a bus, walking on a street, and travelling on a train. Thus, the use of mobile apps for supporting language learning has become a major interest for educators. In order to provide an ubiquitous teaching and learning environment, our college has created a prototype of a mobile app for students on the Android platform and on the iOS platform, starting with learning English and Putonghua. The mobile app allows end-users to download and access learning materials whenever and wherever they like so that language learning is no longer constrained by time and space. The mobile app provides three modules for learning: course materials, video archives of seminars and lectures, and animated short films. The course materials module is connected to our course management system. Students can access the materials in the courses for which they are currently enrolled through the app. The materials can have different formats, including PowerPoint presentations, Word or PDF documents, audios and videos. Students can read the materials on their mobile devices. The video archive module contains a hierarchy of archived videos of seminars and lectures given by visiting scholars and guest speakers so that students are able to view/review the live recorded presentations even if they have missed the events. Finally, the module for animated short films provides interesting animation and revision exercises in order to introduce practical oral skills and interesting cultural facts. The films aim to broaden the students' horizons on language learning and to nurture their cultural awareness. This paper will share our experience in designing and implementing this mobile app for language learning.

Modification of respirator donning skill: Adopting the emerging technology of real time leakage monitoring in nursing education

Cathy Nga-yan Lee, Simon Ching Lam and Andrew Kwok-fai Lui
The Open University of Hong Kong
Hong Kong SAR, China
Billy On-ying Pang
Tung Wah College
Hong Kong SAR, China

Training in psychomotor skill is essential for nursing education. The proper donning of a N95 respirator is a necessary aspect of the nursing curriculum as leakage may be life-threatening. Since leakage may not be easily detected by the human eye, the traditional mode of education which relies on demonstration and return demonstration has its shortcomings. In training, the adoption of an emerging technology of real-time leakage monitoring (RTLM) should be able to fill such a gap because RTLM makes invisible leakage into a visible 'fit factor.'

Through a quasi-experimental design, a single group of 111 nursing students who failed in standard fit testing (i.e. pre-test) was recruited to attend a 15-minute RTLM-assisted training session. The post-test of fit testing obtained a 100% pass rate. These findings indicate that RTLM-assisted training was effective in regulating the donning skill of some students who failed previously, albeit that the traditional mode of education was still applicable for most nursing students.

Different roles of digital video in ESL speaking instruction

Tristan Currie
University of Technology
Sydney, Australia

Educating 'the Net generation': Enhancing student engagement with Web 2.0 tools and mobile technology in music education

Naomi McGrath and Alana Blackburn
University of New England
Armidale, Australia

This paper presents a thematic view of the current use of video in ESL, highlighting areas of crossover and overlap, as well as fading borders and new trends. First, the role of video is delineated broadly in Part A 'Contexts of usage.' These contexts include: lesson review, rehearsal and interaction practice, critical and cooperative development, argumentation /media literacy training, self and peer task evaluation and cultural-suitability modelling. Contexts are compared and contrasted to distinguish minor variations in context that do not affect learning aims from minor variations in context that do.

In Part B 'Key factors of learning aims,' the learning content/focus areas are analysed. The content areas include language production/grammar acquisition, vocabulary, culture, conversation strategies and paralinguistics. Learning content is analysed to determine how the utility of videos in teaching transmutes the curriculum. This leads into a discussion of current thinking in the field of EAP (English for academic purposes) about the neglected macro skill of speaking, as a means of making concrete suggestions for a more mature approach to video pedagogy. EAP is examined in terms of its scope, foundations and increasingly geopolitical nature. The paper proceeds to the position that this medium takes the subjective experience and makes it tactile, adding that it can also be 'read as a text,' linking it to a long tradition of learning. Thus, by tracing out the patterns of activity and correlations in content, new trends emerge. The paper concludes with an emphasis on transferability of skills, suggesting that rather than merely employing video to check student understanding or 'get' meaning left unexplained, its role in the classroom and in the curriculum, is perspective gain as an application of language.

Current undergraduate students are known as 'the Net generation.' These students have never experienced a world without information and communication technology. It is claimed that they have gained specific technical skills, new ways of thinking and different learning preferences, which require a new educational approach. Online education is increasing but the effectiveness of these online courses in certain areas of learning are still debatable, especially in music education. Instructors and instructional designers need to use new technologies effectively to enhance the delivery of music education to new generations who understand these teaching methods. Using Web 2.0 tools to create fun and engaging learning will not only encourage students, but also engage them in learning musicology in a progressive way. The challenge is to deliver a unit fully online and not 'reinvent the wheel' as such with traditional academic content. Creating and incorporating these tools add a richer online environment for students studying music online.

This paper outlines the design of an undergraduate fully online music unit which uses Web 2.0 tools and mobile technology to engage and create student interaction with the unit materials. The unit is designed for those with little or no knowledge of music. It provides an introduction to the fundamentals of musical styles and genres, the theoretical skills required for notating and reading music, and enhancing listening skills. Several 'e-tivities' were developed, taking advantage of Web 2.0 tools such as iPad apps, quizzes, chat sessions, asynchronous discussions, screencasts and a virtual piano. These tools were incorporated to facilitate interaction, and provide practical practice, authentic learning activity and collaboration within the unit. They enable students to learn through practice rather than stand-alone exercises related to each topic in the unit. Student data confirm that this approach is successful in engaging students with the materials and student grades obtained were higher than in the last offering of this unit.

Developing mobile learning modules for the enhancement of language proficiency

K S Yuen, Eva Y M Tsang and Belle P P Cheung
The Open University of Hong Kong
Hong Kong, SAR, China

A new trend — mobile learning — is taking shape in technology-supported learning, as the use of wireless mobile technology allows learners and educators to access information 'on the move' without concern for time and context (Evans 2008). The use of hand-held mobile devices is found to be well aligned with strategic educational goals, including improving students' retention, fostering personal and academic achievement, and increasing learners' opportunities to practise (Kukulska-Hulme et al. 2005). Also, mobile learning has been shown to have a positive relationship with language learning (Lu 2008). Two years ago, a study (Yuen et al. 2011) showed that the iPad was a versatile and convenient tool most preferred for mobile learning or e-learning which happens when the learning is on the move, using unplugged learning devices. This preference is still valid now, albeit that many more tablet PCs using Android as the operating system are now available in the market.

In order to enhance students' general language proficiency in their undergraduate studies, a team of senior staff at the Open University of Hong Kong (OUHK) including the head of educational technology, a senior course designer, the registrar, the head of information technology, the director of research and an expert in English language studies joined together to make an application to the Government's Quality Enhancement Grant Scheme for support to develop four mobile learning modules. The application was approved in 2011. The four modules of learning materials are: English for effective communication, English for managers, Chinese language and Putonghua. The content will be made available on mobile devices which allow students to study in their free time in addition to the wide spectrum of language courses offered at the University. The modules will be made available both to OUHK students and students in other universities in Hong Kong.

The development of the learning modules is based on the framework for the rational analysis of mobile education (FRAME) proposed by Koole (2009), in which the learning process is closely linked to mobile technologies, human learning capacities, and the social aspects of learning. Features of the learning modules which fully exploit the latest technology include interactive learning capabilities, audio and video clips, practice activities and an online forum, all of which aim to motivate learning and enhance students' learning experience.

Through descriptive statistics, including students' test performance and attitude calibration in their mobile learning process, this paper attempts to examine the effectiveness of mobile learning for language enhancement. It also investigates the likelihood of students using the mobile device as a supplementary tool in their learning. In addition, students' learning experience with the mobile device will be studied both quantitatively and qualitatively. It is expected that the research results will shed light on our future development of mobile learning.

Designing a 3D-based computer-assisted instruction tool for teaching orthographic projection

Geeng-Neng You, Ming-Hsien Hung and Yung-Chou Hsu
National Taichung University of Science and Technology
Taichung City, Taiwan

In vocational high schools, students in departments such as machinery, architecture or design are required to take graphics-related courses. Courses on orthographic projection can help students to acquire spatial concepts for developing skills in their major area of study. However, the instructional support for teaching orthographic projection needs upgrading to take advantage of modern digital technology. Various multimedia technologies can be exploited to establish tools for a more versatile and flexible applications of computer-assisted instruction (CAI). We therefore explored various feasible technologies and designed a prototype of a 3D-based CAI tool for teaching and learning orthographic projection. The system prototype utilizes 3Ds Max to build solid models, Unity 3D to facilitate the projection, and Flash to integrates them into a web-based 3D visualization tool for helping students to interact with the orthographic projection. The prototype has been tested by students recruited from two tenth grade classes, with two different groups being formed after a preliminary test on students in the two classes. The experimental group used the CAI tool, while the control group followed the traditional practice. The outcome of the experiment provided convincing evidence that the problem-solving ability of the experimental group was generally better than that of the control group.

Catering for learners' diverse needs through blended learning

Kam Cheong Li
The Open University of Hong Kong
Hong Kong SAR, China

For effectivene learning, it is important for study programmes to cater for the needs of students. One key to catering for learner diversity is the provision of learning flexibility that allows learners to go about their learning in their preferred ways. Blended learning can integrate this flexibility into study programmes, with choices being made available as a means through which the learning of individual concepts or skills can be achieved. Such options bring flexibility in learning and facilitate control, and allow learners to learn in different ways and have their varied needs satisfied.

This paper reports a study that surveyed 115 students from four blended learning courses. Two of the courses were on management, and put an emphasis on qualitative conceptualization; and the other two, on accounting, laid stress on quantitative operations. Each of the courses allowed students to learn in diverse ways by providing a variety of means of learning. The survey gauges the effectiveness of these means in relation to the qualitative and quantitative orientations of the course content, and explores the relationship between flexibility and blended learning. The study results suggest that the means adopted in the courses are considered useful for learning purposes and that the blended learning mode facilitates learning flexibility. No significant difference was observed regarding the perceived effectiveness of components between the two types of courses (with quantitative and qualitative orientations), which suggests that the blended learning approach can be equally effective in both types of courses. The perceived flexibility was significantly positively correlated with the effectiveness of components and the ease of use of the online learning platform. This study therefore suggests that the blended learning approach can effectively facilitate students' learning in both qualitative and quantitative courses and the provision of an effective blended learning approach facilitates students' learning flexibility, which better addresses learner diversity.

The design and implementation of a pre-enrolment guide for students pursuing higher education

Kenneth Wong, Wai-Shing Ho, Reggie Kwan, Fu Lee Wang, Louise Luk and Michael Cheung
Caritas Institute of Higher Education
Hong Kong SAR, China

One crucial foundation for the career development of students is the programme they choose when they study in a higher education institution. Selecting an appropriate programme can develop students' strengths and equip them for pursuing their career goals. Moreover, the programme should match the students' personality so that they can fulfil their potential. However, given the many programmes available in higher education institutions, it can be difficult for them to select the most suitable one by themselves. Even worse, the students may not fully understand their own personality and may not know which programmes suit them best. In order to provide guidance to students on programme selection, our college has created a prototype of a pre-enrolment guide as a part of OASISS 2.0 student advisory system supported by QEGS. The guide first uses a questionnaire to capture the students' personality based on the Big Five personality traits; and then it suggests the most appropriate programmes to each student according to their personality. In addition, as different programmes have different admission requirements, the guide selects the programmes according to the results or expected results of the students. This paper describes the design and implementation of our pre-enrolment guide. Also, the methodology we used for programme recommendation in our prototype will be discussed and the interface of the system will be outlined.

Students' use of Facebook in King Saud University

Mohamed S H AL Moshaikeh
King Saud University
Riyadh, Saudi Arabia

Facebook technology has been used recently in many areas, including educational technology. This area is important for education as it needs this technology, in particular social networks, to facilitate the learning processes and activities. Facebook is a very popular social network platform which may promote learning in higher education.

This study aims to examine students' attitudes towards Facebook and how they use it to enhance their learning of educational technology courses. A questionnaire was distributed to a sample of 60 randomly selected higher education students. The results show that the participants have the opportunity to use Facebook, and use it frequently; and they show positive attitudes towards its use in educational technology courses. The implications for how Facebook can enhance learning in such courses will be discussed.

Meeting the higher education needs of mainland China

Dave Towey
The University of Nottingham
Ningbo, China

The People's Republic of China (PRC) has seen incredible economic growth over the past 30 years, fuelled, arguably, by a manufacturing industry boom that observers now suggest may be grinding to a halt. Commentators have argued that the best hope for China's continued economic success may lie in a move away from manufacturing to a service economy. A problem identified with this, however, is a current, and foreseen, shortfall in an appropriately skilled workforce, especially in terms of a tertiary-level educated population — some estimates suggest that, by 2020, the PRC will face a labour shortfall of about 24 million university and vocationally trained workers. In response to this challenge, the PRC authorities have, over the past ten to 15 years, been reforming the higher education (HE) landscape. These reforms have included enhancements to the quality and quantity of domestically-provided HE, but another option the PRC has also been experimenting with relates to looking overseas for assistance, with a large number of joint-venture and foreign-run programmes now established and running. These reforms and initiatives, it is argued, will still fall short of the target numbers, prompting the question: How can the PRC meet the foreseen shortages?

This paper looks at some of the as yet relatively unexplored potential in open and flexible learning modes, particularly the possible use of massive open online courses (MOOCs) to bridge the foreseen skills gap. In addition to examining some of the known challenges facing MOOCs, including quality issues and expected computer literacy levels, the paper discusses some of the unique characteristics of learners in the PRC, and how these traits may well help to facilitate MOOC adoption.

Mobile Sage Grapher for simulation of mathematics

Shaowei Sun, Kyung-Won Kim and Sang-Gun Lee
Sungkyunkwan University
Seoul, Korea

Over the last 20 years, our learning environment for mathematics has changed dramatically, and mathematical tools now play an important role in our classes. Sage, a popular piece of mathematical software which was released in 2005, has efficient features for adapting to the Internet environment and can cover most mathematical problems, such as algebra, combinatorics, numerical mathematics, calculus and linear algebra. Nowadays, there are more mobile devices than personal computers all over the world. Also, the most sophisticated smartphones have almost the same processing power as personal computers and can connect to the Internet easily. For example, we can connect from a mobile phone to any Sage server through the Internet. Over the years, we have developed mobile mathematics with smartphones as a tool for teaching the subject (Ko et al. 2009; Lee and Kim 2009; Lee et al. 2001).

As a visual expression of mathematics, graphs make it easy to visualize complex mathematical concepts. The Sage Grapher we have produced can be used as a supplementary pedagogical tool for various mathematics courses. In this paper, we introduce the mobile Sage Grapher we have developed and aim to show the mobile infrastructure of Sage and the mobile learning environment.

On the mobile Sage Grapher, a total of eight different versions have been developed, e.g. general function grapher, parametric function grapher and implicit function grapher. We will demonstrate the capabilities of these new and exciting mathematics tools. Manipulating and understanding these graphers can be an asset for all mathematics students, regardless of age or level.

Moving online: A best practice approach to achieving a quality learning experience for online education

Sue Whale, Naomi McGrath, Tim Cluley, Llara McClenaghan and Alana Blackburn
University of New England
Armidale, Australia

This paper describes an innovative approach to managing the development, presentation and delivery of online learning materials. This process couples learning design, technical support and content delivery in a partnership between educational development and academic staff to ensure quality outcomes for students in distance education studies.

A learner analysis and content analyses informed the development of this approach and a templated guide was created to provide an outline required for all unit development. This ensures that students are provided with the information and resources needed for completing their studies successfully, and that their experience is enhanced by reducing the need to search for the key information they require each time they commence a new unit in their studies. The consistency in learning resources means that information about the unit of study, assessment and learning outcomes, for example, are always present and are provided in the same location across all units, thus reducing the cognitive stress students report in navigating educational materials. Technical assistance provided in this managed process ensures timely solutions are implemented in online sites and academic staff time spent on technological issues is minimized.

A quality learning experience for students is achieved through the partnership the educational development and communications team have established with academic staff to prepare materials and provide technical support, along with pedagogical advice on the management of learning activities in the learning management system (LMS).

Affordances of digital media for building research capability online

Jean A Saludadez
University of the Philippines Open University
Baños, Laguna, the Philippines

The paper aims to contribute to discussion on open and flexible education by looking into the affordances of digital media through the lens of agency. It argues that digital media are agents that participate in the accomplishment of online teaching and learning. The ventriloqual approach that involves a three-step process was employed, viz. (1) collecting archived/recorded online interactions; (2) identifying markers through which digital media appeared to recurrently and iteratively express themselves in the recorded interactions; and (3) understanding or hearing what the markers are made to say. On this basis, the paper will show how digital media afforded the creation of interactive activities in a graduate level research course in an open university, enabling students to design and implement research using both quantitative and qualitative methodologies. Examining the agentive roles of digital media staged at teacher-students interactions provides insights into why learning is possible in an open and flexible environment such as online education.

Analysis and appplication of Weixin in online interactive teaching

Xuan Zhang
Jiangsu Open University
Nanjing, China

The delivery of teacher education programmes in regional Victoria, Australia: Opportunities and challenges

Bonnie Yim, Louise Paatsch, Janet Moles, Bernadette Walker-Gibbs and Terri Redpath
Deakin University, Australia

While QQ and microblogs are in the ascendant, the meteoric rise of Weixin has provided another new powerful mobile phone app for online interactive teaching. With the popularity of WiFi and intelligent mobile phones, Weixin has gained 300 million registered users since it went online only two years ago; and it has been widely applied in various fields because of its superior transmission mode of node-to-node and node-to-surface. In this situation, some online education and training institutions have started to open public accounts for Weixin in teaching. However, the use of Weixin in online interactive teaching is still at an initial stage, and further study is needed on how to put its functions to full and proper use in the teaching process. For this reason, we have adopted an action research approach, combining with the characteristics of Weixin, to try out a variety of complementary and interactive designs for online teaching. This has involvedan in-depth exploration of the functions of amobile teaching service, and established multi-dimension channels for effective communication between teachers and students, and students and students. In this way, we could strengthen the emotional support and improve the quality of teaching. At the same time, it has been found that Weixin, QQ, microblog and other social media tools play very important roles in assisting and supporting online interactive teaching to a different extent. As Weixin and QQ are homologous, QQ is widely applied in China's inland regions, whereas Weixin has more advantageous mobile phone application functions, which could lead learners to accept its teaching service relatively more easily — but the application of other social networking tools can also be included in their learning.

A significant number of Australian universities have multiple campuses (Winchester and Sterk 2006). To manage successful student learning outcomes, Winchester and Sterk (2006) argue that universities may experience challenging teaching and learning issues such as fragmentation, duplication, inconsistency and lack of equitable opportunities for students across the various sites.

In recent years, online educational technology has enabled Australian universities to rethink the ways in which they deliver programmes (Smith, Ling and Hill 2006). Such a paradigm and technological shift provide a 'window of opportunity' to meet the challenging demands of serving multiple campuses (Bottomley 2000), especially those in regional areas. In Victoria, at June 2012, the regional population was 1.38 million (Australian Bureau of Statistics 2013). However, Polesel's (2009) report found that students from regional areas defer university at twice the rate of metropolitan students. There is also evidence that students in regional areas, on the one hand, consider such areas as a learning environment with many advantages (e.g. small classes and a compact campus)(Ellis et al. 2005). On the other hand, students' different interests can often be overlooked in educational settings (Semke and Sheridan 2012).

This paper will report on the results of a baseline study using survey methodology, which examined the challenges and opportunities of delivering elements of two undergraduate programmes in regional areas in Victoria, Australia. In particular, the research focused on two selected undergraduate teacher education programmes: (1) primary education; and (2) early childhood education. Focused discussion data, gathered from academics involved in delivering the programmes in the regional campuses will be presented as an analysis of issues and practices of teaching and learning in the 21st century. Implications for the provision of a quality learning experience and environment for students and for the course marketing strategies will be discussed.

The challenges of implementing an ICT curriculum in primary schools in Dar es Salaam, Tanzania

Kassimu A Nihuka and Florence Peter
Open University of Tanzania
Dar es Salaam, Tanzania

The study reported in this paper investigated the challenges facing the implementation of information and communication technologies (ICT) under the Kiswahili as Teknolojia ya Habari na Mawasiliano (TEHAMA) curriculum in primary schools in Dar es Salaam. The study used a case study research design, and a total of 206 respondents comprising of 106 pupils and 98 teachers from 15 primary schools drawn from the districts in the Dar es Salaam region participated in the study. Structured questionnaires were used to collect data from teachers and pupils. Analysis of the data through the Statistical Package for Social Sciences (SPSS) has shown that there are several challenges facing the effective implementation of the ICT curriculum in primary schools in Dar es Salaam. These challenges include the unwillingness of some teachers to teach ICT, a lack of interest in teaching ICT, a lack of ICT literacy among teachers and pupils, a lack of pedagogical knowledge and limited access to ICT facilities among most teachers and pupils. The study concludes that the successful implementation of an ICT curriculum in primary schools in Tanzania is still a challenging endeavour. It is therefore recommended that efforts should be made to address the identified challenges and that further researh should be conducted to evaluate a professional development programme developed to promote primary school teachers' pedagogical knowledge so that they can exploit and implement the ICT currciulum more efficiently and effectively in primary schools in Tanzania.

The development and practice of m-learning courses based on tutor-directed online teaching

Jianjun Hou and Kuiyuan Zhang
Peking University
Beijing, China

The information literacy of foreign students in China and the training strategy

Wang Yunwu
Jiangsu Normal University
Xuzhou, China

Because of the cheaper price and more powerful performance of mobile devices such as mobile phones and tablet PCs, more and more Chinese learners can afford them and use them for learning. This project explores a course framework to integrate m-learning technology into online courses which are used in distance education at Peking University. This framework provides learners with a blended learning environment in which they can study a course through a PC, mobile phone and tablet PC without problems in the learning process, and get a smooth learning experience with different devices.

Based on the analysis of learners' needs and course structure, the researchers established the following five elements in the design: (a) keeping dynamic data consistency among three kinds of platform through the server communication; (b) binding static information with the app program to save communication expenses for learners; (c) providing tutor-directed function to facilitate learners' learning; (d) reducing the level of mobile application and providing clear learning navigation; and (e) adopting Scorm to standardize content structures and data interfaces.

This project chose three courses which are popular in the School of Continuing Education of Peking University as examples to test the framework. The early development work included proofreading the learning content, developing a mobile phone application and tablet PC application, revising the online courses procedure to match the m-learning apps, and developing synchronous programs and databases in the servers.

After completing all this work in December 2012, the researchers invited the learners on the three courses to use the blended learning platform in the spring semester of 2013. Through interview and a questionnaire survey at the end of the term, it was found that the learners were satisfied with the interface design, tutor-directed function design and cross-platform learning experience — but they also made some suggestion, such as enhancing the interactive function between learners and optimizing app performance.

Improving the quality of education for foreign students in China can enhance China's educational soft power and its international competitiveness and influence. In recent years, China has been paying more attention to improving students' information literacy; but in this regard not enough consideration is being given to foreign students in the country, and their standard is not high enough. The information literacy training of foreign students differs from that of Chinese students. This paper, which focuses on first-year foreign students in China, involves an information literacy questionnaire and interviews. On the basis of an anaysis of the findings, some strategies are suggested for improving the information literacy of foreign students.

Cognitive apprenticeship: An effective pedagogy in open and flexible learning

Yousaf Khan
Allama Iqbal Open University
Islamabad, Pakistan

Cognitive apprenticeship is a learning theory that explains how the learning of concepts, processes, strategies and procedures of different schools, and related thinking and understanding skills, can be learned by engaging learners in e-learning-type activities or designs in an ICT-rich environment. It provides schooling through teaching methods (pedagogy) — modelling, coaching, scaffolding and fading on the basis of individuals' zone of proximal development (ZPD) or prior learning and interaction with more knowledgeable others (MKO) — to fill in the gaps in knowledge and skill; and it helps the learner to develop his/her own cognitive and metacognitive abilities through articulation, reflection and exploration (self-regulated learning) to become a master and trainer in his/her domain of knowledge and skill (contextual learning). In this way, a person becomes creative.

The purpose of the study is to review the literature for effective pedagogy in open and flexible learning environments at school level and develop a model for cognitive apprenticeships.

Development of an instrument for programme evaluation: An illustration from a nursing programme

Linda Yin King Lee, Alisa Ka Po Wong, Joseph Kok Long Lee, Wai Shun Yuen and Joey Che Yan Yip
The Open University of Hong Kong
Hong Kong SAR, China
Yee Shan Wong
Queen Elizabeth Hospital
Hong Kong SAR, China

The Open University of Hong Kong launched the Bachelor of Nursing with Honours (General Health Care) programme in 2005. This professional programme adopts a number of flexible features. For example, it uses a mobile device for clinical teaching which makes learning outside the campus feasible. It also includes a three-term system with flexible arrangements between the classroom teaching and practicums, thereby maximizing the learning opportunities. Furthermore, it works closely with hospitals to bring clinical expertise into the teaching content.

A comprehensive programme evaluation from the graduates' perspective was necessary for programme improvement. Owing to the unique nature of the programme, a specific instrument was constructed.

For evaluating the programme, a questionnaire was developed. Donabedian's triad was adopted as the theoretical framework in which 'structure,' 'process' and 'outcomes' were considered as the three sub-scales of this instrument. Under this framework, ten evaluation themes were identified: programme goals, curriculum model, contents and delivery, clinical education, resources, technology structure, staff, alumni, policies and student learning outcomes. Seventy-one evaluation items were then developed.

The stability of the instrument was evaluated by testing and re-testing 10 graduates at a two-week interval; for assessing its internal consistency, Cronbach's alpha was used; and the content validity of the instrument was evaluated by an expert panel of six nursing academics. Based on the percentage of items that were rated as relevant by the panel members, the content validity index was calculated.

The instrument has sound psychometric properties. The test-retest reliability coefficient was 0.81, indicating satisfactory stability. Cronbach's alpha for the three sub-scales was 0.91, 0.93 and 0.74 respectively, showing satisfactory internal consistency. Finally, the content validity index was 0.90, indicating good content validity. The present experience is relevant to academics who are involved in programme evaluation.

Innovation and social impact in Hong Kong higher education: Some lessons from Massachusetts Institute of Technology and Tohoku University

Cheung Ching Yuen
The Chinese University of Hong Kong
Hong Kong SAR, China
Carol Poon Man Wai
The Open University of Hong Kong
Hong Kong, China

In recent years, the Hong Kong Education Bureau has been zealously encouraging schools to enhance students' critical thinking and creativity, and their innovativeness and motivation for learning. Along with this, American scholars (Levi 2008; Macwilliams 2008; McCarthy, 2009; Clement, 2013) have strongly encouraged members of the teaching profession to apply innovative approaches to teaching. Actually, this strategy has been widely examined in the United State and Japan for some time and the outcome is quite fruitful.

Based on the lessons learned from the Massachusetts Institute of Technology and Tohoku University, this paper aims to shed light on a heavily under-researched multidisciplinary area: innovation and education. It examines this issue through cultural history, education policy and related social systems, together with 'the traditional custom.' In addition, this paper aims to redefine the concept of innovation in current teaching in higher education, to serve as a reference for potential change agents as they consider ways and means of creating improved learning environments at universities and other institutions — and to enhance educators' interest in, and understanding of, utilizing such new media as well as their social power. Finally, the social impact of the introduction of innovation in teaching in the higher education profession is examined and compared with the traditional practice.

Apart from literature studies, a field study and interviews in both Hong Kong and Japan, and also field observation in Massachusetts Institute of Technology and Tohoku University, are outlined.

The impact of cross-year peer tutoring on developing a culture of excellence in an undergraduate computing programme

Andrew K Lui, Maria H M Poon, H W Go, Vanessa S C Ng and Terri W Y Wong
The Open University of Hong Kong
Hong Kong SAR, China

A major challenge for the computing programme at the Open University of Hong Kong (OUHK) is to overcome the prevalent perplexity among first-year students about studying computing. Each year, a number of secondary school leavers are admitted into the computing programme that is not their true preferred choice. Many of them are low-achieving students who consider the computing programme as a pragmatic last choice in the Joint University Programme Admission System. They are ill-prepared academically and emotionally for the rigours of studying computing, and there are doubts about their ability to progress in the programme without a good background in science and mathematics. Also, the more able students are often misinformed about careers in computing and are not motivated to study hard.

Within this context, a cross-year peer-tutoring scheme is believed to be a valuable approach for raising the standard in both these sets of students. The students in need of tutoring can receive attention sooner with peer tutors providing additional help in tutorial and laboratory classes. The presence of peer tutors in the classes enables significantly more interactions between students in different cohorts. Peer tutors' similar background and learning journey can inform and motivate the first-year students; and their excellent academic and teaching abilities can also inspire the better first-year students. Peer tutors also benefit from this experience and enhance their academic abilities.

The cross-year peer-tutoring scheme has been running in the full-time face-to-face computing programmes at the OUHK for the past five years. At the beginning of each academic year, a number of final-year students are recruited on a competitive basis to play the role of peer tutors under the supervision of full-time academics in junior year laboratory sessions. They are also recognized as student leaders who are providing guidance to junior students. The merits of peer tutoring are well established in the literature, such as improving academic performance in tutees, facilitating soft-skills development in tutors (Falchikov 2001) and building a sense of belonging (Glaser, Hall and Halperin 2006).

The aim of this project is to study peer tutors as role models of excellence in a cross-year peer-tutoring scheme. The project focuses on whether peer tutors can exemplify, in words and actions, a level of high academic achievement in

Turning learning: A case study of flipped learning at an Australian university

Ronald Kordyban and Trishita Mathew
Bond University
Robina, Australia

the computing discipline due to hard work. The study uses a hybrid design that draws out the multi-aspect nature of the role model they play.

The first part of the study investigated the academic development of peer tutors, which included an interview with them to explore their individual learning journey, supplemented with a cross -sectional study of their self-efficacy at the time of appointment. To evaluate the continued development through peer tutoring, a longitudinal study (pre-post tests) of the self-efficacy and meta-cognitive abilities of the peer tutors was carried out, with the other final year students as the control group.

The second part of the research looked at whether peer tutoring can promote positive motivational interactions for first-year students. It included collecting statistics on tutoring activities in classes, the amount and nature of interactions within the computing programme, and a cross-sectional descriptive study of first-year students' perceptions of peer tutoring, supplemented by interviews to explore how peer tutors are possibly inspired by their own peer tutors.

The study has collected an abundance of first-hand data for a better understanding of the benefits of a cross-year tutoring scheme to overcome the common worries students have in undergraduate computing programmes in Hong Kong. It was found that peer tutors were perceived as role models for both average and better students. Some junior students displayed admiration for the peer tutorship and even talked about their aspiration to become a peer tutor one day. Cross-year peer tutoring can be regarded as a key process that passes on the desire for achievement and excellence from one cohort to the next.

References

Falchikov, N. (2001). Learning together: Peer tutoring in higher education. New York: RoutledgeFarmer.

Glaser, N., Hall, R., & Halperin, S. (2006). Students supporting students: The effects of peer mentoring on the experiences of first year university students. Journal of the Australia and New Zealand Student Services Association, 27, 4–19.

As the digital education revolution accelerates, we must continue to look at ensuring our underlying principles, approaches and philosophies of how we teach. The alignment of these pedagogies with the ever-increasing new and exciting e-learning tools is of interest to academics, educational leaders, administrators and other diverse learning stakeholders.

Flipping the classroom is a growing educational phenomenon which is turning learning upside down and challenging traditional teaching models. The basic idea is to reallocate precious face-to-face time away from simple content delivery and towards more important activities which can make better use of the teacher-student connection.

When combined with a blended learning mode of delivery, the underlying pedagogical strengths of a flipped learning approach provide a number of advantages and improvements over traditional teaching, such as catering for learner diversity. However, there are also several challenges and obstacles which need to be addressed, such as ensuring that students do the pre-class work required in a flipped approach.

This paper outlines a case study of flipped learning and blended learning currently being held at Bond University, Australia. It utilized both the learners' and teachers' perspective toward changing the traditional model of the instructor as the content provider and the learners as the passive sponges soaking up the information.

The methodology follows a qualitative approach, where a thematic analysis of observations, comments (both from instructors and academics), focus group data and interviews were conducted using NVivo.

In general, the results indicated an overall positive experience, both from the instructors' and students' points of view. Addressing learning diversity and increasing one-on-one student-teacher interaction were found to be two of the main advantages of the flipped classroom. However, generalizability of the results is limited as this was a case study. Specific strategies and approaches for using this model are discussed both in terms of positives and negatives, such as: (i) how to begin flipping your class; (ii) the strengths and weaknesses of a flipped and blended approach; and (iii) advice from academics who have tried the model.

A study on the influence factors of educational outcomes in a 'third-tier' TV university

Lu Shoudong
Zhongshan Radio & TV University
Guangdong, China

This paper takes the senior students of a 'third-tier' TV university as its research object. It collects a total of 238 sample data and applies SPSS, AMOS and other statistical software to conduct a statistical analysis on the factors affecting the educational outcomes of this 'third-tier' TV university. The research findings show that: there is a significant positive correlation between the duty fulfillment of teachers and educational outcomes; there is a significant positive correlation between curriculum resources and educational outcomes; there is no correlation between the diligence of class sponsors and educational outcomes; there is no correlation between the educational platform and educational outcomes; the positive correlation between the education management and educational outcomes is not statistically significant.

Towards a mobile learning environment at Caritas Institute of Higher Education

Lai-On Chun, Wing-Hang Yu, Wai-Man Pang and Jeff K T Tang
Caritas Institute of Higher Education
Hong Kong SAR, China

Applying mobile technologies in an e-learning system is an irreversible trend nowadays due to the rapid expansion in the number of mobile users in recent years, as well as the change of study habits among current college students. The ubiquitous nature of mobile learning is attractive to students as they can enjoy the flexibility of learning at any time and anywhere.

In this paper, we present a prototype system for mobile learning developed at the Caritas Institute of Higher Education. Our prototype system contains three major sub-systems — the mobile course management system, the mobile library information system and the mobile 3D library navigation system. Students can access course contents and materials in both textual and multimedia format from the mobile devices. An online quiz and exercises can be conducted via this mobile platform so that the students may easily evaluate their understanding via an immediate response from the system.

The library information system works as an additional source of reference to assist learning and teaching for both the students and teachers. The users are able to search and access library resources instantly if they are in a digitized format; otherwise, reservations can be made via the mobile system.

It is reported that the utilization of facilities in the library is low, with about 10% of respondents having never visited the campus library. Therefore, the mobile 3D library navigation system tries to attract students' attention with a fancy 3D user interface and environment, so as to introduce the available facilities for learning and discussion in the campus library.

A preliminary evaluation of the system has been performed by collecting the opinions of students in the college about the prototype system. Eleven students were invited to experience the three subsystems and over 70% of them found the proposed system to be satisfactory.

The profiles, motivations and expectations among UPOU celebrity students

Emely M Amoloza and Elinor T Lopez
University of the Philippines Open University
Los Baños, Laguna, the Philippines

As an open university, the University of the Philippines Open University (UPOU) caters for all those who are interested in continuing their studies. Adhering to an open and flexible learning system, the UPOU serves all types of people: young, adults, professionals — and even those in the field of show business, commonly called the country's 'celebrities.'

There have been many studies on the profiles, motivations and expectations of students but so far none of these has considered celebrities as the respondents, a gap which this study aims to address. More specifically, it describes the socio-demographic characteristic of these celebrity enrollees, to identify their motivational factors and to determine what they expect from the degree programme in which they are enrolled.

This study made use of the data available from the Admissions Section in the Office of the University Registrar, considering the essays submitted by celebrity students as part of the application requirements before being admitted to the University.

The preliminary results showed that most of these celebrity students are in the age range 25 to 30, female and single, and they cited career/professional advancement as their main motivation in enrolling for a programme.

If time and resources permit, this study will also make use of an interview schedule to gain some important insights from celebrities about their personal thoughts on distance education.

Online student portal: Learners' support system in an open and distance e-learning environment

Percia V Secreto and Rhodora L Pamulaklakin
University of the Philippines Open University
Los Baños, Laguna, the Philippines

Learner support in open, distance and online learning is defined as 'all activities and elements in education that respond to a known learner or group of learners, and which are designed to assist in the cognitive, affective, and systemic realms of the learning process' (Brindley et al. 2004). Teaching and tutoring, advising and counselling, and information and administration are the main institutional systems involved in learner support. The University of the Philippines Open University (UPOU) functions under an open and distance e-learning (ODeL) framework of distance education, where most of its academic and non-academic processes are done through the Internet. This study will focus on UPOU's online student portal (OSP), a student facility in the academic information management system (AIMS), which is the online gateway of UPOU's academic operations. Through the OSP, students can register online, view their final grades, pay online, request documents, view important announcements, and access the online course sites, e-library resources and online order system for learning materials. The system was established in 2012 and, after being implemented for a year, additional features were added to the system to make it a one-stop-shop online system for students, faculties and other staff in the University. An online survey was conducted with continuing undergraduate and graduate students who were admitted prior to the implementation of the online student portal but had experienced the manual and online registration process, viewing of grades, requests for documents, and the like. This paper will describe the students' assessment of the OSP's functionality, efficiency, appearance, ease of use and security. It will also report on the students' assessment of the OSP's usefulness in addressing their specific needs.

Moodle e-learning in higher education: A case study of its applications and impact in a university in Taiwan

Shu-Chiu Hung
Ming Chuan University
Taiwan

Xiangyang Zhang
Jiangsu Open University
Nanjing, China

With the advent of many free-and-accessible e-platforms and the advances in educational media and technology, e-learning has gradually become a key mode of learning in university settings. This paper considers various applications of Moodle e-learning in a university in Taiwan as (i) a computer-assisted learning supplement to any course, and (ii) an e-self-learning centre to facilitate and enhance students' learning for specialized courses (economics or statistics), certificate courses (TOC) and English courses (vocabulary or current issue in English). This case study uses Current Issue in English (CIE) as an example for discussion of its design and development, and its impact on learners' perceptions. In this research, the data were collected using a questionnare and the results of content analysis shed light on wide applications of Moodle e-learning in higher education and its effects on the students. In conclusion, the paper reflects on Moodle e-learning based on practical applications and suggests possible future developments and challenges in Moodle e-learning.

Openness: What it means to the support unit staff

Alvie Simonette Q Alip and Yasele Irene Angela M Yambao
University of the Philippines Open University
Los Baños, Laguna, the Philippines

The historical reconstruction of openness in education reveals that it is a technological, social, cultural and economic phenomenon (Peter and Deimann 2013), which has an impact on the teaching, curriculum, research, textbooks and policies in education (Wiley and Green 2012). In responding to the call for openness in a digitized world, the University of the Philippines Open University (UPOU) continues to innovate and expand its reach while staying grounded in its open and distance e-learning (ODeL) ideals. In embracing the philosophy of openness to fulfil its mandate of widening access to quality education, the alignment of the mission and vision of the UPOU's leaders and managers with its workforce is imperative for sustaining an environment in which learners can thrive. By conducting a focus group discussion (FGD), this paper consolidated the views of the UPOU support unit staff on openness in terms of instruction, research and public service. Specifically, it aims to answer the following questions: (1) What is the role of your office in the development of ODeL?; (2) How do you envision your office's research priorities in the context of ODeL?; and (3) How do you envision your office's contribution to public/ community service in the context of ODeL? In general, the results showed that the 31 staff who participated in the discussion had quite a good idea of what openness is. Also, their perceived office's roles and visions in ODeL instructional development, research and public service are aligned with the vision and mission of the UPOU's leaders and managers.

Partnering with a community to develop a technology-rich open access online unit: Melawhat?

Yoni Luxford, Rosalind James and Alan Wylie
University of New England
Armidale, Australia
Maura Luxford
Melawhat?
Australia

Community service and engagement are integral to the charter of Australian universities. In this paper, we present a case example of dynamic partnership between community and university. The project set out to develop a technology-rich and open-access online module addressing the health promotion issue of raising awareness of melanoma among young people. Designed as a resource for students, teachers, parents and health professionals, Melawhat? eduONE (Education Our New England) is an ambitious project. It is the opening module of learning offered within the suite of new open- access modules at the University of New England that is intended to partner with a community. The processes of negotiation between a small rural community organization with a very big vision and a regional university requires sensitive attention to details such as content management, presentation and intellectual property rights. This ensures that the product is ultimately fit for purpose and is participatory at all levels throughout the process. This case study documents the journey from idea to product from three perspectives: the community organization, the academic sponsoring the module, and the team of online education developers who came together with a unique charter to achieve the final product. Highlights of the process and project are shared with you during the presentation.

Teaching with 'post-PC' tablets: An ongoing study of teacher adoption of iPads in higher education

Tianchong Wang and Daniel Churchill
The University of Hong Kong
Hong Kong SAR, China

'Post-PC' mobile devices such as iPads have been adopted increasingly in educational contexts in recent years. While these tablets have brought both convenience and challenges to educational institutions and instructional design, many teachers have moved on from seeing teaching with a mobile device as a kind of e-learning paradigm with handheld computers. In addition, studies have identified that teachers' acceptance and perception of newer technologies like iPads have influenced their successful integration into the classroom environment. However, much of the current literature on 'post-PC' mobile devices has merely explored the positive role iPads or other tablets can play as tools for supporting learning through early, short-term mobile projects run by enthusiasts. Research into teachers' educational applications of 'post-PC' mobile technology is still very limited. In response to this lack of prior research, this paper reports an ongoing qualitative study that involves ten academic staff from different disciplines at a university in Hong Kong. We attempt to investigate how higher education teachers use iPads to facilitate their teaching practices. Data are being collected through interviews with the teachers, direct observations, focus group meetings, and reflective posts on a mobile-optimized social networking app. With cross-case analysis, the emergent study results provide insight into both the educational affordances of 'post-PC' mobile technology and the ways in which teachers' personal or private theories mediate these affordances and transform through the process. The study outcomes will contribute to a theoretical understanding of how teaching in higher education evolves through the adoption of such technology. Furthermore, the outcomes will provide a set of recommendations for applications of 'post-PC' mobile technology in higher education and ways to support teachers in adopting such technology effectively in their practices.

The use of videoconferencing: An evaluation of a partnership model in an Australian University

Christine Ure, Damian Blake and Bonnie Yim
Deakin University
Australia
Marjory Ebbeck
University of South Australia
Australia

This paper reports on the Victorian Government Regional Partnership Facilitation Funded (RPFF) project entitled *Bachelor of Early Childhood Education – Deakin at Your Doorstep* (BECE-DAYD). The DAYD delivery model uses state of the art videoconferencing, teaching spaces and trained tutorial staff in selected regional TAFE (Training and Further Education) partner institutions in Victoria, Australia. The project builds on the expertise and infrastructure developed, and leverages existing partnership arrangements. The overarching aim of this project is to evaluate whether this new mode of delivery can be replicated with future cohorts of students. A mixed methods approach (Creswell and Plano Clark 2011; Tashakkori and Teddlie 2010) is adopted to achieve the research aim. The evaluation involves the collection of both quantitative and qualitative data in the forms of a survey and a range of interviews with students, teaching and support staff, and other stakeholders involved. The findings from this research will provide relevant information and recommendations for early childhood education, early childhood teacher education providers (university and TAFE) and policy-makers. The knowledge gained about the impact of the BECE-DAYD initiatives on students' learning outcomes and experiences may be of benefit to the government in informing their continuing role in overseeing and shaping the field of early childhood education. The project findings will also be invaluable to those conducting teacher education courses, as they will be able to prepare teachers better for their profession and the issues associated with their work and professional development. In addition, it is possible that the findings from this research will highlight the need for the provision of professional learning opportunities in the 21st century.

The impact of the Students Academic Records Information System (SARIS) on learning flexibility in ODL at the Open University of Tanzania

Tolly S A Mbwette, Kassimu A Nihuka and Regina Monyemangene
Open University of Tanzania
Dar es Salaam, Tanzania

The use of computer-based systems to enhance flexibility in open and distance learning universities is well reflected in the current literature. At the Open University of Tanzania, a computer-based system called the Students Academic Record Information System (SARIS) was introduced back in 2004 to enhance student academic records management, which was in crisis at the time. This study will explore the extent to which the Students Academic Record Information System (SARIS) has enhanced flexibility in terms of the management of students' academic records, and in terms of access to course grades by students at the Open University of Tanzania. The study will employ a survey research design, and a total of 400 students will be drawn from three regional centres of Dar es Salaam (i.e. Kinondoni: 150 students, Ilala: 120 and Temeke: 130) to participate in the study. Both structured questionnaire and interview guides will be used to collect both qualitative and quantitative data. Then, the Statistical Package for Social Sciences (SPSS) will be used to analyse the quantitative data, whereas a thematic data analysis technique will be employed to analyse the qualitative data. Based on the findings, relevant recommendations shall be made in relation to the use of SARIS in ODL institutions and in education in general.

Designed for cross-cultural communication — Research on instructional message design of the Confucius Institute Online

Xuelian Li
Shanghai International Studies University
Shanghai, China

Public opinion on OER and MOOCs: A sentiment analysis of Twitter data

Ishan Sudeera Abeywardena
Wawasan Open University
Penang, Malaysia

The Confucius Institute is one of the important measures for international communication about Chinese culture today and a major strategy for Chinese 'soft power' enhancement. However, with the Institute's expansion, many problems have emerged, such as a shortage of teachers, a lack of teaching materials and a lack of systematic evaluation mechanisms. These difficulties have prevented improvement in the Institute's teaching quality and further development. However, the Confucius Institute Online will provide a useful and important complement and support because of its extremely rich resources and flexible interaction. Based on educational psychology theories, communication studies and aesthetic design, the paper discusses the advantages and disadvantages of the Confucius Institute Online instructional message design and operation, including a cross-cultural analysis of the audience, the design and integration of instructional resources, the interaction design and the effective integration of online and offline learning activities. We also give some suggestions about how to apply a network technology platform effectively to respond to the multiple needs of learners worldwide so as to achieve cross-cultural dissemination of Chinese culture.

The open educational resources (OER) movement has been in existence since 2002. It has gained significant momentum recently with a global effort culminating in the 2012 Paris OER declaration. However, the purist definition of OER has become blurred since then, morphing into massive open online courses (MOOCs). Even though OER are a significant part of the MOOC movement, it might not be a defining one. However, this has not yet been fully verified with respect to the opinions of the general public who are the main stakeholders of both these movements. To answer this question, this paper attempts to explore public opinion and perceptions regarding OER and MOOCs, and their complementary roles. A text mining approach is being used to analyse raw Twitter data in the OER and MOOC domains within the past four years. Sentiment analysis is applied to the data to understand how public perceptions have changed during this time period. The major contribution of this paper is a chronology of public views on OER and MOOCs. Through this, a roadmap can be identified for future research and development based on public demand. This allows both the movements to tailor their efforts to give the public what they want. This is the major advantage of the preliminary findings presented.

Using web-based corpora for flexible language learning: Japanese student views and feedback

Yoko Hirata and Yoshihiro Hirata
Hokkai-Gakuen University
Sapporo, Japan

The development of computer technology has made significant changes in linguistic research and the teaching of languages. One such change is the use of corpora (the plural form of corpus), which are large collections of naturally occurring written and spoken language from a wide range of sources stored in electronic form. Different types of corpora have been developed, ranging from a large corpus of modern language in the form of speech and text, such as the National British Corpus and Corpus of Contemporary American English, to small genre-specific corpora in different languages, a web-derived corpus, a parallel corpus such as *Paraconc*, and even a learner corpus. The analyses of multiple language examples and the patterns of co-occurred words in concordance lines assist the learner in understanding how language functions in different ways with different meanings. As regards English language education, many instructors have been convinced that making full use of these corpora is an important component of learners' academic success. In particular, for Japanese learners who have a limited exposure to authentic English in daily life, the advantage of using corpora for language learning is regarded as enormous. However, little research has been conducted on how learners view these different types of corpora.

This study examines Japanese university students' assessment of, and feedback on, different types of readily available web-based corpora. The focus is placed on determining how these corpora should be incorporated into the language classroom. The findings suggest that corpora provide some students with opportunities to raise their awareness of recurrent lexical patterns of target words. The results of this study also provide instructors with many insights into how to incorporate these corpora into the classroom for the future development of open and flexible language learning environments.

A study of guidelines for developing a Web information system for art teachers in Thailand

Ampai Tiranasar, Intira Phrompan, Nattakarn Anantrawan, Sarita Juaseekoon and Nuttida Pujeeb
Chulalongkorn University
Bangkok, Thailand

This research aims to study the development of a Web information system for applying in art teachers' professional development. The objectives were to study: (1) the current state of art education Web information systems and the need to use an online database for art teachers; and (2) guidelines for developing a Web information system for these teachers in Thailand. The analysis was based on the views of five experts in the fields of art education, education, and Web information systems, and a sample of 70 teachers and students in related fields of art education who attended a focus group in ways they chose. The research instruments were a structured interview form for retrieving the opinions of experts in the field in the focus groups. The views of experts and the focus group participants were recorded during the group discussion. The data were analysed by content analysis, dividing the data into different types (categories) and then summarizing the key issues.

The results of this research were as follows:

1   Most experts and focus group participants commented that Web information for art teachers in Thailand should be through a professional learning communitiy, open to students, teachers, and the general public who are interested in becoming members of the network.

2   Thailand's art teachers' professional associations should be a mainstay in developing the Web information, and should create incentives for its members by organizing contests and linking to the database of knowledge related to cultural Thailand.

3   The universities were responsible for creating the best practice, a basic model for teachers in their practical application.

4   The composition of the Web information system for teachers in Thailand should include: theory of art; knowledge about art; teaching methodologies; art education and integration; art education and special education; research methodology in art education; links to other websites; and activities for members.

An investigation of China's national online excellent courses based on encounter theory

Beibei Zhang
South China Normal University
Guangzhou, China

China's State Quality Resource-sharing course is one of the two projects about the construction of national open courses, which aim to promote the application of high-quality resources and improve the quality of higher education. Using a web-based survey and evaluation, this paper investigates the construction of national online excellent courses in the field of educational technology on the following five dimensions, viz. welcoming encounter, directing encounter, strategic encounter, ethical framing encounter and personal narrative encounter. The national online excellent courses are almost in stable continuous improvement after nearly a decade of development.

Through data analysis, it was found that these kind of courses provide learners with a wealth of teaching resources, but the guidance, learning activities and technical support services are developed unevenly. An online learning environment where the different stakeholders are experiencing different people has the potential for conflicting or frustrating encounters — and the imbalance in the encounters experienced by each of the stakeholders can have an impact on the overall quality of the teaching and learning environment. It is argued that the most effective state for consistent and successful online teaching and learning experiences is where all stakeholders (in terms of their roles for a particular course) are at the same level of personal narrative encounters, and in harmony. So the educational resources on the website, to some extent, should be identified and scientific classification should be carried out. Also, some departments should actively implement resource standardization, update resource production tools and enhance resource sharing platforms. This interactive experience can help learners to use the resources better and offer advice and suggestions on how to optimize the structure and update it into a state resource-sharing course.

An empirical study on using web-based social media to build a learning community

Ricky Yuk-kwan Ng and Cecilia Po-san Leung
Vocational Training Council
Hong Kong SAR, China

Grouping dispersed learners with recommender systems

Wolfgang A Halang and Maytiyanin Komkhao
FernUniversität
Hagen, Germany

Sunantha Sodsee
King Mongkut's University of Technology North Bangkok
Bangkok, Thailand

Adopting a mixed method approach that combines quantitative and qualitative methods, this study examines the effectiveness of using web-based social media to build a learning community for nurturing a collaborative learning culture among 24 students studying a 12-week culture studies module in one of Hong Kong's largest vocational education and training institutions. Students' perceptions on using Facebook to complement their learning, the usefulness of the learning community and their experiences were addressed. In addition, the teacher's views and strategy on using web-based social media as the learning management platform were collected for reflection and improvement. The findings reveal that most of the students preferred using Facebook rather than the learning management platform provided by the institution. Furthermore, the students' responses and the teacher's observations indicate that the online social network facilitated rapport-building and knowledge-sharing. This study suggests that facilitation skills and a sense of belonging are important for online learning. Another noteworthy point is that marks should be assigned to students for their participation in online discussion.

Distance learning, in particular e-learning, is characterized by geographically dispersed student populations and only in rare cases do students know each other. The consequence of this impersonality is social isolation, resulting in feelings of loneliness, decreased motivation and, finally, passiveness. To address the needs of geographically dispersed students, several collaborative learning environments were developed, which — in addition to the proper information delivery and communication features within given groups — comprised some forms of group-building tools. Just facilitating contacts with computerized support is, however, insufficient to form effective peer groups whose joint work motivates their members. There is an urgent need to find an effective way to automatically organize learners into highly coherent groups which share common learning interests, and similar personal preferences and dynamic learning behaviours, and also enable individual students to provide capabilities which complement those of their peers. To form cohesive learner groups within large student bodies, the use of recommender systems is proposed as this appears to be quite well suited for the purpose, and also helps to assign students registering late to already existing groups. The basic idea is to bring together people who share common interests and similar attitudes, and whose capabilities are complementary, allowing them to provide mutual help. The special form of consensual recommender systems allows one to characterize student groups. Distance functions which measure the similarity and complementarity of students are the key to successful grouping. Course instructors need to elaborate them according to the educational objectives being pursued.

Enabling an interactive campus life using a marker-based augmented reality interface

Jeff K T Tang and Wai-man Pang
Caritas Institute of Higher Education
Hong Kong SAR, China
Pak Ping Wong, Tsan Sing Chan and Long Yin Ling
The Open University of Hong Kong
Hong Kong SAR, China

In everyday life, augmented reality (AR) is a popular technology which automatically overlays additional text/graphical information and 3D visual effects on a real scene. There is a high potential to improve the quality of study life by combining the AR technology with ubiquitous mobile technology, which enables the students to access and manipulate the latest information inside the campus at any time and anywhere. We believe that the availability of such an interface can make the students more willing to stay on the campus and motivate them to attend lectures, have more gatherings and join more extra-curricular activities — the essential blocks of whole-person development. In this paper, we present a prototype system of an augmented reality campus at the Open University of Hong Kong (OUHK). It is a mobile app that consists of three parts, targeting different scenarios that may happen in the campus. Firstly, our app displays the timetable for a classroom which is identified by an AR marker, so the students can check a vacant classroom, or confirm whether they are going to the right room. Secondly, the app also simplifies the enrolment for extra-curricular activities: when a student scans the AR marker on a poster, our app pop up an interface for him/her to confirm enrolment by inputting his/her personal information. Finally, the app simplifies the food ordering process at the canteen (OU Club). A printed menu with food images and their corresponding AR markers is produced, and students can order food through the app and confirm the order by paying at the cash desk. A preliminary evaluation is being conducted, in which ten OUHK students are surveyed on their feelings about our app. All questions have received an average score of 5 (or more) in a 7-point scale, which shows they are quite satisfied with our app.

Alphabet Soup: Developing game mechanics as open education resources

Dana Ruggiero
Bath Spa University
Bath, England

Newly developed university programs in the United Kingdom are focused on creating links between industry and academia. The games industry is one of the strongest in the United Kingdom with both AAA games studios and Indie start-ups working with university programs in games technology. To create more instances of widening participation in a growing creative technological program, Alphabet Soup was designed to introduce more dialogue between content, game mechanics and topics under contention in the games industry. Using short-form game design with rapid prototyping and design-based research, 26 month-long challenges aimed at exploring new technologies in games have been constructed. These challenges are constructed as prize fights with multiple contenders vying for each challenge title. Thereafter, the mechanics developed are made available on creative commons for the challenges.

The aim of this presentation is to discuss the benefits and demands in making game mechanics open access and the process for creating evolving procedures to mitigate any intellectual property issues. A discussion of the Alphabet Soup project will be the focus of the presentation, with key points emphasizing the ADDIE model used to develop and disseminate information to the stakeholders at each stage. The evaluation of the project is ongoing with a design-based research methodology supported through a community of enquiry framework. Given the overlap between industry and academia in games technology, a community of game developers from across the world, a core group of academic advisors, and computer science staff form the project team. This integrated approach is the justification for using a community of enquiry framework and the 26 month-long challenges allow a design-based research methodology to develop naturally through the use of designer- developed mechanics. Alphabet Soup is in the final stages of planning and will be launched in February 2014. The results of the planning and challenge constraints will be the final part of the presentation.

Acknowledgements

The Conference Organizing Committee would like to acknowledge the following organizations for their contributions and generous donations towards the Conference:

- Croucher Foundation
- Wu Jieh Yee Charitable Foundation
- SZ Reach Tech Co., Ltd
- Fujitsu

icofe2014.ouhk.edu.hk