

Abstracts

Integrating educational video games in LAMS: The <e-Adventure> experience

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Educational computer and video games is a digital medium that has been proven to be useful in improving both students' motivation and learning outcomes, enhancing the overall learning experience. On one hand, digital games can introduce new appealing interfaces and highly interactive experiences that can bridge the disconnection between students and educators by providing advanced mechanisms to track students' performance. On the other hand, e-learning environments can help to address some of the open issues that come up when digital games are introduced in the curriculum as they can improve deployment and delivery, reduce the technical requirements or provide educators with a higher level of control over the game-based learning experience. In this paper the authors present how the LAMS e-learning system and the <e-Adventure> gaming platform have been integrated, resulting in mutual benefit: LAMS learning designs have been enhanced with educational games; and <e-Adventure> games can use LAMS monitoring and flow-driving features to increase educators' control in game-based learning experiences.

Biographical notes

Ángel finished his Masters Degree in Computer Science at the UCM in 2009, and currently he works as a full-time researcher in the <e-UCM> research group. His research focuses on the technical integration of highly interactive contents into e-learning environments, with special emphasis in the current e-learning standards and its limitations.

Javier Torrente obtained his Masters Degree in Computer Science at the UCM in 2009, and currently he works as a full-time researcher in the <e-UCM> research

group. His research focuses on the application of educational video games as highly adaptive content.

Fernández got his PhD in Physics from the Universidad Complutense de Madrid (UCM) and he is currently Professor at the School of Computer Science at the UCM. He is co-director of the <e-UCM> research group and his main research interests include e-learning technologies, educational uses of markup technologies, application of educational standards and user modeling on which he has published more than 90 research papers.

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Developing pre-service teachers' research capabilities using LAMS

Matt Bower
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This paper examines the impact of a LAMS activity designed to develop the research-based thinking capabilities of pre-service teachers. Diploma of Education students were required to formulate a research question regarding an educational question of interest and then design a LAMS sequence that could be used to investigate their question. The approach resulted in small but significant shifts in students' perceptions of the importance of research in learning and teaching, as well as improvements in their understanding of research issues. The technology-enabled research designs that students created revealed a range of student difficulties, including the creation of a measurable question, alignment of the methodology with that question, and the effective selection and use of technologies to implement the research designs. Eighty-four percent of students surveyed indicated that they experienced success in creating a technology-enabled educational research study, and the same proportion indicated that as a result of the exercise they would be more likely to integrate research-based investigation in their professional learning practices.

Biographical notes

Matt's work spans the fields of Computer Science Education and Technology Based Learning. After several years of high school teaching specialising in Mathematics, he returned university to complete his Master of Education (Online Education) and a degree in computing. Matt designed, built and lectured in the online Graduate Diploma of Information Technology course for the Division of Information and Communication Sciences at Macquarie University. He is now an Information and Communication Technology lecturer for the School of Education at Macquarie University and has recently completed his thesis entitled "Designing for Interactive and Collaborative Learning in a Web-Conferencing Environment".

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Implementing Learning Designs: A summary of the ALTC Project

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In the “Implementing Learning Designs” Project, the project team developed a number of scaffolded templates designed to facilitate the learning design planning process. These templates provide teaching staff with an opportunity to share examples of good design practice. Additionally, a framework was developed that can be used by academic staff to tailor these exemplary learning designs to meet the individual lecturer’s and/or course co-ordinator’s particular requirements, whilst providing them with the underlying pedagogical principals involved in the learning design.

Biographical notes

Leanne is currently working with MELCOE (Macquarie University’s E-Learning Centre Of Excellence) in Sydney, Australia. She is managing a number of research projects including the project described in this presentation. Until April 2007, Leanne was working with the Australian Centre for Educational Studies at Sydney’s Macquarie University. Prior to that Leanne spent a number of years working as a teacher in both primary and secondary schools and as Technology Trainer for the Department of Education’s Training & Development Directorate.

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Introducing Learning Design and LAMS to pre-service education students

Chris Campbell

The University of Notre Dame Australia, Sydney Campus, Australia

Leanne Cameron

Macquarie University E-Learning Centre Of Excellence, Australia

Pre-service Teacher Education students are exposed to a variety of learning designs while studying at university. This generally occurs as part of the course they study, while on practicum and informally, both at home and socially. This paper uses data from two different studies to present a case for determining the best time for pre-service education students to be exposed to learning design and LAMS.

Biographical notes

Chris has been a lecturer in ICT Education at The University of Notre Dame Australia in Sydney since the beginning of 2009 and prior to that she worked at La Trobe University, Australia for four years. She has researched middle year students' capacity for self regulation and how students use the Internet. Current research projects include use of iPods in middle year settings and using online tools in educational settings, including LAMS, with undergraduate teacher education students. This year Chris has also been investigating the use of learning objects by university students when on practicum.

Leanne is currently working with MELCOE (Macquarie University's E-Learning Centre Of Excellence) in Sydney, Australia. She is managing a number of research projects that are designed to help university lecturers and teachers develop effective Learning Designs. Until April 2007, Leanne was working with the Australian Centre for Educational Studies at Sydney's Macquarie University. Prior to that Leanne spent a number of years working as a teacher in both primary and secondary schools and as Technology Trainer for the Department of Education's Training & Development Directorate.

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Education students using The Le@rning Federation's digital resources

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The Le@rning Federation was created to provide teachers with access to e-resources. This study investigated the introduction of the Le@rning Federation learning objects and digital resources into a pre-service teacher education course. In the study, 225 pre-service teacher education students from the Sydney campus of the University of Notre Dame were provided access to content from The Le@rning Federation's website for an entire year. The use of learning objects was embedded into their course, providing them with the opportunity of adding the resources into assignments, as well as the use of them in class. Results indicate that pre-service teachers respond positively to having access to The Le@rning Federation's e-resources. Indications are that the pre-service education students will continue to access this digital content when on practicum and in their classes in the future.

Biographical notes

Chris has been a lecturer in ICT Education at The University of Notre Dame Australia in Sydney since the beginning of 2009 and prior to that she worked at La Trobe University, Australia for four years. She has researched middle year students' capacity for self regulation previously and how students use the Internet. Current research projects include use of iPods in middle year settings and using online tools in educational settings, including LAMS, more specifically with undergraduate teacher education students. This year Chris has also been investigating the use of learning objects by university students when on practicum.

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Integrating the experience of students through collaborative task design using student blogs

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There is interest in the social learning advantages technology-infused pedagogy gives higher-education students. This presentation reports on data that was part of a wide project from multi-campus teaching in the Bachelor of Education course at La Trobe University (Bendigo - n=235; and Mildura - n=25). The project aim was to increase the use of technology in the course by enriching the student experience and moving beyond giving lecture content. The project used a blog as the main source of communication between students who were asked to collaboratively construct a definition of learning. Students were grouped with one Mildura student in each group. Results show students were generally positive about the task, although improvements can be made to the way the task was set up to avoid Mildura students feeling isolated.

Biographical notes

Chris has been a lecturer in ICT Education at The University of Notre Dame Australia in Sydney since the beginning of 2009 and prior to that she worked at La Trobe University, Australia for four years. She has researched middle year students' capacity for self regulation previously and how students use the Internet. Current research projects include use of iPods in middle year settings and using online tools in educational settings, including LAMS, more specifically with undergraduate teacher education students. This year Chris has also been investigating the use of learning objects by university students when on practicum.

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Using LAMS to structure and support learning activities in virtual worlds

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Virtual worlds are being increasingly used in education, often for their flexibility in facilitating student-directed learning. As the flexibility offered to students to direct their own learning increases, however, the challenge of guiding the students' learning trajectories towards the intended learning outcomes also becomes greater, as does the need to provide appropriate support and guidance. LAMS presents one method of structuring student activities while providing targeted support, and as such may be a useful tool for teachers educating within virtual worlds. This presentation reports on the use of LAMS within a virtual world project with high school students, and identifies both opportunities and challenges for integration of LAMS and virtual worlds. Further improvements are identified that would improve the integration of LAMS and virtual worlds.

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Using a problem-based-learning approach with LAMS to facilitate best practice sharing of medical education content

Bronwen Dalziel

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Whilst there is no shortage of scientific and medical content available in individual medical schools and medical graduate colleges, there are problems with sharing medical education content due to: lack of “openness”, difficulty of manipulation and re-purposing of content, copyrighted content, and keeping content up to date. One technique the authors have used to address these issues is by using PBL (problem based learning) to engage students in a more active learning style where students have to research information and share their findings with their peers, rather than all of the content being provided with in the LAMS sequence (most of which can be found in textbooks, library resources and/or the web). Additionally, the flexibility of the LAMS Authoring environment and use of new LAMS features, such as Lesson LAMS and the ‘embed’ function in the LAMS Community, have allowed the authors to share the medical education content in a way that is unique in the medical education sector and has helped address the issues raised above.

Biographical notes

Bronwen is currently a Senior Lecturer in Medical Education at the University of Western Sydney. Prior to that she worked at LAMS International, primarily on the creation of a LAMS library of sequences based on British K-12 curriculum. She has a PhD in Science (genetics of obesity) from the University of Sydney.

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From LMS to VLE or from supermarkets to airports: Classifying elearning platforms using metaphors

Eva Dobozy

Edith Cowan University, Australia

Patricia Reynolds

King's College, London, UK

This paper presents a rational model developed to make sense of various elearning platforms currently in use in Australian universities. The conceptualisation and organisation of the elearning platforms is underpinned by an educational psychology framework of social construction of meaning, data visualisation and story telling for meaning making. The model explains how various elearning platforms can be integrated to represent a three-dimensional, hierarchical construct that has the potential to aid understandings about the utility of information systems (IS) for learning and teaching. The model shows that LAMS, which has gained increasing popularity in Europe (Laurillard & Masterman, 2010), is usefully depicted as a 'middle ground' system, successfully bridging conventional LMSs and more advanced IS, referred here as (MU)VLEs (Multi-User Virtual Learning Environments). The model has important implications on how university lecturers, classroom teachers and students come to engage with an increasingly complex elearning environment.

Biographical notes

Eva has worked in Swiss and Australian schools and higher education institutions. Her special interests include problem-based learning with ICT, student learning engagement and the development and testing of interactive blended learning tasks. Eva has been part of several ICT-related projects testing the feasibility of interactive lecture podcasting and online academic learning support. More recently, she has been studying students' utilisation of flexible learning provisions and engagement with LAMS activities. She is widely published and her latest co-authored book: *Psychology applied to teaching* (2009) is used in higher education across Australia. Eva was awarded the Early Career Award from the Western Australian Institute for Educational Research in recognition of her ability to generate new knowledge about the impact of democratic, learner-centric pedagogical practices on students' learning experiences.

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Students as learning designers

Concetta Gotlieb

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Macquarie University and Department of Education and Training

Matt Bower

Macquarie University, Australia

This paper reports on outcomes of a project where seventh grade students became designers of learning experiences for their peers. The students were required to identify learning outcomes, design activities that aligned to those outcomes, construct multimodal and interactive digital resources (using LAMS) to deliver those activities, and finally jointly participate in the learning created by their peers. The project developed students' content knowledge, multimodal literacy, understanding of learning, and a new form of literacy which we will call 'participatory design literacy'. The ways in which these elements were evidenced in the students' learning designs is described, and considerations for developing these forms of literacy are discussed.

Biographical notes

Matt's work spans the fields of Computer Science Education and Technology Based Learning. After several years of high school teaching specialising in Mathematics, he returned university to complete his Master of Education (Online Education) and a degree in computing. Matt designed, built and lectured in the online Graduate Diploma of Information Technology course for the Division of Information and Communication Sciences at Macquarie University. He is now an Information and Communication Technology lecturer for the School of Education at Macquarie University and has recently completed his thesis entitled "Designing for Interactive and Collaborative Learning in a Web-Conferencing Environment".

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Taking LAMS to the great outdoors

Debbie Evans, Cate Fredrickson, John Willis, Jenny Madsen
Macquarie ICT Innovation Centre, Australia

Andreas Utomo Kuswara & Kathy Stewart
Macquarie University, Australia

The Local Ecostudy Project (LEP) at Macquarie ICT Innovations Centre understands that students learn differently to past generations. A new generation of e-learners has evolved, demanding teachers use innovative methods of teaching. The LEP provides students with an opportunity to utilise a variety of mobile and collaborative tools including iPhones, digital cameras and hand-held portable datalogging computers to collect biodiversity data in the field. The instructions for the activities are delivered through LAMS sequences on the iPhone, utilising global positioning software and instructional YouTube videos.

Student-directed learning, middle-years peer mentoring and subject integration are just some of the pedagogies utilized in the LEP to make the inquiry-based learning project an authentic, engaging, quality e-learning experience for students.

Our presentation will deliver background information on the innovative ways we have made LAMS accessible in the field including the integration of the "Google Map"-based location-aware web application 'Mappo'. Two high school students from Pittwater High School involved in the LEP in Term 3, 2010 will also talk about their experiences as mentors and learning to use LAMS. Exciting future modifications to LEP will be discussed such as student-designed LAMS lesson activities and linking LAMS to augmented reality technologies.

Biographical notes

Deborah is currently Centre Director, Macquarie ICT Innovations Centre, Macquarie University. This facility is a collaborative agreement between Macquarie University and the NSW Department of Education. She has worked in NSW DET for 29 years as a primary school classroom teacher, computer coordinator, Assistant Principal and now Centre Director. Her experience in the integration of information and communications technologies began in the mid 80s with the Computers in Schools program. In 2003 Deborah was introduced to the earliest

version of LAMS and has worked with students and teachers ever since to design, implement and evaluate innovative ways of enhancing teaching and learning using dynamic and emerging technologies such as LAMS.

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Local Ecostudy Project (LEP)

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The online Local Ecostudy Project (LEP) supports distance schools investigating their local ecosystem to identify and build environmental awareness about the factors affecting the biodiversity in the natural environment. This middle-years project involves schools individually or collaboratively whereby high school students mentor their primary school partners in the shared responsibility of caring for their local ecosystem. The online LEP enables schools anywhere in the state to access a LAMS sequence that allows the teacher to confidently plan collaborative student centred learning experiences utilising research, questions, forums, voting, data collection and group decision making processes. In the field, students engage with locally accessible technologies such as laptops, digital cameras and data loggers. LessonLAMS enables MacICT to deliver a previously-designed LAMS sequence about biodiversity to schools in remote locations with limited background in learning design. It simplifies the online lesson design task and administrative process for teachers, provides new users of LAMS with easy access to well-designed scaffolds and allows users to customise these sequences to suit the local needs of the classroom. Teachers are able to use, reuse and share their sequences as well as their teaching ideas with other teachers with a shared interest in local biodiversity issues.

Biographical notes

Deborah is currently Centre Director, Macquarie ICT Innovations Centre, Macquarie University. This facility is a collaborative agreement between Macquarie University and the NSW Department of Education. She has worked in NSW DET for 29 years as a primary school classroom teacher, computer coordinator, Assistant Principal and now Centre Director. Her experience in the integration of information and communications technologies began in the mid 80s with the Computers in Schools program. In 2003 Deborah was introduced to the earliest version of LAMS and has worked with students and teachers ever since to design, implement and evaluate innovative ways of enhancing teaching and learning using dynamic and emerging technologies such as LAMS.

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Measuring collaboration in online forums

Glenn Mason

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Online forums can be a powerful educational tool for promoting discussion and the adoption of different perspectives on knowledge and ideas. However, forums often fail to meet these educational goals. In this presentation, the author will explore how models and instruments to measure and identify collaboration in online environments can function as useful aids in helping educators identify the reasons behind the success or failure of online forums.

Biographical notes

Glenn is an Educational Designer and is part of a joint UWS/Macquarie University team working on an ALTC-funded project on the development of online medical modules in the basic sciences for UWS medical students. He has a degree in Philosophy and an MSc in Computer Science and Natural Language Processing both from the University of Essex (UK) and an MA in e-Learning from the University of Technology, Sydney. Prior to his current role, Glenn worked for the Royal Australasian College of Physicians and Sydney University on medical education projects. He has extensive experience in commercial web development including working for media organisations such as Forbes and Choice as a web and database programmer.

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The Learning Outcome Authoring Tool (LOAT) integration into LAMS: Scaffolding author to write learning outcomes in any LAMS Activity Tool

Spyros Papadakis

Hellenic Open University, Greece

Tania Al. Kerkiri

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Learning outcomes are statements that describe the expected learner's knowledge, understanding, new abilities s/he acquires after the completion of a learning process. Learning outcomes meet desired behavioural criteria, through a clear set of measurable performance definitions. Consequently, they are a means so that a) the tutors precisely express what they expect from their learners and b) the learners to easily self-assess their achievements. As a result, the well-designed learning outcomes strongly support the creation of effective learning activities.

Despite their importance, it is a usual phenomenon even experienced tutors to face difficulties in using them properly. Moreover, in spite the fact that current LMSs provide a great number of services to support the learning process, this specific one is not yet available. Even LAMS, a worldwide leading software for Learning Design, does not support this facility. Recognizing this need, we developed and promote a web-based tool, the Learning Outcomes Authoring Tool (LOAT), that comes to fill this gap. The role of LOAT is threefold. Initially, it supports the (non-specialist) tutors to investigate the underlined pedagogical framework of a number of learning taxonomies. Secondly, it lets the tutors decide which level of thinking behaviour to cultivate within their learners. Finally, it lets them to navigate these taxonomies and select proper verbs/phrases that describe well designed learning outcomes achieving the desired goals.

In this presentation the functionality of LOAT is demonstrated, along with its integration in CK Editor –a tool widely available in LAMS environment. This integration makes LOAT easily accessible in every LAMS activity.

Biographical notes

Spyros is the Greek LAMS Community Coordinator and LAMS Trainer/Administrator at the Hellenic Open University (HOU), Greece. He holds a PhD in Computer Science from the School of Science and Technology (HOU), a Master in Adult Education (HOU), a Postgraduate Certificate in Open and Distance Education (HOU) and a Bachelor in Mathematics from the University of Patras, Greece. His PHD thesis was titled "Online educational resource development: supporting the educator". He has extensive teaching experience in the schools sector from secondary to professional development. He is member of a research team in the Training Sector at Research Academic Computer Technology Institute (RA-CTI), Greece. His current research interests include learning design, adult education and teachers training, teaching and learning in virtual and blended learning environments. He has authored or co-authored seven books and 2 chapters in Greek (among them is the book "Basic skills in ICT" for all 134,000 Teacher's Training in Greece and over 37 research papers in international journals and conferences.. He has participated in over 15 research and development projects in the area of software engineering and educational technologies. He serves as a reviewer for journals and conferences.

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Enabling the sharing of great pedagogy: An online peer and self assessment tool

Donna Shepherd

Griffith University, Australia

The Music Assessment Tool (MAT) is an online peer and self assessment tool developed for the Bachelor of Popular Music at Griffith University. Dr Don Lebler's pioneering peer and self assessment approach for students enrolled in the

Bachelor of Popular Music explores the learning implications that are implicit in the self-directed nature of popular music; where learning occurs iteratively, through listening to recordings of one's work and collaboratively, through sharing these listening experiences with colleagues. Relying on peer learning and the creation of a learning community, Don's innovative assessment offers students a rich reflective and authentic learning experience. Using this peer and self assessment strategy requires a heavy time commitment from the academic staff. This can be a stumbling block for others wishing to employ this educational concept. The authors have created an online application, MAT, that handles all of the administrative tasks thus drastically reducing the time taken to run and to manage this pedagogy. MAT also provides a 'one stop shop' for students to upload their original works, to carry out the assessment, provide feedback to their peers and facilitates the collaborative process. The students now have a more focused environment allowing them to concentrate on the creation of the music rather than the methods used to implement their assessments. Students are able to upload, collaboratively and individually listen to, provide feedback for, and assess their own and their peers' tracks in a single, easy-to-use application. Learn more about this innovative application, and the pedagogy it supports, at the presentation by

Biographical notes

Donna Shepherd began her working life as a musician and performing artist. An interest in technology and its many applications lured her away from performance and into a career in multimedia and animation, where her communication skills were soon recognised and she became a senior instructor with a Brisbane based new media and games educational institution, QANTM. This was followed by a move in to the tertiary education sector, where she brings her unique skill set into a collaborative space with academics, designing technology to support sound pedagogy, supporting academics in their endeavours to move into an online space and to improve learning and teaching outcomes in the Arts, Education and Law group at Griffith University.

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Finding the tools and pedagogies for the next generation of e-learners

Frank van 't Hoog

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Second language teaching and learning can benefit significantly from incorporating LAMS activities into the curriculum. From a student centred as well as from a task based learning perspective, using LAMS activities as a unit of learning offers the possibility for language teachers to provide learners with structured tasks and activities outside the classroom and for learners the possibility of planning and monitoring their own learning. By adding LAMS activities (narrated slides with exercises; activities built around websites) to the teaching process, teachers can enhance learning outcomes. Well-designed LAMS activities are motivating and more classroom time will become available to focus on the (language) learning process; the development of skills and strategies and communication in the target language. In this presentation the author will argue that LAMS activities:

- Provide a means for learners to do a range of audiovisual preparatory activities online and asynchronously instead of in the classroom;
- Can be built around sources like websites and newspapers outside the syllabus in order to offer motivating and authentic materials; and
- Can be used within any existing curriculum.

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LAMS in medicine: Designing a virtual clinical case in the field of human endocrinology teaching

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Consiglio Teresa

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The aim of the work is the use of new technologies for higher education in human endocrinology didactics. The authors built a virtual clinical case based on a common disease as thyroid nodule and used LAMS to design a diagnostic and therapeutic path useful for teachers as educational support and for students as self evaluation test. In the sequence the authors used the Noticeboard, Voting, Forum Multiple Choice, Image Gallery tools and Branching based on voting output. After providing a brief case presentation and some clinical and instrumental data, the voting activity starts the first step consists of four different laboratory tests. Based on the given answers by branching tool, the authors designed four different sequences. For those students who selected the wrong answers, the authors provide paths containing additional lessons with a final multiple choice questionnaire to verify the knowledge improvement of the topic before they move on to the next activity. After the step of terminal differential diagnosis, there is a forum in which it is mandatory for each participant to make at least one post. After the final diagnosis is provided, instructions are provided regarding follow up.

Biographical notes

Teresa's work spans the fields of e-learning development and delivery; conceptualising courses that blend classroom based teaching with a strong support by LAMS learning designs. After several years of teaching Italian and Latin at high schools, she returned to the university for a PhD with a focus on empirical research. She organised experiments with experts in the fields, combining a theoretical sound approach to learning and up-to-date knowledge and insights on the medical topic in a modern unit of learning. Luigi is a physician with a long experience in internal medicine; he serves in the department of endocrinology of general hospital in Chieti and is physician in charge of 'autoimmune diseases' unit ; he has particular expertise in the field of thyroid diseases. He works also as a professor at the local university; is author and co-author of many scientific papers.

In addition he has particular interest in the field of medical informatics and IT applications in teaching of medicine.

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New innovation: Mobile loyalty in higher education

Stuart C. Warden & Hugo Chichava

Cape Peninsula University of Technology, Cape Town, South Africa

Carolyn Löffler

Friedrich-Alexander Universität Erlangen-Nürnberg, Germany

This paper reports on the investigation of an innovative commercial mobile loyalty (m-loyalty) system implemented in a lecture room at the Cape Peninsula University of Technology. Being one of four Universities in Cape Town competing for students, staff and research funding remains a challenge. The underlying concept of this research was to use technology in an innovative way to reward students for academic success. This could be perceived both as controversial and unethical by some scholars, but the authors wanted to investigate the effects and uptake of using new technology to serve as a base for future research and possible implementation. Being a university of technology, new innovative ways must be found to apply technology and using new approaches not available in general learning management systems (LMS). The background to this research will be discussed as well as the ICT architecture deployed. Some encouraging results will be shared. An important aspect to be kept in mind while plotting a way forward is to uphold pedagogical principles.

Biographical notes

Stuart is a Head of Department and manages a research unit within the Faculty for post-graduate research. His doctoral research on e-commerce adoption by SMMEs now incorporates m-commerce and possibly soon social media. Other aspects are World Wide Web issues and Business Information Systems (BIS). These activities are encapsulated within a funded research niche area (RNA): ICT in e-business, e-government and community engagement for shared growth. The focus of this research niche area is on the appropriation of information and communications technology within business, government and communities. A newly established research project commenced this year on mobile loyalty (m-loyalty) in collaboration with the Friedrich-Alexander University of Erlangen-Nuremberg.

Carolyn, the creator of the m-loyalty system in Nuremberg, is from an Information Systems and Business background.

Hugo lectures under graduate students and regularly uses technology and social media in teaching. One vision of this research project is to develop strategies to deploy e-learning to stakeholders either, as an extension of the existing University e-learning platform, or specialised new system.

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