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Keynote Speeches
Marshall (Mike) S. Smith

is retired and a Visiting Resident Scholar at the Carnegie Foundation for the Advancement of Teaching and a Visiting Scholar in Education at Harvard. His most recent full time assignment was as the Senior Counselor to U.S. Secretary of Education, Arne Duncan, and Director, Office of International Affairs, U.S. Department of Education. Earlier Dr. Smith was the Program Director for Education at The William and Flora Hewlett Foundation. In the Clinton administration he was the Under-Secretary and the Acting Deputy Secretary of Education and, under President Carter, the Assistant Commissioner of Policy Studies in Education and the first Chief of Staff for the first Secretary of Education. Under Presidents Nixon and Ford he was the first visiting scholar and later a senior official at the National Institute of Education. Smith has been a Fellow at Center for Advanced Study in the Behavioral Sciences, a member of the National Academy of Education, and has been recognized for his contributions in several ways. He has also been an Associate Professor at Harvard, a Professor and Director of the Wisconsin Center on Education Research at the University of Wisconsin in Madison, and a Professor and the Dean of the School of Education at Stanford University. He has published over one hundred books, articles and chapters on educational issues of policy and practice, technology, social mobility, early childhood, evaluation and methodology and currently serves as a consultant or board member for a variety of organizations.

Castles in the Sand: New Directions for OCWC

Click the image to view the video.
Prof. Emeritus Gajaraj Dhanarajan

Prof. Dhanarajan is one of the world's leading advocates and experts on OER. He began his career in open and distance learning over three decades ago, establishing ODL programs in various parts of the world. He served as the second president of Commonwealth of Learning (COL) in Vancouver, Canada. Upon returning to Malaysia, he took the position of vice-chancellor at Wawasan Open University. With his network in ODL institutions, he has been played a major role in promoting OER in Asia. He began the OER Asia initiative, hosting conferences and publishing a book on various OER projects in Asia in collaboration with other OER leaders of Asia.

Higher Education and OER in Emerging Asia

Click the image to view the video.
Collaboration in Open Education
UNESCO report on OER in France

Sophie TOUZES

Abstract

A new survey “Open Educational Resources in France: State-of-the-art, Challenges and Prospects for Development and Innovation is being published by IITE UNESCO Institute for Information Technologies in Education.

This is the last IITE publication within the series of case studies summarizing best practices of OER development in non-English-speaking countries.

The study provides an overview of the French educational landscape, national educational policy, the current level of development of open educational resources and platforms in France and presents some case studies in Francophony. It proposes recommendations and strategies enhancing the adoption of Open Education OER or OCW on the horizon of the new government period 2012-2017.

This study shows lacks of visibility in the teaching community and several obstacles of coordination between higher institutions. For instance, OER are not called OER and access in French language is uneasy. France seemed to be absent in the global initiative of Open Education. The creation of an OCW consortium France is just accomplishing and the joining to OCWC too. Actions need to be taken to optimize the existing system and improve its efficiency. This means harmonization, communication and assistance for all actors from all levels in the French educational system. Recommendations are:

1. Harmonizing existing OER and OCW. Following UNESCO recommendations regarding the use of Creative commons licenses. Giving more intelligibility and easier access to OER and OCW for all actors.
2. Communicating on existing OER and OCW. We welcome the French participation to the OCW consortium and the signature of UNESCO’s 2012 declaration in Paris.
3. Accompanying OER and OCW development. We acknowledge that Open knowledge may create reluctance within the educational system and induce a shift in mind. We welcome the Government position and willingness of notorious actors to deeper the development of OER and OCW.
4. Participating in debate.
5. A major debate of society is taking place around the new government reform on education. Government, presidents of universities, teachers, students, but also sociologists, journalists are engaged showing Education has a key role in French society.

Our hope is that voice of Open Education and all initiative of opening will be listened as French Philosopher Edgar Morin prone: ‘[…] we have a common destiny that should unite us, that should turn us solidary and that should transform us into citizens of Planet Earth. For the first time in the history of mankind there is the possibility of unity - a unity in diversity, a peaceful unity. It means the possibility to make a truly new phase in the future of humanity’.
OER Research Hub – The Good, the Bad & the Other

Martin James Weller, Patrick McAndrew

Abstract

The OER research hub is a two year project at the Open University funded by the Hewlett Foundation. Working with other projects it aims to find evidence for and against 11 hypotheses relating to OER. The primary aim is to investigate whether OER use leads to an improvement in learner performance and/or satisfaction.

AS OER moves into the mainstream of educational practice, establishing a firm evidence based approach to decision making will become increasingly important. By working with collaborations from different sectors and different areas of OER coverage the project aims to investigate the 12 main hypotheses in detail. It is also gathering existing evidence to support or contradict these hypotheses.

The 11 hypotheses under investigation are:

a) Use of OER leads to improvement in student performance and satisfaction.
b) The open aspect of OER creates different usage and adoption patterns than other online resources.
c) Open education models lead to more equitable access to education, serving a broader base of learners than traditional education.
d) Use of OER is an effective method for improving retention for at-risk students.
e) Use of OER leads to critical reflection by educators, with evidence of improvement in their practice.
f) OER adoption at an institutional level leads to financial benefits for students and/or institutions.

The aim of this session is to use these as the basis for discussion and sharing of research findings and practice. This session will be mainly interactive, setting out the 11 hypotheses, providing an overview of the OER Research Hub project, and then inviting participants to engage in activity based around:

g) Informal learners use a variety of indicators when selecting OER.
h) Informal learners adopt a variety of techniques to compensate for the lack of formal support, which can be supported in open courses.
i) Open education acts as a bridge to formal education, and is complementary, not competitive, with it.
j) Participation in OER pilots and programs leads to policy change at institutional level.
k) Informal means of assessment are motivators to learning with OER.
   • The good – provide any evidence to support one of the hypotheses, and suggest how finding evidence for these would be beneficial for decision makers.
   • The bad – provide evidence that contradicts a hypothesis, and what the implications would be.
   • The other – what further research questions would be useful for the audience to find evidence for.

Using examples of evidence already gathered prior to the conference, we will then further populate and share the evidence for these hypotheses with the participants.
Manage Your Knowledge

Jenni Louise Hayman

Abstract

Based on her recent Masters of Education study and research, conducted fully at a Distance through Athabasca University, Jenni Hayman will present a session that reviews knowledge and knowledge management from a learner perspective.

Globally, we are frequently told we are in a knowledge economy, and that knowledge may be our greatest asset. Openly sharing our knowledge surely presents benefits for our families, communities, nations and the world. If knowledge is our greatest asset and can provide global benefit when openly shared, then management of this asset takes on tremendous significance as an issue of personal stewardship.

In a world full of opportunities to learn, how do we begin to manage? There seems little advice or guidance for learners to discern what to learn, and how to learn effectively, from unprecedented and ever-expanding choice in open and other forms of education. This presentation will explore these issues and recommend some personal asset management strategies.

In addition, identifying how we learn best (hello learning theory) may help us target our learning and reduce neural waste. How about that for a greening-the-planet concept? Reduce neural waste.

This presentation will begin to explore with participants (diverse learners one and all):

1. What they would like to accomplish in life that may require learning (through guided reflection on personal and livelihood goals);
2. What they already know (through use of a web-based knowledge-asset checklist), and;
3. How they learn best (through use of a learning preferences instrument).

This process of learner exploration may identify knowledge gaps, and indicate how learners may address those gaps through a variety of options, including Open Education and Open Education Resources to achieve their stated goals. The use of open, interactive and engaging resources to experiment with this idea may also end up being a lot of fun.
The Mechanical MOOC: It's alive!

Steve Carson

Abstract

In August 2011, Peer 2 Peer University, MIT OpenCourseWare, OpenStudy and Codecademy announced a collaboration that would knit together existing open educational resources to create an introductory Python programming MOOC.

The model, dubbed a "Mechanical MOOC," uses an email list to coordinate learner activity across the participating site; the course has no central platform and no instructor--learners questions are answered by their peers.

The first iteration of the course enrolled 6,000 learners, with hundreds more joining in subsequent cycles of the course. Response from the learner community has been overwhelmingly positive.

This presentation will provide an overview of the model and its benefits and drawbacks; a summary of what has been learned in the first iterations of the course; and an overview of what's next for the Mechanical MOOC.
Open Educational Resources in Action: Beyond the Textbook – Description, results, and analysis of a study on the use of an open learning system in a community college mathematics department

Donna Gaudet, John Hilton III

Abstract

Many students in U.S community colleges have financial challenges that prevent them from obtaining immediate access to class materials. Lack of immediate access to class materials may cause these students to fall behind and suffer lower performance results or withdraw. In an attempt to provide immediate access at little or no cost to students, the math department at Scottsdale Community College (SCC) has embarked upon a full-scale effort to create and/or adopt open source materials. We are attempting to mainstream open educational practice within our department and offer students open materials for all of our classes.

Open resources in education have traditionally focused on textbooks. While the list of open materials utilized by SCC includes an open textbook, we have gone beyond the textbook and created open source interactive workbooks that include video examples, practice problems, and lesson assessments. In addition, an open source online assessment system (WAMAP) has been adopted so that students may practice with instant feedback. The three components: the textbook, workbook with online lessons, and the online assessment tool allow our faculty to create a complete open source learning system for our students. Adopted in fall 2012 for a sequence of classes from introductory algebra through college algebra, this learning system is utilized by over 35 instructors and impacts over 1500 students a semester. Cost savings to students in one semester was over $150,000; those numbers will only increase as more classes and instructors begin using OER.

We will share the background and development of SCC’s open learning system, explain the different implementations it supports (hybrid, online, and face classes), and provide participants a means to access to the materials in the system.

Just because an open learning system is in place, however, does not mean that it works any better than one that costs lots of money. Saving students money is important; however, we are also collecting data to ascertain whether open materials are at least as good (according to agreed upon metrics) as materials that cost lots of money.

In conjunction with the Open Education Group, SCC is conducting a research study on the efficacy of our open learning system. Perceptions of students and faculty using open materials were gathered via surveys at the end of the fall 2012 semester. Over 1500 responses were obtained from students and over twenty from faculty.

In addition to survey data from students and faculty, student retention and success data were also collected, as were the results of the common final exams. All of these results and data points will be analyzed in an attempt to determine if the system we have created with open materials is at least as effective as the one we had in place before. Results of this research study will comprise the second half of our presentation.
Learners as Producers: Structuring Courses around Open Resource Production by Students

Jonan Donaldson

Abstract

This presentation discusses the planning, implementation, and results of an 11-week course designed around a framework of having the students produce open resources. Working as a collaborative group, students in this course author and publish a book under Creative Commons license. The book produced in the experimental offering of this course is on the topic of Massively Open Online Courses (MOOCs). The guiding principle behind this course design is that when students become the producers of knowledge rather than consumers of knowledge, the educational benefits are significant. Not only does this kind of course design model best practices in education (project-based learning, collaborative learning, student ownership of learning, and so on), but it also helps them become expert in production, use, and theory of open culture. The traditional adage which says "The best way to learn something is to teach it" is embodied in this course design. The students in courses designed on this framework, through building open resources, become teachers with students all over the world. This experimental class design holds promise as a model for collaborative student projects and classes centered around the creation of high-quality open resources.
IntOERnational - putting OER into international agendas

Alex Fenlon, Stephen Gomez, Adrian Thomas, Rebekah Southern

Abstract

The presentation will provide examples of OER projects aimed at international audiences and highlight their outcomes to others wishing to promote their institution or educational products internationally through the medium of OERs. It will look at how OER can be used to foster and enhance international collaboration through teaching and learning rather than research, as well as further expanding the reach and involvement of internal colleagues in OER practices. The presentation will ask if the projects have helped OER achieve some of the aims it sets out for itself.

The global reach and market for higher education (HE) has put internationalisation high on the agendas of most, if not all, UK higher education institutions (HEIs). Internationalisation is operationalised in numerous ways, from encouraging students from abroad to come to the UK to take a course, to a UK HEI opening a campus overseas. A major contributor to the internationalisation agenda has been the OER movement, which has allowed the distribution of learning materials across geographical boundaries.

As part of the UK OER funding stream from Higher Education Funding Council of England, the Higher Education Academy invited OER proponents to bid for funding to investigate how OERs might be used, targeted and developed to promote UK university courses, teaching and learning approaches to overseas students, HEIs and stakeholders. Nineteen projects were funded and, at the time of writing, the projects are due for completion by the end of January 2013.

The projects cover a range of different approaches to help UK HEIs attract interest from overseas parties and to establish new partnerships and collaborative activities. These projects include activities focusing on how to exploit iTunesU at a strategic level to establish and assist a HEI with international promotion; a case study on the decision processes to apply for OCWC membership; the use of websites to support students’ transition to UK HE; and the reuse of a guide to support academics adjusting to UK HE, which will be summarised in this presentation.

These projects are led by institutions that have a significant history in OER development and use. The institutions have demonstrated a commitment to OER outside of project funding at strategic and operational levels and are further exploring the medium of OER to attract overseas interest in their teaching and learning. The third year of the UK OER Programme addresses key strategic and thematic priorities whilst building on the lessons learnt within the first two OER Phases.

Also involved in the projects is the British Council, an organisation devoted to fostering dialogue and international partnerships between UK HEIs and organisations overseas. They also provide services to help students who want international study experiences meaning the Council are perfectly placed to help UK HEIs use OER as a method to raise their profile internationally. To date the Council have shown a strong commitment to helping the project leads establish contacts in target markets, building strategic relationships which they hope will develop into more sustainable links in 2013.
Gamified mobile learning with OCW — Effective learning though competition and collaboration

Satoshi Yamawaki

Abstract

Today, a large number of open contents have been created on the Internet. Now the next agenda is to make the learning of the contents easier and more effective. In order to realize a more handy learning experience it is necessary to use mobile devices and to divide content into segments, so that the learners can accumulate and continue learning. To realize the effective learning experience it is necessary to trigger competition and collaboration within the learning process by way of gamification. Competition with others within the learning process increases the motivation to learn more, while collaboration promotes knowledge and skills to flow from those who have them to those who do not.

We offer mobile social learning platform “goocus pro” to realize such innovative learning style with OCW. goocus pro is the native application for iOS / Android, which provides comfortable user experiences on mobile devices for learners. The learning segment within goocus pro is “class”. Each class consists of several dozen modules, in which texts, audio, movies etc. can be integrated, which means that the users learn with the use of short texts, audio and movie contents. Additionally, goocus pro has quiz modules, in which learners are given multiple-choice quizzes on what they have learned from those content. Because the learning materials are divided into segments in this way, learners can easily continue their learning. Besides, in order to stimulate competition within learning groups, achievement degrees of all learners within the group are printed in the form of leader boards after completion of each module, which increase the motivation for learning in order not to be left out. As a structure to stimulate collaboration, we equipped “I can’t understand” button, by tapping which learners can call for help from other group members.

As described above, by putting OCW on the learning platform with the system of mobile learning and gamification, learning with OCW will be easier and more effective. By introducing this into educational institutions and enterprises, much more number of people will be involved within the learning process.
Learners' needs analysis of meet-up support mobile system design for Massive Open Online Course

Wei-Ting Lin, Wei-I Lee

Abstract

Based on media richness theory proposed by Daft and Lengel (1984), the richness is much higher in face-to-face conversation than computer mediated communication. In this paper, we aimed at analyze learners' needs of an support mobile system that assign Massive Open Online Course (MOOC) learners to meet up, random/non-random, when they encounter learning problems and need to ask or discuss with other learners. The major contribution of this paper is to propose a prototype, which could gather MOOC learners from virtual to real world, and thus enhance media richness and social presence that traditional OCWs lack of.
Qualified: Using OER to Bridge Occupational Skills Gaps

Peter Smith, Brian Ouellette

Abstract

In a recent Harvard Business Review article (Who Can Fix The "Middle-Skills" Gap?, HBR, December 2012), it was estimated that as many as 25 million, or 47%, of all new U.S. job openings from 2010 to 2020 will fall into the middle-skills range, meaning they will require some form of post-secondary technical education or training. While this does not reflect an international perspective, we believe global data may parallel U.S. data in this case. For a seemingly ever changing American workforce, already plagued with skills gaps, this influx in skill-dependent new jobs creates upward and lateral barriers to career progress.

With a historical failing of the American higher education system to educate students with the skills necessary for today's jobs, the answer is to provide alternative learning opportunities for the career-seeker or career-mover. Our goal is to provide a learning ecosystem comprised of worker/learners, employers, and content providers that leverages a common workplace skills taxonomy. Within the system worker/learners can determine their skill alignment to current job openings as well as occupations, and locate online educational content where they can learn the skills they lack.

The system starts with educational content, which currently includes only OER. Using descriptions of content, learning outcomes, and course syllabi, the OER is aligned to workplace skills from a common library using semantic technology through an expert system. Using a semantic methodology, employers identify desired workplace skills for vacant positions. Together educational content and employer needs provide the foundation for worker/learners to develop a custom learning plan, whether or not the plan includes a formal degree or certificate. This learning plan begins with a diagnostic of the worker/learner's occupational history and presentation of the worker/learner's skills.

In this paper we will present the initial findings from the system's alpha/beta tests. These tests include OER-based content from Coursera, Saylor, and MIT OpenCourseWare. By sharing insight into our skills taxonomy, the semantic technology, the expert system and the developing algorithms, we hope to solicit feedback from the audience around the inclusion and classification of OER in the ecosystem. Specifically we hope to elicit from the audience the barriers, key challenges, comparable international skills gap issues, and solutions for the use, sustainability, discoverability, and the development of OER in the ecosystem.

In summary we will discuss our forward mobility and intent to foster transparency and inclusion of the OER community who work can help shape the ecosystem. For U.S. academic institutions, we will discuss our desire to align a workplace skills assessment with academic degree frameworks, thereby allowing worker/learners to earn college credit for developed workplace skills. With the international scope of the OCWC, we will discuss our desire to collaborate internationally to match job skills and matching algorithms with those of non-U.S. countries. Finally, we will present the 2013-2014 product development roadmap for Qualified, and discuss potential concepts, features and future research needed in this area.
Open instructional design and development: Processes and potentials

Irwin DeVries

Abstract

In an emerging model of OER development, a process termed “open course design and development” is being undertaken in the early stages of the international collaboration of universities known as the Open Educational Resource university (OERu) network. Within this process, the development and design of courses is undertaken within a wiki environment, where developed courses can then be exported into a variety of other formats or learning management systems. This model implicitly challenges the assumption that course development and design are necessarily undertaken by a sole individual or dedicated team in traditional or proprietary settings, and opens up new avenues for exploration of open educational practices in a wider context. This presentation describes and explores open design and development processes and potentials within the context of the OERu project.
Integrated open-source learning management system for OER application

Kuo-Chun Hsu, Cheng-Han Kuo

Abstract

The core function of learning management system which helps the university to automates the managing of learning events and production learning materials. However build a learning management system is a very large cost for schools. Fortunately there were many excellent open source software in learning-related applications that was sufficient to construct a powerful learning management system, there are many university using open-source learning management system as the open-source platform, such as Moodle, ATutor etc.

We think about Open Educational Resources should be allowed to place in an open platform for access, open educational resources should not only contain textbooks, but also all course activities can be used as part of the open educational resources, this study focused on comparison the function of open source learning management system, and implement an integrated system for Open Education Resources with course authoring, learning content management, teaching activities sharing, access statistics and user-base portfolios.
Abstract

This session will showcase the lessons learned in planning a MOOC for secondary school students. A hybrid (online and face-to-face) First Year Experience (FYE) class taught at Emporia State University was repurposed for secondary school students. The plan was to develop this course as an OCW project with major segments of the course offered as stand alone OERs. To develop this course as a flagship class a number of critical digital elements needed to be developed.

1) The textbook, *Million Dollar Rookie Mistakes*, needed to be recreated as an ePub that worked with the class and that also worked as an OER. I spent over 11,000 hours of research in developing this book. The ten strategies showcased in the book virtually guarantee a student will succeed in college when followed. Only six of these strategies work in secondary school. Since the MOOC is targeting secondary school students, a critical decision had to be made on how to share the four remaining strategies.

2) The interactive hyperstory, *Dr. Wiley Makes Sense*, needed to be moved online. To do this we needed to convert the hyperstory from a self-contained CD with nearly 70 video clips to a cloud based online resource. The hyperstory was developed to help students identify their sensory modality strengths and then learn how to study with these learning style strengths.

3) A digital game-based learning resource, *Dr. Wiley’s Game of Learning (DVD)*, needed to be analyzed to see if it could be developed as an OER and if this would work as an integrated element of the OCW project.

4) Protecting students from the side effects of technology through awareness of cognitive dangers and by practicing empowering strategies is a critical element of academic success. This is a vital element of our MOOC. When students learn key academic strategies, they also need to know how to avoid the digital distractions that are found everywhere online. Incorporating these strategies in a VLOG means that these videos are also OER.

The focus of this course is to help students begin using six core strategies that work in secondary school and in college. The remaining strategies will be shared as a resource in the hope that the student will add them to his or her tool chest of strategies at a later date. Brainstorming and storyboarding the order in which the above resources align with the strategies taught in the course as well as any other OER materials discovered brought our initial designs to a close. It should be mentioned that this hybrid course has been taught at both Emporia State University and to hill tribe students from Thailand and Myanmar. It is the goal of this project to share these resources with students in America, in Southeast Asia and the world over.
Does OpenCourseWare change our view on learning and the role of teachers in Higher Education?

Stephanie Verbeken, Frederik Truyen, Wim Van Petegem

Abstract

Our paper offers insights on the reflection we currently are making in the project team of OpenCourseWare (OCW) KU Leuven. In 2012 KU Leuven launched its OCW website (ocw.kuleuven.be) with the purpose to open up its education in the form of OCW. We are running an educational project to outline the implementation of OCW in KU Leuven's education. To this end five courses, currently taught at university as regular courses, were chosen as pilots and are being converted to fully functional Open Courses. In our view, not only the content (presented to its users under the form of weblectures, texts, auto-corrective exercises, self-tests, etc...) but also the learning process has to be represented in an Open Course. Therefore we developed the concept of Study Guides aiming at educating students to become empowered, autonomous and self-regulated learners. Another important form of study support is the concept of peer-to-peer interactions: in the near future we will be offering the possibility to students to interact with one another in online forums.

Creating Study Guides was primarily very obvious for us since it is a direct consequence of two dominant assumptions in our education. The first assumption is our current view on learning: learning as a social and constructivist process, the learning theory that considers learners as active constructors of knowledge and insights, while interacting with their environment. The result of a learning process are connections between formerly acquired knowledge and newly acquired knowledge. However if we will rely on peers too in order to constitute the learning process in an Open Course, we might be evolving more towards what Stephen Downes calls a connectivist view on learning. In the latter view, the process of knowledge building is seen to as an active and constructive process, but where according to the constructivists this is an internal process, connectivists believe that this construction happens in a network.

The second assumption is the role of the teacher in traditional education: our teachers are—the experts when it comes to both content and didactics. It is the teacher who knows better than the students, no matter how old they are, what the state-of-the-art knowledge is in a certain domain. It is the teacher (driven by policy) who defines the content being offered and who controls the steps students take in their learning process. At the end of this process, it is the teacher who determines whether a student achieves the learning outcome. By developing OCW we noticed that we are pulling apart this role of the teacher. The content provider is still the teacher (i.e. the professor who teaches the regular KU Leuven course), but it is the team of OpenCourseWare developers who compose the study guides and the didactics, i.e. the structure of the Open Course (which is not necessarily identical to the structure in the regular Course).

These differences between the regular education at university and OCW will especially receive attention in our paper and presentation.
Engaging students as OER users and producers: Is it working?

Veronica Ann Mitchell, Nicole Andrea Southgate

Abstract

In 2007, the University of Cape Town signed the Cape Town Declaration demonstrating a commitment to Open Educational Resources (OER). Such institutional leadership towards openness and sharing facilitated the Faculty of Health Sciences’ Education Development Unit to promote online publishing of teaching and learning resources using Creative Commons licensing.

UCT educators are starting to share their own teaching materials and to look for OER from elsewhere to revise, change and redistribute. OER has been taken up by some however the process is slow with a degree of resistance.

Meanwhile the majority of our students inhabit the open digital world welcoming teaching and learning from the web platform – a comfortable and connected space for them. Recent workshops introducing OER to Year 1 students emphasized the importance of understanding online intellectual property. In addition we began the production of open resources with Year 3 students. These initiatives have been enthusiastically welcomed by students however there are challenges.

This paper aims to elicit discussion with other educators in tertiary education on the facilitating and limiting factors for undergraduate students’ engagement with OER.

In 2012 we introduced interactive workshops for all Year 1 students in the Faculty. In OER4Us students were exposed to relevant OER material for their courses and facilitated to source openly licenced images relevant to their coursework. In addition these students learnt about digital professionalism.

For more senior students, human rights discussions in their Women’s Health block were video recorded with a view to sharing these debates online. Ethics consent was obtained however it remains a murky area that needs further exploration.

Using OER to expand the learning environment offers students the opportunity to gain from the affordances of the internet beyond classroom and service learning. The uptake of OER is influenced by understanding online intellectual property issues, students’ personal agency in engaging in uncertainty and their willingness to find alternative perspectives to their curriculum. Confidence in assessing the reliability of the abundant sources becomes an important factor in drawing on OER. The permissions offered by varying Creative Commons licenses can be confusing. Students sometimes have difficulty in their searches such as finding image permissions.

Furthermore by students creating and sharing their own course related material, their insights and understanding are valued offering opportunity for deeper learning and motivation for present and future publications. For example Year 3 students’ discussion on fertility options for HIV positive women will hopefully be published to elicit other classroom conversations to promote women’s health.

For students to upload their work online with licenses, their respect for ethics and informed consent is an essential component. For instance one student group chose an Oprah theme with a backdrop of the logo which denied them the opportunity to share their resource.
Enabling multi-directional knowledge sharing: Barriers and example approaches to contextualization and integration of OER from other institutions

Kathleen Ludewig Omollo, Ted Hanss

Abstract

Global standards for open licenses enable individuals to adapt and build upon others’ knowledge by making it legally straightforward to modify content. Thus, resources created by an individual at one institution can, in theory, be used and adapted by educators and learners at institutions in other countries. This ability to modify as well as copy the content is essential because, more often than not, customization is necessary to make materials contextually relevant to a new group of educators and learners. In our five-year experience with the African Health OER Network, socio-technical barriers exist that complicate the process of adopting content from other institutions, especially content from institutions in another country.

Through our work with the Network, we understand these barriers and developed solutions to overcome them. The goal of the Network is to advance health education in Africa by increasing access to locally-developed, high quality learning materials to streamline training of health care providers. The Network has engaged faculty members, staff, and students from multiple institutions and multiple countries in Africa to create OER. The result is knowledge production for Africans by Africans that also contributes to health education globally. Of the approximately 150 OER modules developed by the Network, many have been used, translated, or otherwise adapted by students and instructors at institutions regionally and globally, including materials authored by African academics now integrated into University of Michigan classes. A compelling example of re-use is the Ethiopian Minister of Health bringing University of Ghana-developed Caesarean section videos back to Ethiopia, where they were shared with and used by several health educators for training, without any alteration to content. One medical school in Ethiopia opted to adapt the resource, by changing only audio commentary to provide more context for her students. With only the original video and self-assessment questions still in tact, the physician was able to provide nearly immediate access to high quality learning materials to meet a high priority learning need. We will explain the factors that led to that success story.

To understand the motivations and barriers to sharing, we conducted and analyzed in-person interviews and online surveys with students and educators in Michigan, Ghana, South Africa, Ethiopia, and Uganda. This presentation (targeted at a general audience of authors, adaptors, learners, and OER sponsors) will provide an overview of barriers to adaptation, share proposed solutions, and highlight cross-institution collaborative content development projects. The learning outcomes from this session include understanding the challenges to adaptation, such as individuals not knowing where to find content or how a adapt it; assessing the quality of content; fitting materials into learning programs; technology barriers to access or editing; and institutional policies that do not recognize or reserve faculty time for developing or enhancing OER. A further session outcome is understanding and being able to apply approaches to address these barriers, such as referral services for finding OER; co-authoring activities to build local capacity; incorporating instructional design principles to connect locally-developed and external materials; and making resources available in multiple editable mediums.
OOPS, A Different approach to OER

Fay Chen

Abstract

In 2012, OOPS promoted OER through public media. First, we brought the full courses of Harvard's Michael Sandel on public TV (Taiwan Public Television). Furthermore, while CTI Television started to broadcast TED talk in 2012, we also participated in this project and introduced several TED talks to publics. In addition to mass media promotion, OOPS continued to promote the usage to OER to high school student through public speeches. In 2012, OOPS had already reached over 54000 students in Taiwan.
Developing Model through the Integration of Facebook and Digital References for Online Tutorial Child Development Psychology

Mukti Amini

Abstract

Child Development Psychology is one of the courses provided tutorial support services for undergraduate students PGPAUD UT in semester 1. This tutorial comes in the form of online tutorial (Tuton). However, the participation of students who attend Tuton is still very small, only 0.35% (65 students out of 18,398 students of semester 1). The reason students do not follow this general Tuton are: not accustomed to using the internet service, yet haven't electronic mail addresses (email), or have not been able to operate the computer properly. On the other hand, the use of Facebook as a social networking site has been integrating deeply to the life of people and it can be accessed from cheap mobile phones as well. Therefore, this study will develop Facebook integration in the implementation of the Child Development Psychology Tuton. In addition, the material initiation in children Developmental Psychology Tuton will also be added by connecting them to the various digital reference, not only consists of text and image alone. Hopefully Tuton participants will be more interested to learn the material Tuton, also used to search for a suitable digital reference in the future.

General purpose of this study aims to develop online tutorials models for course of Psychology Child Development by integrating Facebook and digital reference to increase student participation. The study was conducted in UPBJJ-UT Serang, Pokjar Serpong (Serpong study group) in 2012 on the first semester. The method used is research and development with procedural modeling. Tool used for collecting data was a questionnaire for students and observations as well as expert analysis toward the trial of model development. The data has been collected and analyzed descriptively and made as basis for developing a model as the final product of this research.

The study concluded that the overall student experience the many benefits of online tutorials model of Child Development Psychology. This model consist the integration of Facebook through the creation of a group to all Tuton participants and materials modification in relation with an appropriate digital reference. The study also concluded that this model should be applied to other online courses as well, especially for undergraduate students of PGPAUD UT around Indonesia. This model must have disseminated in order to socialize the model that in essence can be applied for other courses.
The Web-based Seminar (Webinar) as An Open Courseware For Universitas Terbuka’s Students

Irsanti Widuri Asih

Abstract

Universitas Terbuka (the Indonesian Open University) provides various learning supports for its students, including tutorial. Tutorials are conducted in face-to-face as well as in online mode. Since the last decade, UT has been focusing on the utilization of online learning and promoting open courseware. The open courseware plays an important role in supporting student’s learning.

Since 2012, UT has been piloting web-based seminar (webinar), a presentation, lecture, workshop or seminar that is transmitted over the web, as an open courseware to enrich student’s learning acquisition. This paper discusses the pilot study of webinar tutorial for the students from the Department of Communication, the Faculty of Social and Political Sciences. The pilot study was conducted for the Public Speaking course. The students who joined in this pilot project resided in South Korea, meanwhile the tutor was in Indonesia.

The pilot study reveals that, webinar tutorial embraces several potentials to be improved. The study portrays the opportunities to be widely implemented. However, capacity buildings are required to be taken place at the first stage prior to the implementation plan.
Integrating OERs in Online Tutorial to Enhance the Quality of Student Teacher Learning

Heni Safitri, Tuti Purwoningsih

Abstract

Open Educational Resources (OERs) are basically a material for teaching, learning, and research in digital form that is available in the public domain making it possible for any one anytime to use it and used to support access to information and knowledge. Due to these potentials, UT (the Indonesian Open University) utilizes almost fully online OERs in order to reach out its students and the public in general. ITV-UT contains a collection of learning materials in the form of videos streaming that can be accessed online. Meanwhile, Online Journal (OJ) publishes UT’s wide ranges scientific works, Learning Object Material (LOM) is basically a collection of learning materials for distance education in Asia region, Open Course Ware (OCW) provides enrichment online material supporting the topic discussed in the printed instructional materials of UT, Virtual Reading Space (VRS) facilitates students to limited the printed materials developed by UT, and Guru Pintar Online (GPO) is the portal to enhance teachers’ CPD (continuous professional development) all over Indonesia, including UT’s students.

In 2012, UT offers about 1,000 courses through 29 study programs and has 585,700 students spread all over Indonesia. 79.90% of then students are student teachers, included student teachers in educational physics study program. As UT is an ODL (Open and Distance Learning) institution, UT’s students are supported by printed materials to be studied independently by them. In many cases, the printed materials are supplemented by materials offered through radio and TV broadcasts, CD-ROMs and web-based materials using Moodle platform. As face-to-face tutorials are optional depending fully on the students’ initiatives, online tutorial is yet another option to support students learning. In online tutorial, the students are to follow a fixed schedule, study the materials, and do the assignments through the internet. Students are invited to discuss topics of interest and thus interact with tutors and/or other students participating in online tutorial.

Instructional materials in physics education courses are expected to meet the ability to analyze concepts, solve problem found in daily life, and at the same time to make learning be fun. It is in fulfilling these duties of the students and the tutors that the many forms of OERs mentioned earlier could and should be integrated in a meaningful ways. Integrating OERs in online tutorial on physics education courses are expected to improve the ability of students to understand more easily the concepts of physics. In the second semester of 2012, educational physics study program offer online tutorial 23 courses. The topic covers OCW material such as Electric Magnet, Coulombs law, Ohm's Law, Oersted, Biot Savart and Lorentz force, ITV-UT such as mechanical waves, GPO’s experiments in Newton’s laws, Longitudinal Waves, Bernoulli, and Fluid as well as takes advantage of VRS and OJ. This proposal wishes to describe how online tutorial could in a meaningful ways integrate all of these forms of OERs. The discussion is confined to student teachers enrolled in educational physics study program.
UNESCO Chairs in OER

Fred Mulder

Abstract

At the start of 2013 the number of UNESCO Chairs in OER has been doubled with thenew chairs in New Zealand and Brazil. We continue to support the establishment of new UNESCO Chairs in OER, in particular in Africa, Asia, Latin America, and the Arab region.

With the new chairs the common Plan of Action will be updated and extended on its mainlines of action. In this session we will report on the running activities:

1. The Global OER Graduate Network (GO-GN) has successfully started its operation. Currently there are 13 PhD candidates, around 30 experts for supervision, and 15 institutional partners. On solid grounds we expect all these numbers to grow. GO-GN is being funded partly by the Dutch Ministry of Education; other funding sources, including scholarship opportunities, are anticipated.

2. The OER Knowledge Cloud is continuously loaded with relevant new (and existing) publications (scientific and for a broader audience) and reports on OER. It is accessible to anyone and meanwhile is a rich source for all workers in the OER field. We are considering to start a new open access journal on OER research, possibly linked to the OER KnowledgeCloud and in a more continuous mode.

3. The global OER mapping initiative (from Susan D’Antoni) got into an online discussion in November 2012, the primary objective being to explore whether the OER community could collaborate to build a world map of projects. And yes, there was support for this idea. And there was discussion on the amount of information to be collected as well as on the best organizational and engaging approach. We are considering the further role of the UNESCO Chairs in OER.

4. The OERuniversity is steadily developing with more partners endorsing the OERu concept and plan, including some funding support. The OERu pilot courses which are under development incorporate a number of MOOC-like features. And the OERu delivery model is designed to utilise "academic volunteers". Both characteristics seem to have potential for reuse in other initiatives, as does the OERu itself as a concept.

Apart from these focus areas there is involvement of at least one UNESCO Chair in OER (and sometimes more) with international organizations such as COL, OECD, EU, ICDE, EADTU, ACDE, AAOU, and others. On April 24 we had an online meeting of the four UNESCO Chairs in OER where we have discussed certain updates and extensions of the common Plan of Action regarding, for example: K-12, capacity development, attention for non-English language use, and the potential of expanding the recent pan-European MOOCs move for Opening up (higher) Education in a well-established learner-centred tradition to other parts of the world.
Accreditation and Assessment of OER based Learning
Assessment and accreditation of informal learning: An international comparison

Rory McGreal

Abstract

A major function of the university is to assess and credentialize learning by conferring qualifications and degrees. The problem is that learners who access digital learning content on the Web and acquire knowledge and skills either formally or informally cannot readily receive appropriate formal recognition for their efforts.

This paper provides a comparative international analysis and evaluation of existing assessment and credentialization protocols and practices that can be adapted to accommodate emerging forms of digital learning. Scalable solutions are posited for post-secondary institutions to implement more flexible pathways to enable non-traditional students to gain academic credit from digital learning. This includes:

1. Mapping the existing universe of projects and initiatives exploring the integration of digital learning (online learning) into formal assessment and accreditation in post-secondary education globally.
2. Analyzing and evaluating the existing and potential scalable approaches to formal assessment and accreditation to digital learning, comparing and contrasting such uses with more traditional approaches.
3. Documenting lessons learned so far from key initiatives in this area, proposing tentative guidance for policy makers and various stakeholder groups in this area.
4. Proposing conceptual frameworks and ways forward for further analytical work to aid in the documentation and rigorous analysis of impact-cost and impact-assessment for the formal assessment and accreditation of informal learning.

In a digitally-connected world, the harmonization of qualification articulation across legal boundaries could contribute to significant savings and reductions in duplication of effort. The standardization of assessment and articulation should provide the basis on which to build scalable systems. The burgeoning phenomenon of Massive Open Online Courses, which utilize the open web and social media to offer courses to large student cohorts comprise both for-credit and non-credit students in the same course and frequently register more than 1,000 learners.

While the provision of open digital learning on the Internet is expanding, there is a lag in corresponding systems for the assessment and credentialization of this growing international type of informal networked learning. This paper analyzes and classifies a range of existing practices with the view to identifying the most effective and appropriate models for assessing and credentialising informal digital learning. Among the array of policies and protocols used within the following frameworks are identified:

- Open distance and online learning institutions versus traditional ones;
- Private versus publicly financed institutions;
- Institutions which use PLAR models versus those that do not;
- International versus local institutions;
- Open access learning resources vs. conventional curricula; and
- Institutions in a federal education system vs. those in devolved systems.

This project followed a strategic policy and practice analysis methodology. In the foundation phase, published international research relating to contemporary practice in the formal assessment, credentialization and national and international qualification articulation protocols were examined. This was followed by a comparative policy analysis and completed with the documentation of lessons along with a discussion of alternative frameworks.
Assesing the Educational Value of OER

John Hilton

Abstract

The high cost of textbooks is of concern not only to college students but also to society as a whole. Open educational resources promise the same educational benefits as traditional textbooks; however, their efficacy remains largely untested. We report on several community college’s adoptions of OER. These adoptions involve a wide variety of courses and several different colleges. I discuss educational results such as test scores and retention rates.
Access to Education and Access to Credentials

Mark Michalisin

Abstract

OER can expand learning opportunities for millions worldwide. In many cases, OER helps educators within existing education systems to build more effective courses for their students. But one of the greatest benefits of OER is how it has opened up knowledge to many learners without access to traditional higher education, due to income or geography or both. With this benefit, though, come new questions: how can we tell what people are actually learning through OER, and now that so many people can gain college-level knowledge using OER, how can they turn that knowledge into a tangible credential?

Historically instruction and academic credentials have gone hand in hand: instructors at an institution teach and also test and grade, and their assessments of individual students lead to granting successful learners a credential from that institution. With freely accessible educational resources, many learners learn without an instructor or even affiliation with an institution. What if they want to use their learning towards a degree? We need to “unbundle” the learning from the granting of credentials, so that independent learners can receive cost-effective educations. Several institutions have processes in place for evaluating the quality of courses taught elsewhere, and some have a system of assessing learning through having learners complete portfolios. But the first solution does not provide assurance that learners in the courses actually attended, let alone learned anything, and the second cannot be scaled to the hundreds of thousands of learners who might need them. One solution is large-scale exams. Exams that are built to measure college-level learning in specific subjects can be designed to be machine-scored and securely administered, and so can be available for a relatively low cost to anyone who wants to prove that he or she has learned the material. Many such exams exist already, and credential-granting institutions can have confidence in the learning assessed. The presentation will cover the large-scale assessments already available, how institutions can create valid large-scale assessments, and a call for flexible transfer credit policies so that higher education institutions can accept credit-worthy exam results from multiple providers, without having to write their own exams when others exist.
Ontology-based Framework to Auto-Generate Serious Game for OER Courses Assessment

Xinglong Ma, Feng Tian, Nan Jiang, Stefan Dietze

Abstract

Since Massachusetts Institute of Technology (MIT) launched the OpenCourseWare (OCW), many universities and organizations have participated in carrying forward the development of Open Education Resources (OER) and published their open courses supplied in the form of videos and related documents, which can be freely accessed and used by the global learners.

Even though many OER courses are greeted, registered and followed by many public learners, the learning process is quite boring and lacks interaction between peers and instructors as well as timely feedback and assessment. Normally, once an OER course is published, no ongoing supplement is maintained and served. Thus, it is difficult to catch up with the whole curriculum without interactive classroom climate. Learners need high motivation and self-controlling for continuous self-learning. In recently years, some projects of massive open online courses (MOOCs), such as Kham Academy, Coursera and Udacity are trying to improve the interaction, but there is no standardized guideline to exhaustively address this problem in a more flexible and open method.

In this paper, it proposes a semantic web-based approach that reuses the OER and supports generation and customization of game based formative assessment. This approach employs an ontology-based framework to structure and annotate OER courses and uses linked data to connect related learning resources. The core of the ontology framework consists of four sections, Open Courses Ontology (OCO), Knowledge Points Ontology (KPO), Serious Game Pattern Ontology (SGPO) and User Trace Ontology (UTO). OCO is the base that semantically annotates learning goals of OER courses and various learning materials, especially the materials fragments, which can improve the annotation granularity. KPO can link knowledge points with Wikipedia by DBpedia, a project to extract structured information from Wikipedia, describe relationships among knowledge points, their peers as well as referenced learning material fragments. SGPO annotates the serious games in a universal way (e.g. mode, currency, etc.) and input data (knowledge points and learning materials) for games has to be particularly described. Finally, it needs UTO to record the learning processes and outcomes. By the aid of the ontology base and linked data, the game-based assessments can be customized and generated by learners themselves, which can improve the learning interaction and self-learning motivation, maximize learning performance and enrich their experience in certain degree. Moreover, this approach can be extended and applied to traditional teaching that teachers can reuse existing OER to generate quizzes to check teaching outcomes.
KAXA Q&A everywhere

Jengnan Tzeng

Abstract

There are many open courses relative to mathematics, physics, chemistry or other courses that use many notations in representation. The forum of such courses is not easy to present the notation or equation by typing in the computer or cellphone. Although there is some syntax for mathematical communication, for example, Latex, discuss equation or proof is difficult by typing the letter still. Fortunately, the hardware of cellphone progress rapidly such that people can use cellphone take clear picture easily. Because writing a question or a solution on a paper (blackboard) and then take a snapshot is much faster by typewriting, KAXA use this simple idea to provide a Q&A solution to make learning easily.

In this talk, we will present the fundamental functions of KAXA website. We will introduce how to install the KAXA app on your android mobile or iphone and the basic flow to use KAXA app for Q & A. We will show how to embed the embedded code to the OCW website to make the forum Q&A easily just by your fingers. We will also demonstrate how KAXA help the posting question and solution and of course KAXA increases the viewing of OCW.

We will present some Taiwan OCW statistical data and survey the important network behavior. Because more and more people use cellphone instead computer as the network device, the way to record OCW have to change immediately. Split a full course into several sections within 7 minutes is required. To increase the viewing of OCW, the OCW websites are designed by just using one finger to browse. Contains must be easily published to Facebook or email. And the forum must improve to avoid typewriting. That is the advantage of KAXA app.

The KAXA website is available on http://kaxa.com.tw by the Chinese version. The English version is coming soon on http://kaxa.net.
De la evaluación a la certificación de competencias con recursos educativos abiertos: el caso de Hybrid Days

Daniel Dominguez

Abstract

En este póster se presentan los procesos de evaluación de los aprendizajes y de acreditación y certificación de competencias mediante badges desarrollado en Hybrid Learning (www.hybrid-learning.es), un proyecto enteramente abierto impulsado por el Observatorio para la CiberSociedad (www.cibersociedad.net) que tiene como misión contribuir a la alfabetización cibersocial. El modelo conceptual de Hybrid Learning se apoya en la web como plataforma y empleando materiales abiertos disponibles en Internet con licencias Creative Commons. Para hacer el seguimiento de los estudiantes en la web abierta, Hybrid Learning dispone de una herramienta de monitorización del buzz que permite a los facilitadores gestionar las evidencias de aprendizaje de los estudiantes. Estas evidencias serán la base para evaluar el conocimiento adquirido y su posterior certificación, que está abierta a cualquier agente interesado en participar en el proyecto.

La evaluación es una dimensión central para determinar la calidad del aprendizaje basado en recursos educativos abiertos. La forma en la que influye la evaluación es validando las competencias adquiridas por parte de los estudiantes. En ese sentido, la evaluación supone el paso previo para acreditar los conocimientos, que es un aspecto del interés de las políticas en favor de los recursos educativos abiertos. De hecho, la capacidad de acreditar el logro de competencias es una de las claves de la expansión de este movimiento a múltiples campos de educación formal y no formal.

El poster/demostación ofrecerá toda la información sobre el ciclo de la evaluación en Hybrid Learning y planteará interrogantes para la reflexión por parte de la comunidad. De manera especial, se mostrará cómo se articulan las competencias a acreditar, formadas a partir de las habilidades vinculadas a actividades concretas. En lo relativo a la evaluación, se muestran las diversas formas de valorar el conocimiento que incluye la evaluación experta, por pares, basada en la comunidad y la vinculada a procesos automatizados como quizzes. También se presentará un esquema particular generado a partir de ese proceso con los badges que están disponibles en Hybrid Days y los itinerarios diseñados para acceder a cada tipo de reconocimiento.

La demostración es del interés de personas interesadas en nuevas formas de evaluar el conocimiento obtenido en entornos y con recursos educativos abiertos. Asimismo, también se dirige a diseñadores instruccionales, investigadores sociales y cualquier persona vinculada al movimiento de la formación abierta y mediada por tecnologías digitales.
The Online Assessment for BIPA Program by Utilizing OER

Lidwina Sri Ardiasih

Abstract

Bahasa Indonesia untuk Penutur Asing (BIPA) is a fully-online language program offered by Universitas Terbuka (UT) to non-native speakers who intend to learn the Indonesian language or Bahasa Indonesia. This program has been offered as one of continuing education programs of UT. Moreover, it is fully supported by UT as the opportunities to design collaborative programs which enable the tutors to provide various materials as well as learning resources for the participants’ learning process (as stated in the UT’s strategic plans 2010-2021). The BIPA program consists of three levels: 1) Elementary (Dasar), 2) Intermediate (Menengah), and 3) Advanced (Lanjut). In order for the participants to achieve the goals, each level of the BIPA program has been divided into three courses. The first course is “Terampil Berbahasa Indonesia Lisan” which focuses on Speaking skills. However, the course uses other skills integratedly in the process of learning. The second course is called “Terampil Berbahasa Indonesia Tulis” which gives the participants the learning experiences more on writing practices. In order to achieve the third goal, the BIPA program also offers “Pengenalan Kebudayaan Indonesia”. This course is offered in order for the participants to enrich their knowledge about the culture of Indonesia as well as to learn the language.

Since the BIPA program is delivered fully-online for the participants, developing the online assessment for language learning has become one challenge for the tutors in order for them to evaluate the participants’ learning outcomes effectively. It is the responsibility of the tutors to be creative and innovative in providing the most effective evaluation process. The exercises as well as the assignments should help the participants understand Bahasa Indonesia through reading and listening and help them practice Bahasa Indonesia both in speaking and writing.

Open Educational Resources (OER) has been intensively recommended by the United Nations Educational, Scientific and Cultural Organization (UNESCO) as open learning resources to be used by both educators and students to provide the evaluation facilities as well as to support students’ learning process. Based on this opportunity, the use of OER is one alternative taken by the tutors of the BIPA program. Using the Moodle software for the learning process has enabled the tutors to provide more varied learning contents as well as assessment systems, including utilizing open educational resources (OERs). Furthermore, this software also enables the tutors to modify the assessment facilities to be more effective in evaluating the participants’ learning process. In this article, the writers intend to 1) review the theories or best practices of OER, 2) describe the current online tutorial of the BIPA Program, particularly the evaluation process, and 3) analyze how far OER supports the evaluation process in the BIPA program. From the analysis, it is visible that the use of OER highly supports the online evaluation process of the BIPA program.
The Development of Virtual Reading Room in Universitas Terbuka

Dimas Agung Prasetyo, Tengku Eduard Azwar Sinar

Abstract

Universitas Terbuka (UT) is the 45th state university and the first university dedicated to distance learning in Indonesia, Universitas Terbuka engages various learning activities and resources which provides flexibility and option for student independence in learning. UT also expands the development and use of web-based contents to build e-resources collection for students. UT has strong commitment to use and provide open educational resources for learning and teaching. The institution strive to encourage it’s lecturers to utilize OER from various sources when developing and delivering learning material for their students. UT also developed many Open Education Resources for years. The development of UT’s OER materials mainly geared to enrich UT standard textbooks as supplementary learning materials to boost learning process. These resources can be used by others for free. UT OER can be accessed through UT official website http://www.ut.ac.id.

In early 2012, UT has launched a new system called ‘Ruang Baca Virtual’ which has direct meaning: ‘Virtual Reading Room’ which is one of the new features provided in UT’s Digital Library website. The program is divided into two main modules; E-Textbooks repository and web based E-Textbook’s reader. The repository is an application where digital book are categorized, encrypted, and stored. The e-reader part is an application to access the collection, decrypt, and display the content directly to web browser. Users are only required to have an internet connection access, flash enabled browser. Based on UT’s policy, access to e-textbook introductions and summaries are provided freely for anybody while access to the full text E-textbooks are only provided freely for UT students and Lecturers. The system now has more than 900 hundred E-textbook titles and planned to be increased by the end of the year.

This article discusses the development process of Ruang Baca Virtual. The discussion covers the reason behind the initiative, technology and tools used in the project, and problems that occurred during the development and its solution. Some statistic reports are presented to provide an overview about system utilization and user acceptance. Finally, we also discuss the possibility for further development and improvement to expand system accessibility for the users.
Expanding the reach of OER
Supporting OER policy making in Dutch Higher Education, an approach

Robert Schuwer, Ria Jacobi, Hester Jelgerhuis, Ellen Kuipers, Martijn Ouwehand, Saskia de Rijk, Ellen Simons, Nicolai van der Woert

Abstract

In Spring 2012, a research was conducted among institutions for higher education in the Netherlands. Goal of the research was to find out to what degree a vision or policy on OER was present in these institutions (Jelgerhuis & Schuwer, 2012) (SURF, 2012). The research indicated that only few institutions had a clear policy on OER. A number of institutions are experimenting locally, not backed by a top down policy. Institutions that are not yet engaged in policy-making for OER say that they currently have other educational priorities that prevent them paying attention to these resources, a situation that is partly the result of budget cuts and performance agreements. For them, the focus is on such topics as improving the quality of teaching, academic performance, and professional training for instructors. These institutions do not yet fully realise that OER can be used to tackle these issues.

From the research it was concluded that there still exists much unclarity and that there is a lack of knowledge about the advantages OER can have, e.g. as a tool to improve quality and efficiency of education. This conclusion gave rise to SURF and the Dutch Special Interest Group on OER (SIG OER) to support policy makers of institutions for higher education in formulating an OER policy. We will assist institutions for higher education by organizing strategy workshops and by developing a model for various business case scenarios involving OER.

The strategy workshops will be offered for free to interested policy makers of all 56 institutions of higher education in the Netherlands and will take half a day each. The content of the individual workshop will be assembled (tailor-made) from an available toolkit of processes and products. An example of one such process is a brown paper session (e.g. for a brainstorm about advantages and risks of an OER strategy). An example of one such product is a number of reference business models for OER, based on the canvas of Osterwalder and Pigeur. We plan to offer the first workshop during the Open Education Week of 2013. In the presentation we will talk about the approach, the toolkits and the first experiences with the workshops.

About the SIG OER

The SIG OER facilitates and promotes community building, developing and sharing knowledge, cooperation and creation of vision, all directed at OER in the field of higher education in the Netherlands. The SIG OER has a core team of 8 specialists on OER and has a community of currently 360 members. It is set up and supported by the SURF organization, initiator of innovation in higher education and research.

References:


Bringing OER into class, helping student pass their courses

Martijn Ouwehand

Abstract

Many students at Delft University of Technology (TU Delft) struggle with the same basic courses, like Math and Mechanics. These courses cover the foundations every Delft Engineer needs to master. The content of these foundation courses have to be applied in courses further in the curriculum. So not fully grasping them and not completing these courses means students will encounter delays in their study progress. It is difficult for students to catch up, because these courses are offered only once a year. Another problem is that many students have different learning styles and needs, meeting those styles and needs is heavily dependent on how the instructor deals with this in the limited amount of time he or she has within the classroom. So we asked ourselves, can we help the instructor in meeting different learning styles and offer more flexibility for students in time and opportunity to comprehend course contents with providing additional services?

The world wide web contains tens of thousands of high quality Open Educational Resources providing all sorts of different styles in explaining the same universally fundamental knowledge in engineering. In this project we made content arrangements based on Open Educational Resources available on the Internet, as additions to the course contents already offered to students in class.

This way the same subject, model, fundamental principle etc which are explained in class and course contents, can now be explained in more ways a teacher could imagine or do himself, at the same time, exactly fitting students’ needs.

On top of offering additional explanatory course materials, we aim to provide additional services, like on-demand online tutoring, ‘crowdsourced’ educational contents and peer-to-peer tutoring.

This way we provide different additional services in terms of both content and guidance to meet students’ demands whenever they want, however they want, in a low budget model.

Additionally we’re creating extra awareness among both students and teachers about the existence of and possibilities to reuse OER in existing educational/learning contexts, bringing OER into the classroom. Right now we’re doing a pilot on how to add additional contents and services to existing course contexts. Ultimately we aim to provide exchange of (open) educational resources and services among comparable TU Delft faculties, creating synergy in educating our students in fundamental engineering knowledge. In 2013 decisions will be made in terms of extending this project to more courses. At OCWC Global 2013 we will be able to talk about the experiences with the first course and what lessons we’ve already learned.
Legal and Quality Guidelines for Open Coursewares Sites

Ignasi Labastida

Abstract

The first OCW site was established by the MIT in 2001 and since then number of OCW sites offering free courses online has grown rapidly. However, in Europe, the number of institutions involved in the OCW movement is still small. In order to increase the awareness of the movement, among other reasons, five European universities and three third party international organisations have been working together under the umbrella of a project funded by the European Comission aimed at the creation of an European branch within the OCW Consortium.

The project started in the fall of 2011 and it is expected to finished at the end of 2013. During the first year of the project we have gathered information about the current situation of the European OCW sites, especially on the use of free licenses. As a result of this work, we have produced a report entitled “Analyses of current practices in Europe” focused on the use of the licenses. This report was presented last September in Barcelona during the Workshop on legal matters related to OCW.

The report shows how institutions share their courses by means of open content licenses, mainly the set of licenses offered by Creative Commons. However we have found a lot of misunderstandings, misconceptions and misuses we think there is a need to be fixed by means of a guidelines document.

In order to help European Higher Education Institution to establish an OCW site to share their courses online we are working on the production of a set of legal and quality guidelines trying to solve some of the misunderstandings of current sites that we have found during our research.

In the guidelines we will try to explain, for example, how to include a license in an OCW site in order to be found by search engines looking for open educational resources, how to embed the licenses in the contents or we discuss the interoperability among the licenses.

We think that the final document will be helpful to improve the quality of the current OCW sites and we help new institutions to establish their new sites and it could be implement not just in Europe but in any continent.
From learning to research, an international cooperation model on expending the impact of utilizing OER.

Hsu-Tien Wan

Abstract

In Taipei Medical University (TMU), we began to utilize OER content to facilitate the learning outcome for more than 4 years. The first course, the Basic Computer Concept, is an undergraduate-level general education course. It has adept OER content from a Harvard extension school course, the Computer Science-E1. During 4 years of practice, students tend to consider it is a course with challenges but worth to enroll. Every year, it remains its status of “Hot.”

By the end of 2011, another graduate-level course was designed and practiced in the spring semester of 2012 in TMU. The course, Health information systems to improve quality of care in resource-poor settings, is original taught in MIT. It is a project-based learning course. Students who enroll in this course should team up and implementing the main technology of this course, the SANA technology. Instructors from MIT are willing to expend technology and projects to Asia countries. Thus, the cooperation began. Instructors of TMU and MIT have decided to do a 2-years plan for integration. In the first year, courses are taught independently, but have similar study schedule. As for the results, during the semester of spring, 2012, there were 2 synchronized sessions, one is Farmer’s speech and the other is the MIT project presentation. Then, in the second year, students from MIT and TMU can team up and try to do “international” projects through this course.

In the spring semester of 2012, there were 16 students enrolled in the TMU course. They are from 4 different colleges and from 8 different countries. During the course, they had formed 4 teams and finished the team projects. Some projects are now become topics of either research projects or academic papers.
Our Experience for operating regional consortium in Japan

Yoshimi Ffukuhara

Abstract

In Japan we established the regional OCW consortium, Japan OpenCourseWare Consortium, JOCW in short, in 2005. At that time in Japan most of Japanese universities were very behind in terms of utilizing ICT technologies in real settings of Higher Education. MIT OCW was a big shock for many top executives of universities in Japan. So when first workshop on OCW was held in Japan, many major universities participated it and they began to consider launching OCW in their own universities. Actually after the workshop six universities, which were Keio University, Kyoto University, Osaka University, Tokyo Institute of Technology, University of Tokyo and Waseda University, made organizational decision to launch OCW simultaneously and establish the organization for sharing experiences, know-how and issues. In next year, 2006 we hosted the very first Global OCW Conference in Kyoto, which was the origin of Global OCW conference. Since that time we established the basic regional Consortium operation which consist of biannual consortium meeting and some academic workshop jointly held with the academic society. In terms of financial structure we opened private sectors as affiliate members in 2008 and introduced membership dues prior to OCWC. From the early stage we have not received any kind of grant from the foundations and we have operated the consortium only with the membership dues. It was weakness of JOCW, but it made JOCW very independent organization.

From the long term perspective regional OCW consortium should have a strong and sustainable structure. Ideally regular annual activities should be operated with membership dues. In order to achieve this structure more organizations should be involved as members, roughly more than a hundred. In Japan we limited the amount of membership dues to 250USD for Institutions and 550USD for companies to make it easy to join.

The other unique activities are Opinion poll and Asia regional OCW and Open Educational Conference (AROOC).

Regarding poll we have carried out poll since 2007. When we launched JOCW in 2005, we intended to get feedback from users who accessed OCW sites. First we put questionnaires on the Web site, but only few users answered, and so we asked the commercial internet provider to use their internet based research service to get opinion about OCW.

In terms of AROOC, we thought we needed the place to share OCW/OER related activities among Asian countries. So since 2009 we held the Asia Regional OCW and Open Education Conference. In 2009 Korea University, Korea hosted and in 2010 National Chao Tung University, Taiwan, in 2011 Meiji University, Japan and in 2012 Thailand Cyber University hosted.

In this paper we report detail result of those activities.
What We Don't Know: Examining our assumptions on open education

Larry Cooperman

Abstract

The New York Times labeled 2012 as the Year of the MOOCs. In some ways, we were surprised by the sudden popularity of public, free educational content offered by well-recognized institutions. But this follows our own success popularizing free educational resources.

It is time for reflection on our dominant narrative and values: that open education will make a difference in national and global prosperity, that open content is an efficient transmission belt, that open content is superior because of the reuse capability inherent in open licenses, or that open education benefits those who do not have access to higher education. We may after reflection, reaffirm these statements or we may find that we need to sharpen our explanation and more clearly define where the roadblocks are. No matter what, we will emerge better able to contribute to global education through a superior understanding and a recognition of areas of weaknesses.

The panelists will address these issues individually and perhaps come with their own. At a minimum, they will be confronted with notions contrary to those that they might hold:

1. Does open education (or MOOCs for that matter) support the goals that we state - or other bodies, such as UNESCO? Are we leading to a world in which everyone is free to learn as much as they want are able to?
2. Is access enough? Is content enough? How do we bridge the gap between our goals and providing real opportunity for millions who have inadequate primary and secondary educations.
3. What is the tie-in between education and economic development and how does open education figure in that relationship?
4. Open education is tied to Creative Commons licenses. Should it be? Does the success of MOOC courses that are fully copyrighted mean that sharing is more important than reusability or the underlying license.
5. Will we negatively disrupt higher education? If we think of university systems - public and private in the aggregate - what is the ecosystem on which they rest? In free education, who pays? Who receives a salary?

The goal of this panel is to dive into these issues, debate with each other, spur a serious conversation between panelists and the conference participants, and lead to sharper definitions of what we want to do and how we want to do it.
Introducing the School of Open

Cable Green

Abstract

The problem: Universal access to and participation in research, education, and culture is made possible by "openness," but not enough people know what it means or how to take advantage of it.

The solution: Peer learning on what "open" means and how it applies to you, powered by mentors and learners like you, self-organized into study groups which themselves leverage existing "open" learning materials.

The goal: Encourage artists, educators, learners, scientists, archivists, and other creators to improve their fields via the use of open tools and materials. Offer skills and certification around "openness" that result in the spread of open tools, content, and practices.

The School of "Open" will offer online courses and challenges that cover what "open" means in the world around us, whether it's in education, technology, media, or government. Potential courses include Copyright 4 Educators, Moving your university from Closed to Open Access, History of Openness, and much more -- all in collaboration with open education advocates and organizations like you. This session will leverage the expertise and interest of the open education community to help drive this effort.

Project Wiki: http://wiki.creativecommons.org/School_of_Open

Project Site: http://schoolofopen.org
Open Educational Resources: An Asian Perspective

Prof. Gajaraj Dhanarajan, Daryono Daryono

Abstract

"Higher education has experienced phenomenal growth in all parts of Asia over the last two decades from the Korean peninsula in the east to the western borders of Central Asia. This expansion, coupled with a diversity of delivery and technology options, has meant that more and more young Asians are experiencing tertiary education within their own countries. In South, South East and Far East Asia especially, universities, polytechnics, colleges and training institutes with a variety of forms, structures, academic programmes and funding provisions have been on an almost linear upward progression.

Notwithstanding this massive expansion, equitable access is still a challenge for Asian countries. There is also concern that expansion will erode quality. The use of digital resources is seen as one way of addressing the dual challenges of quality and equity. Open educational resources (OER), free of licensing encumbrances, hold the promise of equitable access to knowledge and learning. However, the full potential of OER is only realisable with greater knowledge about OER, skills to effectively use them and policy provisions to support their establishment in Asian higher education.

This book, the result of an OER Asia research project hosted and implemented by the Wawasan Open University in Malaysia, with support from Canada’s International Development Research Centre, brings together ten country reports and ten case studies on OER in the Asian region that highlight typical situations in each context. China, Hong Kong, India, Indonesia, Japan, Korea, Malaysia, Pakistan, the Philippines and Vietnam all receive extensive treatment, as do the multi-regional initiatives of the Virtual Academy for the Semi-Arid Tropics.

While interest in and the production, distribution and use of OER are still very much in the early stages of development in most parts of Asia, OER’s potential value to improve the quality of curriculum, content and instruction, facilitate academic collaboration and enhance equitable access to knowledge resources cannot be overstated.

The 25 contributors to this book bring an impressive level and breadth of expertise, innovation and dedication to researching, developing and advocating for OER. Through a combination of quantitative studies and qualitative analyses, they provide valuable, instructive information and insights from throughout Asia. Open Educational Resources: An Asian Perspective demonstrates that OER development is thriving in Asia?in different economies, among different types of stakeholders and with varied approaches to open licensing. The diversity and richness of the contexts and approaches make this publication an important advocacy tool for promoting the use of OER."
Open Policy Network: seeking community input

Cable Green

Abstract

As open advocates recognize the potential for open policies to significantly increase the amount and quality of education, research and scientific resources and data, there is a pressing need to provide them support so they can successfully craft and implement open policies. A new Open Policy Network, coordinated by Creative Commons, will provide support to open advocates and governments exploring open policies. Open Policy = publicly funded resources are openly licensed resources.

If we are going to unleash the power of hundreds of billions of dollars of publicly funded education, research and scientific resources, we need broad adoption of open policies. For the purposes of open policies that contribute to the public good, we define policy broadly as legislation, institutional policies, and/or funder mandates.

There are at least two major barriers that have prevented broad open policy adoption. (1) There is no organized support for open policy advocates and governments who want to learn about, craft, and implement open policies. (2) Existing policy makers typically don’t understand how open policies can increase the impact of public investments.

If we get this simple idea right, open sustainability could cease to be an issue because: (a) there will be plenty of public funding to build and maintain all of the education, science, data, an other resources the world needs, and, (b) “open” becomes the default and “closed” becomes the exception for publicly funded resources.

In this session, Cable Green will present early thinking around an Open Policy Network and seek input from the OCW community re: how to make it better.

Project Wiki: http://wiki.creativecommons.org/Open_Policy_Institute
Abstract

This paper reports on the status of OER policies in Canadian government and higher education institutions, consisting of a POERUP (Policies for OER Uptake) Europroject country report on the existence of policy documents designed to support OER in the different provinces and their institutions. With the knowledge that there are not yet any governmental policies to support OER, open textbooks and few related activities in Canada, this report describes initiatives and/or policy statements that are currently being considered—or perhaps even in developmental stages—in higher education institutions and government.

OER are in a gestational period. Only ten years have passed since the term OER was coined in 2002 by UNESCO; however, while this may provide some wiggle room for countries, which have not yet fully involved themselves in or embraced the concept, it does not bear scrutiny by others who are trying to forward the cause or lead the field. The findings of this study suggest that, with some notable exceptions, there are only a few organizations in Canada currently working to develop and establish higher level government policy, standards and protocols related to OER. Canadian institutions are involved in diverse activities centred on the provision of digital resources, but these are not all necessarily OER initiatives. The importance of policy to support OER at institutional and provincial/federal government levels should not be understated. Although projects related to learning object accessibility and openness in Canada were underway in the 1990s (e.g. Canarie, Industry Canada), a change in federal government at that time brought many of the emerging initiatives to a halt. As education in Canada is solely a provincial responsibility, there is no national department of education and, by association, no federal education policy. This has left Canada alone in the international arena with respect to the development of national educational policies as the only country where such national policy initiatives are not politically possible. On the other hand, The Council of Ministers of Education of Canada, an organization of the 13 provincial/territorial ministries of Education, for the first time brought up the issue of OER at a national meeting as being important for adapting to the 21st century environment. They “reaffirmed their commitment to open access to knowledge and education and to the need to adapt teaching and learning practices to the new realities of the information age.” However they did not actively encourage policy development among their members.

This investigation focused on extracting information on activities taking place from within known institutional and private practice. While activity in the OER arena by major educational, provincial and national institutions may appear insignificant, there is a degree of activity and interest at the individual level that is difficult to quantify but has the potential to lay the foundation for mainstream adoption of policy and practice. Ultimately, groundwork is being laid by at least a few dedicated players in the national OER field. Unfortunately, it remains evident that, Canadian institutions are lagging behind the rest of the world.
Expanding the reach of OERs through Professional, Statutory and Regulatory Bodies (PSRBs)

Stephen Gomez, Alex Fenlon, Rebekah Southern

Abstract

A major challenge in extending the reach of OERs in some academic communities is raising the perception of open materials. There is still the debate about the quality assurance of ‘free’ materials and to some this is a barrier to the use of OERs. One approach to address this issue is to engage scholarly bodies in assessing and promoting OERs.

In March 2012 the Higher Education Academy (HEA) and JISC opened a call to Professional, Statutory and Regulatory Bodies (PSRBs) and Subject and Scholarly Associations within its Open Educational Resources (OER) Phase Three Programme. With a total budget of £150,000, PSRBs and Scholarly Associations were invited to submit proposals for funded projects which:

• Focused on the promotion of open practice within PSRBs and Subject Associations with a learning and teaching role;
• Aimed to facilitate a sustainable change in policy to embed open practice at a discipline level, and used existing discipline-specific UK OER as materials to support education and professional development; and,
• Supported the work necessary in identifying the most suitable resources and for promotion to existing members and networks.

Five projects were funded and delivered over a six month period from May to November 2012 with a requirement to utilise existing (rather than developing new) OERs. The projects were expected to collect and promote discipline-specific resources within their own teaching and learning policies as well as to the wider Higher Education sector. They were also required to reflect the following outcomes:

a) The development of sustainable open teaching practice approaches using OER; and
b) A positive change of culture towards open practice and use of OER within the disciplines supported.

The 5 bodies funded were the:

• Association for the Study of Medical Education - Promoting open approaches with the UK PSRB/subject associations in medicine.
• Royal Society of Chemistry - Higher Education Learn Chemistry project
• Royal College of Veterinary Surgeons Charitable Trust - Aiding the Transition from Veterinary School to Practice
• Royal Geographical Society (with IB) - OER: Facilitating and catalysing uptake in Geography
• Society of Biology - Promoting OER in bioscience Higher Education.

The presentation will cover the aims and objectives of each PSRB together with the key achievements, lessons learned and recommendations for the future.

Overall, all projects achieved numerous successes. The funding was described as a springboard from which they will continue to develop OER policy and practice. Some PSRBs had previously considered exploring OERs, but the grant funding validated their engagement. The projects increased the awareness and understanding of OER across a range of disciplines. In many cases this is leading to the systematic collation of good quality resources in new repositories that will be of enormous benefit to a range of audiences. In other projects, gaps have been identified where new OER are required and, encouragingly, there seems to be a real appetite for rising to this challenge. In some instances funding has already been secured to develop new material.
A cloud-based solution for OpenCourseWare system to meet the need of cross-platform learning behaviors with various devices in the ubiquitous environment

Hui-Chun Hung, Shelley Shwu-Ching Young

Abstract

The rises of new technologies, such as smart-phone, iPad, tablet PC, netbook and desktop PC, have brought up a wide variety of mobile learning behaviors. In particular, designing for these various new technologies has thrown up a number of design challenges associated not only with the physical and functional limitations of these devices, but also with the different user behaviors. However, each technology has distinct characteristics and affordances that facilitate different types of learning. For example, those devices have different affordances such as internet connectivity, screen size, portability, storage and operation system, which let learners to reach the distinct format of content in different user-behavior. Most importantly, in the ubiquitous learning environment, the educational audiences should feel free to choice or swift their devices to learn depend on their personal needs and different environments.

National Tsing-Hua University (NTHU) launched the OpenCourseWare (OCW) project in 2008 to enrich educational resources and to make top quality higher education available for the general public. To engage educational audiences and extend the reach and impact of NTHU OCW, this study concentrated on the updated system with the design and development of a cross-platform cloud-based solution for learning on the various devices. The system aims to support the various specialized technologies, portable media player, smart phone, tablet pc, laptop, desktop, which tend to be used in different learning settings in various ways. Therefore, the digitized contents of open courses were created in various formats suitable for download and display in various environments such as desktop computers or mobile devises. The system adopts cloud-based solution to: first, for teachers to publish courses for mobile and desktop format at the same time, and second, to provide learners with an easy access to archived learning materials through various devices.

Moreover, this study used web metrics tool as the primary research instrument to discover the user's perspectives with different devices so that users’ learning behavior can be better understood. The web metrics tool is a cloud computing tools, the Google Analytics (GA), in order to understand the network profiles of users who visited NTHU OCW. GA is a powerful tools for institutes to evaluation its impact through an objective view. It could provide, such as locations, OS, reference sites.

The results of this study provided valuable references for different learner user-behaviors on various devices, from desktop to mobile, online to offline. Different users’ requirements were gathered from multiple learning sources. Moreover, this paper also discussed the development processes for a cross-platform cloud-based system which supports varies mobile and desktop devices. We expect the NTHU OCW was perceived to be a usable, useful and desirable tool to support video learning and also for gaining new contextual and cultural knowledge.
Massive Open Online Courses and Open Courseware: emerging challenges, promises and futures

Sandra Peter, Lesley Farrell

Abstract

Open educational resources (OER) are seen to be the driver of a fundamental shift in how we understand education. Starting with Massachusetts Institute of Technology’s initiative, Open Courseware (OCW) has been the major open education movement of the past decade, sustained by numerous of universities around the world. However, since Stanford’s Artificial Intelligence open online course gained public attention at the end of 2011, massive open online courses (MOOCs) have emerged as the new trend (see for instance Daniel, 2012 for a review). New commercial start-ups like Udacity and Coursera have entered the scene, promising free access to anyone, anywhere at any time. The New York Times called 2012 “The Year of the MOOC” (Pappano, 2012) and many commentators claim that we are in midst of an unparalleled revolution in education.

Current developments are shifting what seemed for OCW to be a relatively stable system that could be and indeed was being steadily mapped by research (in particular in terms of institutional development, sustainability and formal higher education reform). First, there is a changing balance in the interplay between commercial interests and humanistic rights to education in the context of new initiatives. Second, the media coverage surrounding MOOCs is re-framing previous initiatives (including OCW) as inferior or even re-creating the history of OER initiatives to exclude previous forms altogether. They are also positioning MOOCs as the dominant form for self-learners. Third, there is a shifting balance towards elite, overwhelmingly American producers, providing high production value content. As such, new initiatives raise a number of questions regarding their impact on OCW and have the potential to change the scene for those involved in creating and using such resources, and especially for lifelong learners.

After reviewing how such developments are positioning OCW in the new open educational landscape, we will discuss to what extent these developments represent a challenge to, a complement to, an evolution of or rival traditional OCW. Although historically commercial and philosophical interests have not been completely incompatible (see Peter & Deimann, 2012, Peter and Farrell, forthcoming), new practices are potentially increasing pressures to generate profits and influencing the trajectory of OCW. For instance, although EdX is a not-for-profit enterprise, the University of Texas System is joining the online platform and is considering offering credit for a fee (Coughlan, 2012). The reconstruction of ‘open’ in the media has the potential to obscure OCW and undermine their benefits not only for institutions, but particularly for individual lifelong learners. We analyse the unsettling paradox that such challenges have the potential to on the one hand to greatly increase access, on the other to put us on a path to a more closed system and consider challenges for future research.
Brazilian textbooks access and OER public policies

Cristiana de Oliveira Gonzalez

Abstract

In Brazil, about 30% of the technical-scientific books used at the main courses in public universities are out-of-print and 80% of the same books are produced with public investment (research grant, professor's salaries, tax exemption and infrastructure). Regarding K-12 educational material, the Brazilian government is the main buyer, distributor and promoter of textbooks, with a great impact in the editorial market. One of the solutions that have been proposed are the OER Bill (Federal Bill no 1.513/2011) and the State of São Paulo OER Bill (which has already been approved). The current PL 1513/2011 draft targets two main State actions related to Open Education Resources public policies in Brazil: i) the regulation and implementation of governmental educational resources acquisition and ii) the regulation of the production of educational material that evolves public institutions, such as universities, research institutes, and public foundations with the mission to foster research, scientific and technological development. In this context, to achieve success in OER policies, it is a central action to analyse the impact of all the open initiatives that have already been operating in the country. Until now, there is any data on the usage, impact in the academic community and society, the range of this OER policies regarding Internet and education access. An additional issue that these policies bring to discussion is the preference for open standards when it comes to OER distributed in digital media. This will affect some of the current Federal programs such as the Programa Um Computador por Aluno (PROUCA) and the recent acquisition by the Ministry of Education of tablets for secondary teachers from federal, state and municipal public schools. Since that there is a great public investment in this digital media purchase, the main objective is to come up with a model of open standard and free software that best suits OER purposes and facilitates interoperability for this technological devices. The main objective of the panel is present the current Brazilian educational material access context and point some of the economic, social and political impact of OER policies that have been implemented, which is part of a University of São Paulo research project. It is expected to get some inputs from experts, activists and the public on other countries experience.
Open education: Are we at the crossroads?

Markus Deimann, Sandra Peter

Abstract

The current hype around various forms of openness in education, most notably Massive Open Online Courses (MOOCs), has generated a standpoint that is becoming almost impossible to escape (Daniel, 2012). This, however, changes radically if asked what exactly openness means and how this may lead to better education because goals, principles and tools have become blurred over the last decades. Whereas educational objectives were clearly privileged during the heydays of Open Education, this has become subordinated to economic aspects, in particular with regard to MOOCs which have the potential to generate new revenues. Although such dynamics are not new, neither are commercial and philosophical interests completely incompatible, they can potentially lead to control being transferred from users to producers and other stakeholders (Peter & Deimann, 2012).

In this regard, looking back to the “old days” is an essential endeavour because it unveils that the movement already wrestled to define the core meanings (Walberg & Thomas, 1972). As a result, Open Education has converted into a spirit rather than a rigorous concept that, due to its ambiguity, is conducive to being compromised as a “commodity of education” (Macintosh, McGreal, & Taylor, 2011). The intentions that have driven the development of the original MOOCs were more “humanistic” and defined on the power of “(...) the connectivity of social networking, the facilitation of an acknowledged expert in a field of study, and a collection of freely accessible online resources” (McAuley, Stewart, Siemens, & Cormier, 2010, p. 4). Within a relatively short time, this has changed considerably because of the emerging added value that led to the foundation of several spin-offs such as Coursera. This commodification raises questions concerning the limits of the market because once education is treated as a good it also poses moral issues that must be dealt with (Sandel, 2012).

Against this background, we will summarise recent developments and argue that openness in education can be understood not only as a form that creates new possibilities for individualized learning and Bildung (self-realization, self-cultivation; see Deimann & Farrow, 2012) but also as new forms of exclusion, both directly and indirectly. This is elaborated through Foucault’s work with the specific concept of discipline, i.e. a rather hidden form as opposed to explicit forms like sanction. Manifestation of this underlying mechanism can be found in major official documents like the Cape Town Declaration (2007). Foucault’s notion of discipline is a striking example of the potential of such an analysis as it highlights a different way of thinking about assumed universalities of education.

Our analysis will then end up in recommendations for learners and educators to become more aware of the mechanisms that have emerged through the open education movement. We attend to the rarely examined relation between discourse and practice; the tensions between liberation from institutional forms but implicit promotion of institutions as providers and certifiers; the implicit paradox in the regional versus global nature of openness and how openness can become a burden not only an emancipator.
Metadata management system for a “materials” repository

Tsuneo Yamada

Abstract

In addition to design individual course in some optimized fashions, one of the essential factors in improving the quality of the courseware and course packs is to find and utilize the quality “materials” (assets, modules or components) of those. At present, both open and proprietary content has been accumulated in various repositories in the world. However, most of them mainly provide their search and retrieval services for the learners as an end-user. When teachers and course providers try to find the materials of their developing courseware or course materials, they have often difficulties to reach the right “materials”.

The Open University of Japan (OUJ) is an open and distance university to promote governmental lifelong learning policies in Japan. OUJ has in-house TV/radio broadcasting studios, and produces and accumulates its own “materials” every year. However, most of them have not been reused because of the complicated management processes, such as reediting in adequate granular level and tagging the metadata. Now, with realizing “personalized” or “customized” learning processes, we have just recognized the necessities of sharing and reuse of smaller-granular content, that is, “materials”. While we have provided a cross-institutional search service for JOCW (Japan Open CourseWare consortium) community, called “JOCW Search”, from October 2006, the main function was a search system by keywords and the searchable information was limited only on the location, abstracts and copyright license. They are not sufficient for the search and retrieval of the “materials”. In order to examine the requirements of the “materials” repository, we developed a pilot repository and its metadata management system. Using a couple of metadata items of “Technical” and “Educational” in LOM standards, information on the granularity and academic contexts were described with control vocabulary system. In addition, the data on the usage history and user evaluation are also indispensable for promoting the reuse and remix of the content and a data sharing framework based on metadata is also examined.
Expanding the OER Community by Showcasing a Development Model that Works

Mohamed Noor Hasan, Norah Md Noor

Abstract

The concept of open educational resources was relatively new among public universities in Malaysia. In 2011 only two universities were registered as a member of the Open Courseware Consortium and Universiti Teknologi Malaysia (UTM) was one of them. However, in a period of less than one year after becoming a member of the consortium, UTM managed to publish 70 courses in its ocw website and this was achieved without any monetary reward given to the course authors. The process used to develop the courses started by selecting potential courses from the university e-learning portal. Authors of the courses were invited to workshops especially designed to assist them in converting the lecture notes into OCW publication materials. The normal procedure in OCW development that is checking for copyright and other issues, identifying figures to be redrawn and designing the course for online publication took place during the workshop. Later, individual graphic designers were assigned to each course to assist the author in recreating the figures, if necessary. The software used as the in the ocw website is the same software used as e-learning platform. Next, the IP of the published material was assigned to the respective authors. As a results of this success story, other universities in Malaysia are now looking at their own potential as contributors to OER and the initiative is now seen as one way to contribute to the society and not as a mere branding exercise. OER development is now is becoming a national project and public universities in Malaysia have agreed in principle to form a national OER consortium. By having a consortium, instead of competing with each other and recreating established courses, the universities will focus on the development of courses related to their niche areas. Based on this positive development, it is hoped universities in Malaysia will become major contributors to the global repository of open educational resources.
Discover How OER Adoption Fosters Policy and Practice Changes at Community Colleges

Una T. Daly, Donna Gaudet, James Glapa-Grossklag

Abstract

Community and technical colleges are increasingly advocating for open educational practices and policies to fulfill their mission of open access admissions. Although colleges support an open access model, affordability can be a significant barrier for the high proportion of non-traditional students who attend. These students often work to support themselves and family members while they attend college. As state budget cuts have lead to tuition increases, many students have become less able to afford the expensive textbooks and materials required for attendance.

Faculty members have responded by adopting and creating Open Educational Resources (OER) and open textbooks to make college more affordable. This process has lead to enhanced teaching practices as faculty customize instructional materials to the needs of students and learners in their community. A focus on online and interactive materials and regional workforce education has been noted.

In the light of these new developments, college administrators and trustees are embracing open policies to encourage the use of OER and open textbooks in an increasing number of disciplines and expanding the usage to district-wide implementations.

Hear case studies from members of the Community College Consortium for Open Educational Resources (CCCOER) at the OCW Consortium on how the adoption and creation of OER and open textbooks has improved affordability and teaching practices at their colleges. Learn how the consortium supports colleges through online faculty development and encourages collaborations across institutional, state, and country boundaries. Best practices and the latest research findings from community colleges engaged in open education will also be shared.

Case Studies:

College of the Canyons has expanded student access through open educational practices in technology and the classroom. The college developed an OER repository and a flexible “playlist” infrastructure for supporting the sharing of faculty developed learning objects. The Sociology, Water Technology, and Developmental math departments have created and adopted OER and open textbooks saving students $235,000 over a single year. Their Dean of Distance Education, president of the CCCCOER Advisory Board, promotes and shares community college OER projects at conferences worldwide.

Maricopa District, one of the largest community college districts in the U.S., endorsed “the development and use of OER to support innovative and creative opportunities for all learners” in its 2011-2016 District-Wide Information and Instructional Technology Strategic Plan. Math faculty at three district colleges: Scottsdale, Paradise Valley, and Phoenix are sharing resources and strategies to provide multiple sections of high-enrollment math courses using OER. Scottsdale College alone has saved students over $200,000 in fall 2012. Pilots of OER math at three additional Arizona community colleges will begin in Spring 2013 and additional disciplines are adopting OER to enhance cost effectiveness.

Presenters: Una Daly, director of Community College Outreach at the OpenCourseWare Consortium; Dr. Donna Gaudet, math professor at Scottsdale Community College, Maricopa District, Arizona; James Glapa-Grossklag, dean at College of the Canyons, California and president of the Community College Consortium Advisory Board.
National Pingtung University of Science and Technology
Open Course Ware Proposal

Mei-Jen Lin

Abstract

Short description

In December 2012 National Pingtung University of Science and Technology (NPUST) has become a member of the Taiwan Open Course Ware Consortium which is coordinated by National Chiao Tung University. The Center of Teaching Excellence of Academic Affairs in NPUST takes responsibility for participating related activities of the OCWC. Through Taiwan OCWC experiences sharing, we devote our faculty and resources overwhelmingly to promote Open Course Ware in order to build an Open Course Ware system in NPUST. We have incorporated Open Course Ware into our Teaching Excellence Program and Developing Technological University Paradigms Program and currently, we have 10 video recording open education courses. Moreover, since Open Courses Ware intellectual property rights could become a major issue, we will also focus our research on this area in the future.

Abstract

Since National Pingtung University of Science and Technology joined the Taiwan Open Course Ware Consortium, static presentation and dynamic video have become two of our common instructional methods in this area. According to the consortium’s analysis, video courses are highly accepted and have gained more popularity recently, so our open education course will mainly focus on specific course recordings. NPUST has built 10 digital media classrooms in ten departments. Each media classroom sets a software platform within the Moodle system, which automatically provides teachers with a record function. This facilitates synchronized recording without spending too much time on setting other devices in order to directly upload recorded courses to the Moodle system. These video courses provide an internet-based teaching and learning platform, which gives students a chance to review content after classes and also allows absent students the opportunity to experience any lessons that they may have missed.

Open education teachers often offer a large number of references for students and this can easily cause patent or intellectual property right infringements. For this reason, our school employs legal counsel which specifically focuses on violations of intellectual property in order to establish open education courses without causing any intellectual property right issues.

One major area of research and education that our school engages in is development of tropical agriculture technology. Recently global agriculture development has been trending toward refinement, professionalization and business continuity. Therefore related agriculture courses such as Forest Management, Dairy Processing, and Biodiversity, will become another new direction of the Taiwan Open Course Ware Consortium in the future.

National Pingtung University of Science and Technology has integrated open course education into our Teaching Excellence Program and Developing Technological University Paradigms Program, and will continue to develop open course education, which assists and empowers eager learners through its course content and design.
Designing for Diversity: Creating Learning Experiences that Can Travel the Globe

Jutta Treviranus, Una Daly

Abstract

This highly interactive workshop will introduce and explore pedagogical, technical and policy-based strategies to design, create and deliver OER/OCW learning experiences that can be used by the broadest range of learners globally. Workshop participants will be exposed to a variety of tools while collaboratively creating educational resources that are amenable to translation across cultures, languages, formats, technical platforms, learning approaches, modes of interaction and sensory modalities.

The one consistent and predictable quality of learners is that they are diverse. Among the many differences, they differ in their expectations, languages, learning approaches, priorities, culture, background knowledge, age, abilities, motivations, literacy, habits, learning context, available technology and skills. If the goal is to achieve the largest impact and support learners in reaching their optimum then the most important design criteria is to design OCW/OER for diversity.

There are tools, toolkits and guidelines available to support the creation of engaging, flexible and translatable learning experiences. There are also international research and innovation communities that support the advancement of inclusive design. Participants will be familiarized with both so that strategies introduced during the workshop can be further developed and updated after the workshop.

The workshop will address the full OER/OCW delivery chain from learning experience design, authoring, delivery, review, revision and reuse. Participants will explore a variety of content types including video, simulations, interactive forms, animations, games, electronic textbooks, math/science notation, and collaborative applications. Authoring tools and toolkits explored will range from office applications and OER authoring portals to application development environments. A variety of browsers and delivery platforms on desktops and mobile devices will be covered.

The workshop is intended for educators, policy makers, administrators, OER/OCW developers and technical support staff interested in reaching the broadest range of learners globally.
Creative Commons 4.0 Licenses: What's New for Education?

Cable Green

Abstract

Creative Commons has released the 4.0 version of its license suite. This session will describe the changes from 3.0 and 4.0 and specifically address the changes that affect OCW. Topics will include: internationalization, IGO use, simplified attribution, porting, translations and database rights.

4.0 Wiki: http://wiki.creativecommons.org/4.0
Abstract

= Ubiquitous Learning: Revolutionizing Education System
Learning is a life long process. Today’s education system prevent learners to choose suitable ways of learning for them. Whilst, learning environment dynamically changes from time to time, learners need a new ways of getting education. The new way of getting education calls ubiquitous learning. The advancement of ICT makes ubiquitous learning possible for learner to choose alternative ways of studying. There will be no restriction for learner, when to learn, where to learn, and how to learn. All these alternatives learning will widen the opportunity for anyone to get education.

Prof. Nizam

= Ubiquitous Learning: Putting the Framework in Place
Rapid development of information and communication technology could solve problems in quality, equity, and access to higher education. Realizing the opportunity provided by ICT and e-learning, Indonesia have laid down the framework of ubiquitous learning through law and regulation as well as strategy and programs to use ICT and OER to expand access to quality education. Responding to UNESCO 2012 declaration on OER in Paris, the new law on higher education enacted on 2012 made it clear that the government will support the OER movement to expand and strengthen its higher education system. New regulations as well as blue print on the path toward achieving quality education for all are being put in place as a framework to ubiquitous learning.

Prof. Richardus Eko Indrajit

= Ubiquitous Learning: Accelerating the Adoption of OER Initiatives
Introducing the concept of sharing resources within higher-learning institutions environment in Indonesia is quite challenging. It is not easy to influence the stakeholders to join such collaboration efforts without a proper approach that make them enthusiast in embracing the concept. There are several methods that have been successfully implemented to expedite the adoption of OER initiatives within the campus environment – ranging from the formal approach to the informal ones. By using a good number of techniques, the application of OER-based concept can be assumed effectively. The design and framework of the approaches will be shared and presented to the public for the first time.

Prof. Tian Belawati

= Ubiquitous Learning: Towards Open Education for all
The concept of open education and education for all are not new. Both are striving for widening access of the masses to quality education - minimizing restrictions due to various reasons related to demographic, geographic and economic barriers. It is the praxis of achieving that goal that has been revolutionarily changed by the advancement of information and communication technology (ICT) and the global open movement. Universitas Terbuka (UT), Indonesia’s only Open University, has taken up an approach to making higher education open to all Indonesians. UT has had a long history of developing various educational resources that have been made open to public as part of its community services. Started in 1998 when UT launched its first online journal, UT offers its OER on a website called Sumber Pembelajaran Terbuka (SUAKA), to allow people to engage themselves in learning endeavors.
INTEGRATING UT’S OPEN COURSE WARE TO FACE TO FACE TUTORIAL A Case Study in “Integrated Learning” Subject for PAUD Students of UT

Denny Setiawan, Della Raymena Jovanka

Abstract

Universitas Terbuka (UT) or Indonesian Open University has declared its mission to make higher education open to all. To achieve this goal, UT provides open course ware through online that accessible for anyone. Although still incomplete, UT’s open course ware can already be used for learning a particular topic. Some of the resources are in streaming video formats and they can be found on ITV-UT menu in the website of UT Online which lasted 3-5 minutes each episode. The menu provides a variety of streaming video based on specific topics of learning that have been determined and are divided into several categories. These videos can be free accessed and downloaded by anyone, not just students of UT. Beside can accessing the video, students can also provide comments related to the display of streaming videos. However, if these facilities are useful and effective to make improvement of teacher competencies? The goal of this paper is to investigate what UT’s students know about the integrated learning: specifically about how, when, and why integrated learning takes place. This question is especially important given research on UT’s students, especially as early childhood education teachers, which suggests that how they understand the integrated learning potentially influences their performance and competencies as a teacher.

This study is based on our experiences as well as our research in integrating the video programs into face to face tutorial in “Integrated Learning” subject for PAUD (early childhood education) students at semester 5th. The subject requires the students to be able to practice integrated curriculum in their classroom besides successful in final exam. The main learning material for that subject only describes some related theories and examples of curriculum planning. Therefore, the students still need examples in a real situation about how to create an integrated curriculum and how to make it happened in their classroom. We, as their tutor, used the video programs to give them a real situation where the teachers set up an integrated curriculum and used them as guidance in teaching. However, we integrated the video programs with the tutorial syllabi rather than used it as supplement materials only. We also set up pre and post test evaluation to measure their understanding about the video programs. Then we asked the students to practice how to create an integrated curriculum as well as to use the curriculum on their teaching plan, and conduct learning activity in tutorial classroom (microteaching session). Pre and post test results were analyzed to see their progress in comprehending the subject. After that, they were asked to fill a questionnaire about their opinions on the use and effectiveness of video programs as integrated materials to their regular lectures. They answer positively to the questions in the questionnaire. The students’ responses of questionnaire prove that UT’s students are able to avail the facility of learning support services provided by UT.

Keywords: UT’s open course ware, ITV-UT, integrated learning.
The OCW experience at FGV and beyond

Stavros Xanthopoylos

Abstract

The presentation will aim on describing on how the OERs offered by FGV through the OCW have impacted on the Brazilian public, mainly, during the last 6 years. In addition, we will illustrate how FGV decided to launch OER for Secondary Education based on the OCW experience and also speak about the decision to expand regionally, in Spanish, initially, and in a second stage, our intention to create and translate content into English.
Serendipity a Faceted Search for OpenCourseWare Content

Nelson Oswaldo Piedra, Edmundo Tovar Caro, Janneth Alexandra Chicaiza, Jorge López Vargas

Abstract

Faceted search, also called faceted navigation, is a technique for accessing content organized according to a faceted classification system, allowing users to explore a collection of information by applying dynamic and multiple filters. A faceted classification system classifies each information element along multiple explicit dimensions, enabling the classifications to be accessed and ordered in multiple ways rather than in a single, pre-determined, taxonomic order.

Serendipity is an interface of faceted search for open educational content. Serendipity is accessible from the URL http://serendipity.utpl.edu.ec/. Serendipity provides a search interface for allowing users to browse OpenCourseWare content in such a way that they can rapidly get acquainted with the scope and nature of the content, and never feel lost in the data. Serendipity is an information navigation and discovery tool. This interface exposes OCW metadata in such a way that users can build their queries as they go, refining or expanding the current query, with results automatically reflecting the current query. This interface also combines free-text search. It avoids complex search forms.

In Serendipity, facets correspond to properties of the OpenCourseWare content. Serendipity is based on data extracted from OCW sites. The most obvious metadata for Serendipity is provided by OCW initiatives incorporated on OCWC, OCW-Universia and Linked Open Datastores. The OCW resources was described as Linked OpenCourseWare Data because, linked Data holds the potential to move OCW collections out of their silos. Serendipity works with data extracted periodically and automatically, currently from over 7,500 courses available through OCW Web repositories: OCW Consortium, OCW Universia and Institutions of Higher Education. We have verified that the data published in Serendipity is consistent and corresponds to the information obtained in various OCW sites. In the OCW domain there is special interest in gathering information about higher education institutions, geographical locations, keywords, information on people, scientific publications, educational and scientific resources.

Any of the following cases might prompt a teacher, student or self-learner to use Serenipity faceted search:

- Users need to filter content using multiple category or taxonomy terms at the same time.
- Users want to combine text searches, category term filtering, and other search criteria.
- Self-learners don’t know precisely what they can find on OCW site, or what to search for.
- Self-learners want to clearly show users what subject areas are the most comprehensive on your site.
- Self-learners are trying to discover relationships or trends between OCW.
- OCW sites has too much content for it to be displayed through fixed navigational structures, but you still want it to be navigable.

With Serendipity, we demonstrated that OCW resource metadata can be enriched using datasets hosted by the LinkedOpenData cloud. Additionally, the linked data environment enabled us to run data queries of distributed and heterogeneous of open educational contents repositories through SparQL-EndPoint, APIs or Web services. Also, Serendipity demonstrates following key features:

- Refining search results by facet value
- Displaying of the search criteria in a Bread Crumbs (navigation guides)
- Ability to exclude the chosen facet from the search criteria
- Ability to improve ease of discovery, consumption and reuse of OCW
The 5COE model, the European Union and the first pan-European MOOCs move

Fred Mulder

Abstract

In this presentation three subjects are addressed: a new model for Open Education, the upcoming ‘Opening up Education’ Initiative of the European Union, and the recent launch of the first pan-European MOOCs move. Too much to talk about, so the presenter will stick to what is most to the interest of the audience. First, we will position two views on openness: the classical one from the “established” Open Universities, and the digital one from the recently “emerging” world of online education in a wide variety (OCW, OER, MOOCs). We argue that the term Open Education, which more or less functions as an umbrella over this diversity, has gained new dimensions. This, however, has not yet been reflected sufficiently at the conceptual level. In order to fill this conceptual and terminological gap and to make the multiple openness comprehensible, we present the 5COE model, which comprises five Components for Open Education, OER being one of them. With this model we can make “fingerprints” of educational institutions or activities, showing where they can be positioned along the five dimensions of openness.

Secondly, in 2012 the European Commission (EC) published a document, entitled ‘Opening up Education’, in preparation for the official launch of a far-reaching initiative after the Summer of 2013. With this program the EC wishes to further exploit the potential of ICT and OER for education and skills development in the European Union (EU) along three main lines: opening up content, opening up learning and teaching, and opening up to collaboration. ‘Opening up Education’ is a new, influential, EU-wide initiative that will be accompanied by proven, effective EU instruments and a substantial budget. It can inspire, mobilise, facilitate and support EU member states and their educational institutions in their OER efforts.

Finally, on April 25 the first pan-European MOOCs move has been launched by ten launching partners, all except one being members of EADTU (European Association of Distance Teaching Universities), most of them being Open Universities. The partners are in 10 different countries (including Russia, Turkey and Israel), and will offer MOOCs for Opening up (higher) Education in their home languages. The courses are collected under a joint brand based on values like openness, equity, quality and diversity, which are strong in Europe. This move reflects the need for a well-accessible system of higher education, high-quality learning materials (geared to self-study and independent learning), ‘mobility’ of credits, a solid bridge between informal learning and formal education, and accommodating diversity both in language and in cultural context. It is a move in the familiar European OU learner-centred tradition which is different from the teacher-centred approach that is attached to much of the US-based MOOCs movement. It is extendible to other partners, anywhere in the world, who share and practice the underlying vision on current learning and education needs in society.
Papers
Facebook and Digital References Integration for Child Development Psychology (CDP) Online Tutorial Model

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Abstract

The use smart phones in Indonesia is very close to the people now. Indonesia was ranked 6th in the world in the use of mobile phone numbers. One of application developments that are available now on mobile phones is a Facebook. Therefore, Facebook can be easily accessed from a smart phone, is expected a lot of students who already have a Facebook account and access it through a smart phone. The ease of access Facebook through smart phones is very interesting to be implemented in education and learning, including learning courses through online tutorials.

Meanwhile, the number of digital references for learning courses which can be accessed free of charge, can also be used for an online tutorial material. Through linked digital references, being expected participants will be interested to learn the online tutorial, also used to search for the appropriate digital references.

Child Development Psychology (CDP) is one of the courses provided tutorial support services for Early Childhood Education Program in Indonesia Open University (ECEP-IOU) undergraduate student in the first semester. This tutorial comes in the form of online tutorial (Online tutorial). However, the participation of students who attend CDP online tutorial is still very small, only 0.35% (65 students out of 18,398 students of semester 1). The participation rate is still so low that it should be improved. One way to improve students participation in the CDP online tutorial is by integrating with Facebook and digital references.

Preliminary studies that have been conducted provided data that most of the first semester students ECEP-IOU already have Facebook accounts, and are willing to join the Facebook group specifically for CDP online tutorial participants if the group will be created. The studies also stated that the most commonly used tools for students to access their Facebook accounts is a computer, laptop or smart phone. This is consistent with earlier estimates that Facebook facility in the smart phone is very possible to be further developed for the benefit of education.

General purpose of this study aims to research is to evaluate the use of Facebook and digital references for CDP online tutorial. The study was conducted in 2012 on the first semester. The method used is descriptive. Tool used for collecting data was a questionnaire for students, document analysis and interview. The data has been collected and analyzed descriptively.

This model consist the integration of Facebook through the creation of a group to all CDP online tutorial participants and materials modification in relation with an appropriate digital references. The study concluded that this model has not been effective to improve students participation in CDP online tutorial, but quite effective in creating a more intimate means of communication through the Facebook group. The study also concluded that the overall student experience the many benefits of CDP online tutorials model. The recommendation given is based on the findings of this study is that students can be more active following the tutorial support systems that has been provided.

Keywords: Child Development Psychology, Facebook, Digital References, Online Tutorial
INTRODUCTION

Indonesia Open University (IOU) as one of the Higher Education Open and Distance in Indonesia currently has some program, such as Early Childhood Education Program (ECEP). Unlike the face to face universities, the learning process in IOU based on self-directed study. To facilitate students in self-directed study, IOU has provided some form of learning support services, such as online tutorials.

CDP is one of the subjects for ECEP students in IOU, which provided tutorial assistance, in the form of online tutorials given to students in the first semester. Online tutorial for this course for 8 meetings conducted online within one semester, through 8 material initiations and 3 assignments. At the virtual meetings discussed the difficult essential concepts to understand by the students. Therefore online tutorial material given only 8 times, tutors should design materials that actually needed by students from a variety of sources in addition to printed or non-printed materials.

Although the contribution online tutorial value is high at 30%, but the participation rate of students taking this course online tutorial very low. Of some 18.398 new students, only 65 students or 0.35% follow CDP online tutorial. When asked the reason some students do not follow CDP online tutorial, the answers are: not yet accustomed to using the internet service, not yet have addresses electronic mail (email), or can not operate a computer properly.

On the other hand, communicate with mobile phones (hand phone or HP) in Indonesia is so many, no longer a luxury needs. Currently HP users in Indonesia is estimated at 180 million people, or 60% of the entire population of Indonesia. The amount of use of HP in this society because besides the price is getting cheaper, HP also portable, and offers a variety of interesting features that to be developed continuously by the manufacturer. One of the features available in the HP today is Facebook, which is no longer accessible only from expensive HP, but have been installed in the smart phone as a increase selling point. Therefore, many people have had a Facebook account and operate it through HP, although he is not necessarily proficient surfing the internet. It can be happened because the current registration requirements on members of Facebook does not require the user to register an email address, but it can be replaced with the inclusion of mobile numbers. Look latest news or notifications, write status, or open a message in the inbox on Facebook can be done through smart phone with data transfer rate that is quite satisfactory and affordable tariffs.

Preliminary survey that already carried out indicate that ECEP-IOU students also been many who have Facebook accounts. Proactively these students are also adding researchers as their friend, and several times to discuss or ask questions through text message either through inter-wall (wall to wall) and through the inbox (inbox). This fact makes the researcher want to try to examine the use of Facebook is to increase student participation and activity in the service Online tutorial. This is possible because the existing Facebook group manufacturing facilities both open and closed, so that a variety of materials that exist in online tutorial initiation PPA can be divided (shared) to members of the group with ease.

In addition, a variety of digital references corresponding to CDP course can be accessed free of charge should be introduced to students so that they get used for digital reference sources in accordance with the required materials.

Formulation of the problem of this study was to evaluate the CDP model online tutorials through Face book integration and digital references. The purpose of this study was: (1) describe the CDP online tutorial model by integrating Facebook and digital references (2) see the effectiveness of the CDP online tutorial model through Facebook and digital references integration.

REFERENCES

Tutorial

Tutorial meant to teach others or providing learning assistance to someone. The learning aid can be provided by people who are older or the same age. Tutorial as a learning aid in distance education can be provided in various forms, such as: face-to-face, written, electronic, radio, and others. Tutorial activities involving people who teach (tutor) and the learner (tutee). There is interaction or communication between
tutor and tutee interaction or communication, and this is the core of the tutorial (Wardani, 2005). Learning materials will be reviewed jointly by the tutor with tutee through such interactions. In the face-to-face tutorials, communication between tutor and tutee certainly occur directly.

Tutorials differ from regular lectures. In the tutorial activities, parties are expected to be more active is the tutee, just as the tutor being a facilitator only. Tutee must perform a variety of assessment activities facilitated by the tutor; like analyzing various sources of literature, discussing difficult material, writing papers, reports individual or group reports, counseling, listening to information from guest lecturers, and discuss tasks (Hazard, 1967, in Wardani, 2005). While in face-to-face university, professors are usually more dominating activity.

Online tutorials is one form of a tutorial. Online tutorial in IOU prepared by making 8 material initiations and 3 assignments that must be learned and performed by students. This online tutorial, as well as face-to-face tutorials, have a certain time for each virtual meetings, not available at all times. To be able to access the material online tutorial at IOU, students must register in advance and must have an electronic mail address.

Facebook

Facebook was originally named The Facebook was created in 2006 by a Harvard University student, Mark Zuckerberg. He makes up and launched in 2004. At the end of 2005, Facebook had covered about 2,000 colleges and 25,000 high schools in the U.S., Canada, UK, Mexico, Puerto Rico, Australia, New Zealand, and Ireland (Gunawan, 2009). Currently Facebook users in Indonesia was ranked second in the world, just below his home country, the United States. Number of Facebook users in Indonesia in October 2010 had reached 27,953,340 people (Tempointeraktif, 2010).

Facilities on Facebook which lets make it open or closed group for people who have the same interests and tendencies that can be used also in the study, including the lecturers/tutors with students.

Digital References as Open Course Ware

Various well-based digital reference text, images, and short film, can be easily found on the internet currently. Through the help of explorers engines like Google, information which to be needed has already available completely and so fast. Indeed, the information that would have netted not necessarily useful information, but there is also a lot of junk informations. Nevertheless, the existence of searching machine like this is very helpful in finding the desired digital references.

Digital reference that can be used by anyone can be categorized as Open Course ware (OCW). The Open Course Ware movement started in 1999 when the University of Tübingen in Germany published videos of lectures online for its timms initiative. The OCW movement only took off, however, with the launch of MIT Open Course Ware at the Massachusetts Institute of Technology (MIT) in October 2002. The movement was soon reinforced by the launch of similar projects at Yale, the University of Michigan, and the University of California Berkeley. MIT's reasoning behind OCW was to "enhance human learning worldwide by the availability of a web of knowledge". MIT also stated that it would allow students (including, but not limited to its own) to become better prepared for classes so that they may be more engaged during a class. Since then, a number of universities have created OCW projects modeled after MIT's, some of which have been funded by the William and Flora Hewlett Foundation (Vest, 2004).

According to the website of the OCW Consortium, an OCW project: (1) is a free and open digital publication of high quality educational materials, organized as courses, (2) is available for use and adaptation under an open license, such as certain Creative Commons licenses, and (3) does not typically provide certification or access to faculty (OCWC consortium).

IOU as a Open and Long Distance Higher Education has also provided a variety of digital references such as supplement web, digital libraries, Learning Object Materials (LOM), the materials are summarized in Guru Pintar Online (GPO), as well as short films are summarized in ITV. These materials should be learned by students of UT. Meanwhile, digital reference relates to psychology and child development both Indonesian and English language is so much. This various digital references should be utilized by IOU students, especially by ECEP students.
Child Development Psychology

Child Development Psychology (CDP) is one of the courses provided in the ECE program in IOU, consist of 3 credits and tutorial support service is provided online. The material on this online tutorial covering 8 topics: principles of human development, issues and factors in human development, internal factors that influence individual differences in learning, external factors that affect individual differences in learning, social development theory of Erik Erikson, Maslow's theory of emotional development, Piaget's theory of cognitive development and Vygotsky's theory of cognitive development. Besides that, there are 3 assignments for students to be done.

Initiation on CDP online tutorial is still text-based, so it needs to be further developed into material enriched with a variety of other digital references. Linked with a various of reference material digital initiatives, especially those that have been provided by IOU, need to be included both in the descriptions or assignments, so it can be 'forced' to students learn the various references. If students are usually learn different types of digital reference, it is expected that they will be interested and excited to find their own digital reference is required through the internet.

METHODOLOGY

The methods in this study is a descriptive, which describes the findings of the data in the field. Respondent is limited in Serang UT’s region, precisely in the Tangerang study group. Respondents in this study were students of semester 1 of ECEP students. Students in semester 1 totaled 87 students, that listed as participants CDP tutor.. The instrument used was a questionnaire, interview, and document analysis. The data described in the descriptive findings to facilitate analysis. Variables in this study were students enrolled in the CDP Online tutorial, student activity in Online tutorial, and facebook account ownership by students.

RESULTS AND DISCUSSION

Description Child Development Psychology Online Tutorial Model with Facebook and Digital References Integrate

The CDP online tutorial model was developed by some stages that has been done is as follows:

a. Looking for a variety of connection materials (website/ portal) that appropriate with the topic of online tutorials initiations, and categorizing for each initiation.

b. Uploading material terms that have been grouped according to the topic. The source of many references were also made separately in another file to students look easily (by clicking the material).

c. Notify all participating students on beginning CDP online tutorial, through electronic message that is sent to all participants CDP online tutorial, utilizing the facilities available on IOU website.

d. Ask the students (through a message sent to all participants) to see and learn the material that has been developed and doing their asignments.

e. Send a message to all participants CDP online tutorial to add CDP tutor as a friend on Facebook, respectively.

f. Tutor confirm friend requests from students and identify students that are already connected as a friend to be a member of a Facebook group.

h. Once students become friends of participants CDP tutor, tutors create a Facebook group which contain all the first semester ECEP students that also as participants CDP online tutorial.

i. The same questions of students are grouped together so that the tutor did not answer similar questions repeatedly. Students are directed to learn anymore the old post if the question he asked was similar to the questions of other students.
j. Through Facebook group, CDP tutor reminding members about limit time to do assignment 1, assignment 2 and assignment 3 so that no student is too late doing the assignments.

k. Through Facebook group, CDP tutor also post many important informations, such as assignment scores, the assignments that are not readable because failed to upload, and final scores online tutorial whiha can be viewed online.

Evaluation Online tutorial Model Development Child Development Psychology

After the Facebook group was prepared and carried out pilot implementation for one semester, then be evaluated. One way to evaluate is to ask the opinion of the students who have followed the online tutorial proficiency level through questionnaires. The table below describes the student opinion on the implementation of the CDP model development online tutorial and their expectations.

Table 1. Student Opinion After Trial

<table>
<thead>
<tr>
<th>No.</th>
<th>Item</th>
<th>Yes (%)</th>
<th>No (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Active in the Facebook group for student</td>
<td>24</td>
<td>76</td>
</tr>
<tr>
<td>2.</td>
<td>Facebook and digital references integration for online tutorials should be developed for other subjects</td>
<td>95</td>
<td>5</td>
</tr>
</tbody>
</table>

Based on Table 1 note that students who are active in the Facebook group only 24%. It means that not all participants CDP tutor Tuton added as a friend on Facebook and become a member of a Facebook group. Only 22 students who eventually joined a Facebook Group for students in the 1st half. But of the 22 students are not all active post anything, just observing.

If viewed from the students activity CDP online tutorial, the following results are obtained.

Table 2 The Participation of students in the CDP Online tutorial

<table>
<thead>
<tr>
<th>No.</th>
<th>Aspect</th>
<th>Criteria</th>
<th>2-5 in a week</th>
<th>Once a week</th>
<th>2-3 weeks</th>
<th>Once a month</th>
<th>more than once a month</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Frequency of accessing CDP online tutorial initiation</td>
<td>%</td>
<td>12.2</td>
<td>16.3</td>
<td>22.4</td>
<td>16.3</td>
<td>32.7</td>
</tr>
<tr>
<td>2.</td>
<td>Learn CDP online tutorial initiation</td>
<td>%</td>
<td>51.6</td>
<td>26.6</td>
<td>14.1</td>
<td>0.0</td>
<td>7.8</td>
</tr>
<tr>
<td>3.</td>
<td>Do assignment in CDP online tutorial</td>
<td>%</td>
<td>41.8</td>
<td>13.4</td>
<td>20.9</td>
<td>23.9</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Acces and learn the digital references links at CDP tutor or Facebook group</td>
<td>%</td>
<td>40.3</td>
<td>40.3</td>
<td>13.4</td>
<td>6.0</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Type of activity in the facebook group for CDP online tutorial</td>
<td>%</td>
<td>36.7</td>
<td>36.7</td>
<td>26.7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Based on the Table 2, in terms of students activities to acces the CDP online tutorial initiation, showed that the largest percentage of students (nearly one-third of the number of participants) just accessed CDP online tutorial initiation more than once a month. The data indicate that it is not in accordance with the obligations of the participants should be at least open CDP initiation in every week, because every week old material is replaced with new material. While the students are accesed in accordance with the CDP
online tutorial initiation once a week only 16% of students. One thing that is interesting, there are also 12% of students who have been working actively with the assessing initiation as much as 2 to 5 times a week, which is expected to exceed the minimum requirements.

Further, about the students activities in learning the CDP online tutorial initiation, data showed that more than half of the participants were only just signed up but never learn the initiation. Participants who do not study the whole initiation to 10%. This condition is also not as expected because each participant should learn whole of CDP initiations that have been provided.

In terms of CDP assignments in online tutorial, data showed that nearly half of the participants is 40% of the students have never worked on tutorial assignments, and doing all the assignments that only 23% of all participants. This condition is similar to the activities of students in learning the initiations, where most of the participants did not actually perform the recommended activities. This indicates that students have difficulty in doing the assignment. Through interview that was conducted to students, note that students feel the difficulties while doing assignment not just about understanding the material of the assignmet, but rather the technical procedure. Many students did not know how to upload assignments into CDP online tutorial, or there are also students who have tried to upload the assignment several times but failed to continue until finally despair.

If viewed from the students activities to learn digital reference linked to the CDP initiation, also seen data that is not much different from the previous activity (learn initiation and do assignments), because most of the participants never or only acces a small portion of the reference links that have been prepared. Participants who actually opened and learned that linked digital references only 6%. This suggests that despite being given a digital reference link is integrated with Facebook, students do not use it to the optimum portion.

Meanwhile, when viewed from the type of activity the students on a special Facebook group for CDP online tutorial participants, the smallest percentage in the posting something (only 26%). This is in accordance with the preliminary study of the students stating that although they have joined a group on Facebook, but not many of them have the courage to post something. Some participants chose to read other people post or comment on the posts of others.

CDP online tutorial participants were also asked his opinion on Facebook groups and various link digital materials has been prepared for CDP online tutorial. Their answers can be seen in Table 3.

Table 3 Opinions about Facebook Groups and Digital Reference Link

<table>
<thead>
<tr>
<th>No</th>
<th>Aspek</th>
<th>Criteria</th>
<th>Very useful</th>
<th>Quite Helpful</th>
<th>Somewhat helpful</th>
<th>Not helpful</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Digital references Link help participants to understand</td>
<td>%</td>
<td>39.6</td>
<td>34.0</td>
<td>22.6</td>
<td>3.8</td>
</tr>
<tr>
<td>2.</td>
<td>The useful of Facebook group for CDP online tutorial</td>
<td>%</td>
<td>47.5</td>
<td>37.5</td>
<td>7.5</td>
<td>7.5</td>
</tr>
</tbody>
</table>

Based on Table 3 it can be seen that the greatest percentage of students participants on CDP online tutorial considers that digital reference and a Facebook group was very beneficial. But still there are students who think that digital reference and Facebook group does not helpful although their number is less than 10%. Estimated to amount to 10% in coming from students who are just signing up CDP online tutorial but never opened and learned the CDP initiations and do not want to be member of Facebook group that has been created for them.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

Model tutorial that was designed for CDP online tutorial is to modify the tutorial initiations enriched with appropriate topic link on the initiation and integrate participants into Facebook group to facilitate communication and sharing information. Model development CDP online tutorials of the benefit aspect is
quite helpful in improving student understanding of the initiations and the ease of getting information as directly connected to Facebook. But in terms of enrollment, the development of this model has not been able to effectively increase student enrollment. So in general the strength and weakness of the models that have been developed are as follows:

1. Strength
   a. Online tutorial integration with Facebook can be used for communications and information which is more flexible and accessible among participants with a tutor.
   b. Facebook group enough help to remind students and also ask questions about online tutorials, than sending a message in the email participants.
   c. Link digital references from other portal-based text and non-text, enough to help students better understand the initiations in the online tutorial.

2. Weakness
   a. The participation rates from CDP online tutorial have not improved significantly although the initiation is integrated with Facebook and linked various digital reference.
   b. Not all members of the group in Facebook active in the comment or post something.
   c. There are 44.7% of participants who have not do assignments online tutorial at all, and 67% are only registered but never accessed online tutorial material.

Recommendations

Based on the conclusions above, then recommendations given to ECEP-IOU students, so that not only the score in the online tutorials, but also follow the process to really learn all the material and do the assignments given.

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The Online Assessment for BIPA Program by Utilizing OER
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Abstract

The Program of Indonesian Language for Non-native Speakers or Bahasa Indonesia untuk Penutur Asing (BIPA) is a fully-online language program offered by Universitas Terbuka (UT) to non-native speakers who intend to learn the Indonesian language or Bahasa Indonesia. This program has been offered as one of continuing education programs of UT. Moreover, it is fully supported by UT as the opportunities to design collaborative programs which enable the tutors to provide various materials as well as learning resources for the participants’ learning process (as stated in the UT’s strategic plans 2010-2021). Since the BIPA program is delivered fully-online for the participants, developing the online assessment for language learning has become one challenge for the tutors in order for them to evaluate the participants’ learning outcomes effectively. It is the responsibility of the tutors to be creative and innovative in providing the most effective evaluation process. The exercises as well as the assignments should help the participants understand Bahasa Indonesia through reading and listening and help them practice Bahasa Indonesia both in speaking and writing. Using the Moodle software for the learning process has enabled the tutors to provide more varied learning contents as well as assessment systems, including utilizing open educational resources (OERs). Furthermore, this software also enables the tutors to modify the assessment facilities to be more effective in evaluating the participants’ learning process. In this article, the writer intends to 1) describe the current online tutorial of the BIPA Program, particularly its assessment systems, and 2) analyze how far OER supports the assessment process in the BIPA program. From the analysis, it is visible that the use of OER highly supports the online assessment process of the BIPA program.

Keywords: OER, online assessment, BIPA Program

Introduction

In the globalization era, technology has influenced all aspects of life, including education. It seems no more boundaries between countries because technology has enabled the people to communicate faster and easier using the technology. This has brought some impacts in relation to the use of language for communication. Learning a language has become a necessity for people in order to be able to communicate in the destination country.

Regarding the phenomenon, since 2012 Universitas Terbuka (UT) as a distance education institution has offered The Program of Indonesian Language for Non Native Speakers or Bahasa Indonesia untuk Penutur Asing (BIPA). This program is a fully-online and offered to non-native speakers who intend to learn the Indonesian language or Bahasa Indonesia. It has been offered as one of continuing education programs of UT. Moreover, it is fully supported by UT as the opportunities to design collaborative programs which enable the tutors to provide various materials as well as learning resources for the participants’ learning process (as stated in the UT’s strategic plans 2010-2021).

Since the BIPA program is delivered fully-online for the participants, developing the online assessment for language learning has become one challenge for the tutors in order for them to evaluate the participants’ learning outcomes effectively. It is the responsibility of the tutors to be creative and innovative in providing the most effective assessment process. The exercises as well as the assignments should help the
participants understand Bahasa Indonesia through reading and listening and help them practice Bahasa Indonesia both in speaking and writing.

Open Educational Resources (OER) has been intensively recommended by the United Nations Educational, Scientific and Cultural Organization (UNESCO) as open learning resources to be used by both educators and students to provide the evaluation facilities as well as to support students’ learning process. Based on this opportunity, the use of OER is one alternative taken by the tutors of the BIPA program. Using the Moodle software for the learning process has enabled the tutors to provide more varied learning contents as well as assessment systems, including utilizing OER. Furthermore, this software also enables the tutors to modify the assessment facilities to be more effective in assessing the participants’ learning outcomes. In this article, the writers intend to 1) describe the current online tutorial of the BIPA Program, particularly its assessment systems, and 2) analyze how far OER supports the assessment process in the BIPA program.

**Utilizing OER as an innovation in offering online language assessments**

During the learning process, assessment takes an important role in gaining information about learners’ achievement. Although assessment is often identified synonymously with evaluation, they are different in purpose. Simonson, Smaldino, Albright, and Zvacek (2011) have defined assessment as “the process of measuring, documenting, and interpreting behaviours that demonstrate learning” (Simonson, et.al., 2011:263). In relation to the purpose, assessing learning gains is to provide feedbacks to learners and instructors. Assessment process enables the learners to recall the needed concepts or skills as well as reinforce themselves to enhance their knowledge. When the assessment is conducted frequently, learners can identify the important points within the modules or other learning media package. The advantages are taken by the instructors as well. From the assessment data, instructors are able to provide remediation or prepare more appropriate materials based on learners’ needs.

Assessing learning outcomes in language through online has been another challenge for the instructors. Borrowing the term ‘task-based assessment’ suggested by Bachman (2002), it is visible that the connection between target language use, instruction, and assessment has become an important step in finding a solution to the problem of inappropriate language instruction and testing. The connection is illustrated in Figure 1 as follows.

![Figure 1. The Connecting Point between Teachers, Testers, and Learners](image-url)
Based on Figure 1, there are three components that are related to each other in order to help learners use the target language effectively. The three components are language learners, language teachers, and language testers. Learners have to be highly motivated to practice using the language, whereas the instructors are responsible to provide various materials in order to help learners enhance their language skills, both written and spoken. The testers are responsible to provide authentic materials for assessing learners’ learning outcomes. It is expected that from the effective assessment, learners can enhance their skills in using the target language. This has been supported as well by Prineas and Cini (2011) who stated that “the promise of learning outcomes assessment is that through continuous improvement of curriculum and instruction, learning achievement for all students should increase. Online education and its concomitant technologies promise better ways to help all our students reach their full potential” (Prineas and Cini, 2011:6).

Since 2002, UNESCO has introduced the use of Open Educational Resource (OER) to support online teaching and learning. Kanwar and Uvalic-Trumbic (2011) has defined OER as “any educational resources openly licensed content in the forms of streaming videos, paper-based text, video, audio or computer-based multimedia that are openly available for educators as well as students and designed for supporting teaching learning activities” (Kanwar and Uvalic-Trumbic, 2011:6). There are advantages in using OER such as 1) no needs to pay royalties or license fees during the process of teaching and learning, and 2) both educators and learners are more productive. Moreover, UNESCO has defined OER as “teaching, learning or research materials that are in the public domain or released with an intellectual property license that allows for free use, adaptation, and distribution” (UNESCO, 2011). From both definitions of OER have been discussed before, it is visible that the use of OER has taken important parts in education, particularly in e-learning. In relation to its flexibility and accessibility to support the teaching and learning process, currently OER is highly recommended. Utilizing OER means users can easily copy and share the content available in and through the Internet without permission. However, the users must state the resources correctly.

Utilizing OER in language assessment can be another possibility to be considered by language instructors. Recently the technology has enabled them to provide learners with online speaking tests as well as writing tests taken from OER. These tests provided by the instructors are not only in terms of gaining the materials, but also the tools in order to measure how far learners’ have achieved the instructional goals. Technically, in language online assessment, the technology and OER should be combined to gain effective and meaningful assessment process.

**BIPA as an online language program**
Learning a language is closely related to practicing the four language skills namely listening, speaking, reading and writing. BIPA as fully-online language program was developed in order to provide participants with effective learning activities and experiences in using the Indonesian language or Bahasa Indonesia as the target language. BIPA Program consists of three levels: 1) Elementary (Dasar), 2) Intermediate (Menengah), and 3) Advanced (Lanjut). In order for the participants to achieve the goals, each level of the BIPA program has been divided into three courses. The first course is “Terampil Berbahasa Indonesia Lisan” which focuses on Speaking skills. However, the course uses other skills integrally in the process of learning. The second course is called “Terampil Berbahasa Indonesia Tulis” which gives the participants the learning experiences more on writing practices. In order to achieve the third goal, the BIPA program also offers “Pengenalan Kebudayaan Indonesia”. This course is offered in order for the participants to enrich their knowledge about the culture of Indonesia as well as to learn the language.

Designed as a fully-online language program, BIPA is delivered in an online platform that enables the instructors provide learners with effective learning activities and appropriate assessment package as well as opportunities to have a discussion forum. This discussion forum is very important both for instructors and learners in order for them to communicate with each other.

The implementation of using OER for BIPA’s online assessment

Providing students with the best learning services for students in their learning process has been a challenge for UT. Referring to the education system offered by UT, i.e. distance education, in which the students are considered self-directed learners, the concept of the online tutorials is appropriate to accommodate learners with self-learning activities as well as self-assessments. Therefore, two-way communication is important as well since the students can get feedback from the tutors when they have difficulties during the learning process. Online tutorials are offered to UT’s students as one innovative way of communication, giving them academic support services by using technology. This concept is supported by Jonassen, Peck, & Wilson (1999) who stated that “one useful role of technology in e-learning is as a social medium to support learning which enables students to participate in discussion, collaboration with others, and supporting discourse among knowledge-building communities” (Jonassen, et.al., 1999:13). It is important for UT to offer interactive online tutorials to students where they can communicate with other students as well as with the tutor.

In relation to technical delivery in UT’s online tutorial, Zuhairi, Adnan, and Thaib (2007) stated that starting from 2004 UT has applied the Moodle Software as the mode of tutorial delivery. Moodle is a learning management system that lets you provide documents, graded assignments, quizzes, discussion forums, etc. to your students with an easy to learn and use interface. Moodle is open-source, meaning that the programming code that runs it can be changed to meet the specific needs of users and institutions. Moodle is also free to download and use; there is no licensing fee (Moodle, 2013). From its characteristics, Moodle is categorized as an OER as well. Using the Moodle software for the learning process has enabled the tutors to provide more varied learning contents as well as assessment systems. Furthermore, this software also enables the tutors to modify the assessment facilities to be more effective in evaluating the participants’ learning process.

The BIPA Program as the part of UT’s system has applied the use of Moodle in delivering the materials dan providing learning assessment. The tutorial is conducted in eleven weeks. The first four weeks focus on spoken Bahasa Indonesia. During this period, the learners should practice more on listening and speaking. The next four weeks the learners should enhance their language skills focusing on reading and writing. The materials and assignments of the ninth and tenth week are available for learners to enhance their knowledge about the culture of Indonesia as well as using Bahasa Indonesia more fluently. The last week is for the participants to do summative test. This test will cover all the language skills integrally.

There are weekly materials delivered in the package of web materials or multimedia including learning through images, audios, and videos integratedly. The self-assessment are available in the package. The
self-assessments has accommodate the learners’ needs to practice the language skills by themselves. Figure 2 is the example of weekly assignment. This assignment is for enhancing the participants’ speaking skills.

Figure 2. Recording voices for the assignments

Source: http://bipa.ut.ac.id/course/view.php?id=3

From Figure 2, we can see that participants are provided with reading texts or questions and they have to answer orally. The tools for recording the voice are available in Moodle. The tutor is flexible to choose one of the two ways of recording to be suggested to the participants. First, participants record their answers offline using their own recording tools and upload it through the available place: “upload an existing recording”. The second way of recording is that the participants are suggested to record their answers online directly using the computer tools: “record a new submission”.

Furthermore, the other various assessments are available in Moodle to assess the participants’ reading as well as writing. Figure 3 describes the activities offered to the tutors to be used in their assessing the participants’ performance.

Figure 3. Facilities for language assessment in Moodle
Figure 3 shows the flexibility of the tutor in order to provide the appropriate assessment tools for the participants. It is very crucial to determine the form of the assessment properly since it is used for measuring the participant’s competencies in achieving the learning goals. For example, when the tutor needs to know how far the participants have been competent in writing skills, he/she is better use ‘upload a single file’ technique. This is the best tools in which the participants can upload their writing products through the available space.

After the online tutorial, the participants are given some time to prepare themselves take the final examination. The final examination is done during a week asynchronously. The examination is divided three parts based on the courses. The profile is shown in Figure 4.

Figure 4. The Profile of BIPA’s Final Examination

Conclusion

Technology has taken an important role in education, including in language teaching and learning process. Currently, offering a language program through online platform is possible. BIPA Program as a language program that offers fully-online teaching and learning activities has to consequently provide effective and meaningful learning package for the participants, including the materials, assessment, and discussion forum. Moreover, the use of OER has been taken as one alternative in BIPA program. Using Moodle software enables the instructor or tutor to provide various activities for learning as well as assessment. This has become an innovation applied in online tutorials of UT.
References


The Web-based Seminar (Webinar) as An Open Courseware For Universitas Terbuka’s Students

Irsanti Widuri Asih

Abstract

Universitas Terbuka (the Indonesian Open University) provides various learning supports for its students, including tutorial. Tutorials are conducted in face-to-face as well as in online mode. Since the last decade, UT has been focusing on the utilization of online learning and promoting open courseware. The open courseware plays an important role in supporting student’s learning.

Since 2012, UT has been piloting web-based seminar (webinar), a presentation, lecture, workshop or seminar that is transmitted over the web, as an open courseware to enrich student’s learning acquisition. This paper discusses the pilot study of webinar tutorial for the students from the Department of Communication, the Faculty of Social and Political Sciences. The pilot study was conducted for the Public Speaking course. The students who joined in this pilot project resided in South Korea, meanwhile the tutor was in Indonesia.

The pilot study reveals that, webinar tutorial embraces several potentials to be improved. The study portrays the opportunities to be widely implemented. However, capacity buildings are required to be taken place at the first stage prior to the implementation plan.

Key words: open and distance learning, open courseware, web-based seminar, tutorial.

Preface

In open and distance learning system, learning support services become an important aspect that should be provided in the learning process. The quality of support services for students, both administratively and academically, plays an important role. The quality of services are greatly affected students' understanding of the program will be taken, students' wishes to enroll, their persistence, and the completion of their studies (Simonson, et.al, 2012: 322).

As a higher education institution that employs distance learning system, Universitas Terbuka (UT) always strives to provide learning support services that use information and communication technology at its optimum. Since its establishment in 1984, UT has provided learning support services in various modes of tutorials; face-to-face, written, radio, television, teleconference, and online tutorials.

As an effort to improve the learning support services, to optimize the usage of the latest information and communication technology, and to open as many channels for the learning process as well, in the 2nd semester of 2012, UT conducted a pilot project of web-based seminar (webinar) tutorial. Webinar tutorial is intended primarily for students of UT who reside in other countries.

With the facilities provided by the webinar; chatting, document-sharing, document-presentation, and audio-video communication, the students are able to communicate in synchronous way with their fellows and with the tutor as well, even though they are separated by geographical distance.
Students participating in a webinar tutorial can be designed individually or classical. This tutorial is individual when each student access the tutorial from different places (wherever they are), while the tutorial is classical when students gathered in one location and access the webinar tutorial on the internet-connected computer together.

In the pilot project, UT conducted a webinar tutorial for four courses from different study programs, they were Translation I (from Translation Program), Public Speaking (from Communication Studies), Marketing Management (from Management), and Economics Statistics I (from Accounting). This paper will particularly describe the implementation of webinar tutorial pilot project for Public Speaking Course.

**Learning Support Services in Distance Education**

Students in distance education institutions actually have some expectations to the institutions. As stated by Simonson, et.al. (2012, 322-323), that the distance program students have a number of expectations of the institutions:

- They will receive the same services as such services are obtained by students face to face.
- As much as possible the information they need they can get through online media.
- They can get the service information that is easily accessible (online), and there are certain units that can also provide the information they need (face to face).
- All of the services they need will be available for self-service and online.
- They expect services that are personal, not public.
- They hope to get the right answers to their questions in a quick time.

All of the expectations of students in distance education must be accommodated by the institution. To meet the expectations of the students, the Western Cooperative for Educational Telecommunications (WCET) in 2010 developed guidelines for identifying areas of student services in the context of online learning which is referred to as the "Web of Student Services for Online Learners" (Simonson, et.al., 2012: 323). These models classify services to students in distance education into five categories; administrative core, academic services suite, communications suite, personal services suite, and student communities suites.

From the model we can conclude that tutorials is one of the learning support services to be provided by distance education institutions under the category of academic services suite in addition to other services, such as libraries, bookstores, academic counseling, and technical support.

Figure 1. “Web of Student Services for Online Learners” (Western Cooperative for educational Telecommunications (WCET) in Simonson, 2012: 323)
As an effort to improve the academic learning support services, UT continues to make innovative breakthroughs. In the second semester of 2012, UT conducted the web-based seminar tutorial (webinar tutorial).

Webinar Tutorial

Distance education has a history of the evolution of several stages, ranging from correspondence that began in the 1880s, radio and television broadcasts which were initiated since 1921, open universities in the 1960s and 1970s (in which used various communication technologies, such as tutorial correspondence, radio, television, audio cassettes, phone conferences, experiment kits, and the local library), teleconferencing which began in the 1980s, and the last is the internet/web that the world began to be used in distance education since 1993 (Moore and Kearsley, 2012: 23-24).

Web-based seminar is a presentation of activities, lectures, workshops, or seminars that use the web facility (www.webopedia.com). The thing to be highlighted from webinar is the interactive elements; the ability to give, receive and discuss information either textual, auditory, and visual/video. Webinar has different features with webcast, in which the data transmission is one-way only and does not allow interaction between the presenter and the audience.

The specifications of the system needed in conducting webinar are:

• Web Browser Software (Firefox, IE, Google Chrome)
• The latest Adobe Flash Player Software terbaru for each web browser utilized (http://www.filehippo.com/download_flashplayer/)
• Java Run Time Software (http://www.filehippo.com/download_jre/)
• Microphone
• Headset or Speaker
• Webcam
• Monitor Resolution on 1024 x 768

Thus, webinar tutorial is one kind of learning support services that makes then use of the features of webinar as an OpenCourseWare. On the implementation of webinar tutorial, UT utilized the integrated software OpenMeetings in Moodle software which has been used for the implementation of online tutorials.

In webinar tutorial, the interaction between tutor and student can be varied widely with the various facilities available, including audio, video, document sharing, document/desktop presentations, and chat. Recording facility is also available for all the interactions that occur.

In its implementation, webinar tutorial activities at UT involves three components; the Center Office of UT, Jakarta Regional Office, and Partners (study group administrators). Each course was designed to be handled by a team consists of tutor, the assistant of tutor, and administrative personnel/technician. The main responsibility of tutor was to guide the students in understanding the course materials. The assistant of tutor assisted the tutor in order to make sure that the tutorial run smoothly. The technician was in charge in facilitating technical support to tutor, assistant of tutor, and students related to the use of the system for the preparation and implementation of the tutorial.

Webinar tutorial is designed to be conducted in eight activities within eight weeks with the details as follow.

Table 1. The Schedule of Webinar Tutorial

<table>
<thead>
<tr>
<th>Week</th>
<th>Initiation</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Opening</td>
<td>Introduction to the techniques of tutorial and the</td>
</tr>
</tbody>
</table>
However, there is one thing that distinguishes webinar tutorial schedule activities with other types of tutorials. In the webinar tutorial, the first meeting do not discuss the course material yet. The first meeting is designed for the orientation and the explanation of the mechanism of the discussion. It is based on the consideration that webinar tutorial is a new mechanism that should be introduced to students first and be well-prepared to make sure that the activities can be done as the plans. Likewise, the eighth meeting was not reviewing the material anymore, but summarizing the entire materials and evaluate the results of studying the entire meeting.

The students’ activity in webinar tutorial contributes 50% to their final score. The other 50% was gained from the final examination.

**The Implementation of Webinar Tutorial for Public Speaking Course**

The webinar tutorial for Public Speaking course was designed for the students of Communication Department from South Korea. The number of students who are registered in this tutorial was 12 students, they were the 4th semester students.

Figure 2. The webinar Tutorial for Public Speaking Subject
The tutorial was conducted from September 9, 2012 to October 28, 2012. From the 12 students, two students were finally dropped out, one because of technical problem and other resigned from the program. All the activities of the webinar tutorial for Public Speaking are summarized in the following table.

Table 2. Webinar Tutorial of Public Speaking

<table>
<thead>
<tr>
<th>Week</th>
<th>Course Schedule</th>
<th>Location</th>
<th>Tutor</th>
<th>Students</th>
<th>Assistant of tutor</th>
<th>Technician</th>
<th>The No of Students</th>
<th>Technical Trouble</th>
</tr>
</thead>
</table>
| 1     | Sept 9         | 08.30 – 10.30  | Indonesia (Banten) | South Korea | Indonesia (Banten) | Indonesia (Banten) | 6                 | The connection was on-off  
The delay was too long, particularly when use wifi |
| 2     | Sept 16        | 08.15 – 10.15  | Indonesia (Banten) | South Korea | Indonesia (Banten) | Indonesia (Banten) | 2                 | Audio                                                 |
| 3     | Sept 23        | 08.00 – 10.00  | Indonesia (Banten) | South Korea | Indonesia (Banten) | Indonesia (Banten) | 8                 | -                                                     |
| 4     | Sept 30        | 08.10 – 10.10  | Indonesia (West Java) | South Korea | Indonesia (West Java) | Indonesia (West Java) | 7                 | Tutor couldn’t operate the powerpoint  
Tutor couldn’t access the chat |
| 5     | Oct 7          | 08.05 – 10.10  | Indonesia (West Java) | South Korea | Indonesia (West Java) | Indonesia (West Java) | 10                | The internet connection of the assistant of tutor was off |
| 6     | Oct 14         | 08.00 –        | Indonesia (West) | South          | Indonesia (West) | Indonesia        | 9                 | The audio of students                          |
In general, the communication between students and tutor and among the students was actually very interactive. Unfortunately, the activity often interrupted with technical problems, particularly the connection to the Internet. To make the communication run smoothly, mostly the audio and video of the students must be turned off. Only tutor who can freely use the all types of facility; chat, audio, video, and presentation tool. The smoothest facility that could be utilized optimally was the chat room. The students seemed so freely responded the discussion with the tutor by chatting. Compared with the face-to-face tutorial, seemed like the students were enjoying more the webinar tutorial since they were not in the real class room (some of them were in their bedrooms), they didn’t have to be in the same psychical presence with the tutor.

However, the communication between tutor and students and among the students must be supported by other kinds of communication; facebook, e-mail, cellular phone, Yahoo Messenger, and short message service.

After the 8 interactive activities of the webinar tutorial, submitting 3 assignments, and also taking the final examination, here are the final scores of the 10 students of the Communication Studies engaged in webinar tutorial for Public Speaking course.

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Location 1</th>
<th>Location 2</th>
<th>Location 3</th>
<th>Location 4</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 Oct 21</td>
<td>10.00 – 09.50</td>
<td>Indonesia</td>
<td>South Korea</td>
<td>Indonesia</td>
<td>Indonesia</td>
<td>Webinar class couldn’t be accessed. New room had to be made.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(West Java)</td>
<td>(West Java)</td>
<td>(West Java)</td>
<td>(West Java)</td>
<td>The assistant of tutor couldn’t join the class because the connection was fail.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>The connection suddenly dropped off.</td>
</tr>
<tr>
<td>8 Oct 31</td>
<td>18.30 – 20.30</td>
<td>Indonesia</td>
<td>South Korea</td>
<td>Indonesia</td>
<td>Indonesia</td>
<td>Tutor and the assistant of tutor both couldn’t get connection to the class, even the students were ready.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(West Java)</td>
<td>(West Java)</td>
<td>(West Java)</td>
<td>(West Java)</td>
<td>The class was rescheduled to Oct 31, 18.30 Indonesia time/20.30 Korea time</td>
</tr>
</tbody>
</table>

After the 8 interactive activities of the webinar tutorial, submitting 3 assignments, and also taking the final examination, here are the final scores of the 10 students of the Communication Studies engaged in webinar tutorial for Public Speaking course.
Conclusion and Suggestion

Conclusion

The utilization of webinar tutorial for UT’s students is actually a great effort from UT in providing various learning support services. Webinar tutorial then is efficient to be implemented for students who reside out of Indonesia, since the cost becomes cheaper. The interaction between tutor and students in this tutorial was high since they can communicate through several kinds of media, chat, video, and audio. Unfortunately, the interaction in audio and video modes couldn’t be implemented optimally since the connection mostly dropped whenever tutor and students utilized these facilities at the same time. From the competency achievement (seen from the final score of the students), we can conclude that the webinar tutorial is quite effective since all of the students.

Suggestion

However, further research upon the benefits of webinar tutorial for students should be conducted, especially in determining the specification of the courses that be best tutorialed with webinar tutorial. The infrastructure elements; such as the bandwidth of the internet connection in Indonesia is also important to be improved.

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Learners as Producers: Structuring Courses around Open Resource Production by Students

Jonan Donaldson

Abstract

This presentation discusses the planning, implementation, and results of an 11-week course designed around a framework of having the students produce open resources. Working as a collaborative group, students in this course author and publish a book under Creative Commons license. The book produced in the experimental offering of this course is on the topic of Massively Open Online Courses (MOOCs). The guiding principle behind this course design is that when students become the producers of knowledge rather than consumers of knowledge, the educational benefits are significant. Not only does this kind of course design model best practices in education (project-based learning, collaborative learning, student ownership of learning, and so on), but it also helps them become expert in production, use, and theory of open culture. The traditional adage which says "The best way to learn something is to teach it" is embodied in this course design. The students in courses designed on this framework, through building open resources, become teachers with students all over the world. This experimental class design holds promise as a model for collaborative student projects and classes centered around the creation of high-quality open resources.

Keywords

Open Resources, Open Culture, Creative Commons, MOOC, course design, collaboration, authorship learning, producers

Background

The last few decades have seen a shift in society which cannot be underestimated. For most of human history the vast majority of people were consumers of knowledge, while publishing remained the realm of a privileged few. Information was passed from the few to the masses through media such as books, newspapers, magazines, journals, television, movies, and recently, websites. Now the tools of publishing are widely available and easy to use, especially with free hosting for websites, blogs, and wikis, along with web 2.0 tools. Open culture is the paradigm upon which the foundation of this shift is built. Anyone with useful knowledge to share is empowered to freely publish that knowledge. Others are able to remix and build upon this work. Not since the advent of the printing press has an innovation had such a profound effect on how knowledge is presented and shared.

Although the effect of the shift from information consumerism to information production has impacted all aspects of society, the world of education often seems impervious. Most educational experiences continue to stick to the old form of students being expected to acquire the knowledge imparted to them by teachers, textbooks, and even internet resources. More innovative educators help students gain knowledge through project-based learning. Very rarely, however, do we find students learning through the act of creating resources intended for mass consumption.

We are expected to be helping our students acquire the skills needed in the real world. We should be helping them build the skills needed to function effectively in the digital age, but we should also be helping them acquire the experience and mindsets needed to effectively function in a global society which increasingly expects them to be fluent in content creation, sharing, and publishing.
When I first started teaching I taught the way I had been taught—in a knowledge acquisition modality based primarily on readings, lectures, and practice activities. Although it was effective to a certain degree, I wanted to create more powerful learning experiences. I started incorporating project-based learning and collaborative learning practices. This led me to research and experiments with digital portfolio-based course designs. For several years the majority of my courses had website-based digital portfolios at their core. Each week students would create digital artifacts which they would embed within their portfolios, accompanied by metacognitive work such as reflections. These artifacts and reflections were analyzed, critiqued, and discussed by peers.

At Western Oregon University I have taught a graduate-level course for several years in which we discuss cutting-edge ideas in the field of educational technology. The usual form of this 11-week class is that students read four books by big thinkers in the field. They are asked to discuss the readings and write academic essays in which they analyze, synthesize, and critique the ideas they encounter in the readings. Each term tackled a specific issue, such as how internet technologies affect our students’ ability to focus.

As I was preparing to develop a new term of this course, two questions were prominent in my mind. First, I needed to identify an engaging and cutting-edge topic. Second, I wanted to shift the modality toward project-based learning. These two questions converged as I started leaning toward selecting the topic of Massive Open Online Courses (MOOCs), but found that no books had been written on the topic. At first I considered abandoning the tradition of reading four books during the term in favor of reading journal, newspaper, magazine, and blog articles. Then the thought hit me: “Instead of reading a book, why not write a book?” After nearly dismissing the thought due to perceived limitations of time and lack of my own experience in the world of publishing, I decided to write out a draft course outline just to see what it might look like.

After deciding that it was in fact feasible, I decided to take the plunge and design the course around having students write and publish a book. In the spirit of the open culture which brought me to this point, I also determined that the book should be published under a Creative Commons license. Since I had never built or taught a course like this before, nor even heard of such a course, it became clear that this would be an experiment. There was not sufficient time to set it up as a formal experiment, so I had to proceed with the process as an informal experiment. Nonetheless, I formulated research questions and a working hypothesis to help clarify the emerging framework which I call authorship learning.

The first question I wished to address concerned whether a complete course could be designed with a core of having students create and publish open resources. The second question was whether such a course would result in a degree of learning equivalent to that of the usual modality. My working hypothesis was that students can learn effectively by producing and publishing open resources through a collaborative process facilitated by internet technologies.

**Method**

The official learning outcomes for this course were: “Through readings and class discussions, students will: 1) Familiarize themselves with controversial topics and well-known authors within the field of educational technology, 2) Formulate clear arguments and participate in discussions of key issues within the discipline, and 3) Form educated opinions on issues within the discipline and articulate these in writing.” These course learning outcomes had to be sufficiently broad because this course has a different topic each term.

The first step of the course design process was to settle upon a set of term-specific objectives which would align with the course-level learning outcomes. These objectives were that after completion of the course, students would be able to: 1) effectively argue the pros and cons of MOOCs, 2) identify the arguments of specific leading thinkers in the field of MOOCs, 3) use digital technologies to collaborate in creating a co-
authored book, 4) learn through action in creating open culture, specifically through the use of Creative Commons licenses.

After the objectives were clear, these objectives informed the planning in terms of the overall structure of the book. Since the topic is cutting-edge, and since it holds incredible potential, it was clear that the first chapter would have to address MOOCs in light of Clayton Christensen’s work on disruptive innovations (Christensen, 2011). The remainder of the chapters would be evenly divided between discussion of the pros and cons. Finally there would need to be an introduction and conclusion.

The norm for most books with many authors is that each chapter is written by an individual author and the collection is edited by one editor. To be a truly collaborative project the writing and editing roles in this class were clearly defined and arranged in such a way that each chapter would be collaboratively written by three students and the whole book would be edited by the class as a whole.

Being an online class, the structure of a 10-week course had to be built out with weekly overviews, readings, videos, and discussion boards. The weekly overviews were short—several paragraphs in which I discussed my thoughts and experience on a particular relevant topic. Although the bulk of the research would be done by the students, I posted links in our learning management system (Moodle) to the most influential articles and videos of talks by leaders in the field such as Sebastian Thrun (Rose, 2012) and Daphne Koller (TED, 2012). Each week students were asked to reflect on their research, writing, and editing activities that week in a discussion forum.

After consideration of various Internet tools, Google Documents was selected as the collaborative space in which students would write. A set of Google Documents were created and the links posted in the Moodle course site. Each chapter had a separate shared document.

There was also a role signup document in which students could select the roles they wished to assume. Students had to sign up for three writing roles and three support roles. Each chapter had a lead writer and two support writers, which meant that each student would have one lead writing role and two support writing roles. The editing work was broken down into various aspects such as “logic editor”, “citations editor”, “style editor”, and so on. Students were to sign up for one lead editing role and two support editing roles.

The breakdown of the weekly plan was as follows: after a few weeks of research, the lead writers in each chapter would spend a week writing a handful of pages. The subsequent week they would go into a chapter in which they had a support writing role and add more. A week later they would go into the other chapter in which they had a support writing role. They would spend the sixth week working in their editorial roles. The next week they would go into their chapters in which they had lead writing roles. After one more week in their support writing roles, they were going to finalize the chapters in which they had lead writing roles and summarize that chapter for the book introduction. The last two weeks were spent in intense editing, designing a cover, and contacting the company which would print the book.

The course schedule and syllabus were written in a way that wouldn’t indicate the number of chapters because, since each student was going to be taking a lead writing role, the number of chapters would equal the number of students. The weekly modules in Moodle were set to open each Sunday of the term. In addition to the weekly modules, there were chapter areas in which there were the links to the Google Documents and chapter-specific discussion boards. These were set to open, along with the role signup sheet document, in the third week. This was done because I didn’t want the students to start writing or even select their project roles until they had a firm grasp of the topic. The first two weeks were research weeks in which students were asked to scour academic journals, newspapers, magazines, and blogs. To help focus the research, in the first week the students were asked to individually write overviews of the topic, share them, and discuss each-others’ work. In the second week they were asked to contribute, with citations, to a two-column list of pros and cons. By the third week students would be ready to make informed choices.
when selecting their roles. This also allowed me to know how many students would be in the class after any adds or drops during the first two weeks so I could adjust the sign-up sheet.

Because there was no time to go through the process of institutional human subjects research approval, it was not possible to set up any data-collection instruments.

**Results**

During the first two weeks there were several changes in enrollment as students added or dropped the class. Before the class started, I had worried that some students would drop when they realized that the course project would be to write and publish a book, but fortunately the entire class was quite enthusiastic. It was surprising that many of the students had no prior knowledge concerning MOOCs, so the initial research sparked their interest. This demonstrates the importance of topic selection in projects such as these. The first week overviews of the topic sparked excellent discussions. The two-column pro/con list produced in the second week brought about a depth of understanding of the topic.

Once the third week came around the students were ready to select their writing and editing roles and jumped right into writing with plenty of ideas.

Dividing up the editing roles worked very well. Students felt empowered to make edits within their roles all throughout the book without fear of stepping on others’ toes. It was also good that students had several support editing roles as well. This alleviated the pressure on the lead role editors. One of the editing roles involved selecting a publisher and dealing with all contact with the publisher. These editors polled the class using a survey and came to a decision that the book would be self-published rather than go through a traditional publishing house. They felt this would be most convenient for all because going through a publisher would involve a long process long after the class finished, but going with self-publishing would allow the book to be on sale immediately after completion. Also, the topic of the book was so cutting-edge that the benefit of getting the book out there quickly through self-publishing outweighed the benefits of going through a publishing house.

The book was published and became available on April 17th, 2013 under the title *Massively Open: How Massive Open Online Courses Changed the World* (Donaldson et al, 2013). It was distributed through online stores such as Amazon, as well as available through brick-and-mortar bookstores and libraries.

**Discussion**

The decision to design this course around having the students write a book was difficult. Leading up to the first week of class my mind was constantly filled with scenarios in which everything went horribly wrong. However, the possibility that it could turn out to be one of the most memorable and meaningful educational experiences in my students' lives drove me forward. I have never seen students put so much passion and dedication into one class. There was a continual enthusiasm and positivity throughout the entire process. Eight weeks after they started writing, there was a completed book. All the learning outcomes and objectives were met and exceeded.

The informal study gave a preliminary result confirming the hypothesis that students can learn effectively through producing and publishing open resources through a collaborative process. It is possible to design a course around a core of having students create and publish resources.

My next steps will be to take this kind of process, which I am calling “authorship learning”, into other modalities. This summer I will teach a course in which the class will be divided into groups, each of which will write and publish an academic journal article. After that I hope to go through the formal process of
getting institutional human subjects approval and running the same course again with a different topic, this
time with the collection of a massive amount of data.

If other educators wish to create their own experimental course designs around authorship learning, the
takeaways from this informal study may be informative. First, the selection of topic is crucial. Second, it is
important to clearly define roles when setting up collaborative writing projects. Dividing the chapters evenly
between pro and con proved to be effective, since many of the students came to develop strong opinions
by the end of the project and if the book had been slanted one way or the other they may have felt
dissatisfied. Finally, students will always meet your expectations. If you expect them to meet the minimum
standards, they will. If you expect them to blow you away, they will.

The world has shifted from consumption of knowledge to knowledge production and publishing. Upon
graduation our students will be expected to be fluent producers and publishers of information using a wide
range of digital technologies. It is our duty to prepare them for this world. The traditional modality of
textbooks, lectures, and practice activities will not suffice. Project-based learning is taking education
towards more relevant and effective practices. However, authorship learning holds great potential. There is
much work to be done in researching and articulating the principles and practices involved with authorship
learning. It is my hope that this informal study will inspire other educators to add to the body of literature.

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http://www.ted.com/talks/daphne_koller_what_we_re_learning_from_online_education.html

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Our Experience for operating regional consortium in Japan

Yoshimi Fukuhara, JOCW

Abstract

In Japan we established the regional OCW consortium, Japan OpenCourseWare Consortium, JOCW in short, in 2005. At that time in Japan most of Japanese universities were very behind in terms of utilizing ICT technologies in real settings of Higher Education. MIT OCW was a big shock for many top executives of universities in Japan. So when first work shop on OCW was held in Japan, many major universities participated it and they began to consider launching OCW in their own universities. Actually after the work shop six universities, which were Keio University, Kyoto University, Osaka University, Tokyo Institute of Technology, University of Tokyo and Waseda University, made organizational decision to launch OCW simultaneously and establish the organization for sharing experiences, know-how and issues. In next year, 2006 we hosted the very first Global OCW Conference in Kyoto, which was the origin of Global OCW conference. Since that time we established the basic regional Consortium operation which consist of bi-annual consortium meeting and some academic workshop jointly held with the academic society. In terms of financial structure we opened private sectors as affiliate members in 2008 and introduced membership dues prior to OCWC. From the early stage we have not received any kind of grant from the foundations and we have operated the consortium only with the membership dues. It was weakness of JOCW, but it made JOCW very independent organization.

From the long term perspective regional OCW consortium should have a strong and sustainable structure. Ideally regular annual activities should be operated with membership dues. In order to achieve this structure more organizations should be involved as members, roughly more than a hundred. In Japan we limited the amount of membership dues to 250USD for Institutions and 550USD for companies to make it easy to join.

The other unique activities are Opinion poll and Asia regional OCW and Open Educational Conference (AROOC).

Regarding poll we have carried out poll since 2007. When we launched JOCW in 2005, we intended to get feedback from users who accessed OCW sites. First we put questionaires on the Web site, but only few users ansered, and so we asked the commercial internet provider to use their internet based research service to get opinion about OCW.

In terms of AROOC, we thought we needed the place to share OCW/OER related activities among Asian countries. So since 2009 we held the Asia Regional OCW and Open Education Conference. In 2009 Korea University, Korea hosted and in 2010 National Chao Tung University, Taiwan, in 2011 Meiji University, Japan and in 2012 Thailand Cyber University hosted.

In this paper we report detail result of those activities.

Keywords

OCW, Regional Consortium, JOCW

History of JOCW
In November 2004 many major Japanese universities were invited to the first OCW workshop, which was held in Tokyo co-organized by MIT and Keio University. After the workshop some universities whose top executives had common sense of crisis regarding on utilizing ICT in campus have begun to move forward OCW activity in Japan. Finally six universities who are Keio University, Kyoto University, Osaka University, Tokyo Institute of Technology, University of Tokyo and Waseda University made a decision to launch their OCW simultaneously and establish the organization for OCW in Japan. On May 13 2005 those six universities had a joint press conference in Tokyo with presidents of all six universities and guests from MIT and they announced the simultaneous launch of the first OCW sites and establishment of the organization named Japan OpenCourseWare Alliance. In the late 2005 three more national universities, who are Hokkaido University, Kyushu University and Nagoya University joined the organization. In the autumn of 2015 the international conference related OCW was held in Logan, Utah in U.S. and in the conference we proposed the international OCW conference in Kyoto in 2006. That was the origin of the annual OCWC conference. On April 20 2006 we had the international conference on OCW in Kyoto, Japan co-organized by Kyoto University and JOCW. During the conference we had a press conference to announce Japan OpenCourseWare Alliance to an open consortium, Japan OpenCourseWare Consortium with new three universities, totally nine universities. At that time JOCW had a very unique characteristics, that was;

- Most of top ranked national universities and top two private universities were members
- All of member universities were joined as whole university level under the organizational approval
- JOCW started with no external grant, but internal budget from each member universities.

2006 was the very first year of current JOCW and at the same time global OCW consortium has been establishes as an internal organization of MIT.

Since 2006 we started OCW promotion from various aspects, for instance, sharing information among members, member institution recruitment, technological seminars/workshop and opinion polls. Details of major activities are described below.

**Basic Structure**

From the beginning we thought quality assurance was very important. To make sure the quality of content distributed from the consortium we requested the university organizational approval to be an institutional member. We created bylaw when we restart JOCW as an open consortium in 2006. In bylaw we defined the board of directors, up to ten representatives which are elected from institutional members. So far we have had board meeting in every other months.

**Sharing Information**

For sharing information among members we have been carrying out mainly two sorts of activities. One is online activity and the other is offline activity.

Regarding online activity, we have been distributing various kinds of information through the web site, [www.jocw.jp](http://www.jocw.jp), basic meaning of OCW, introductory description of member organization and links to each OCW site, introductory essay about popular courses written by each university, event information including presentation video and all of board meeting documents (member only). As offline activity we have bi-annual meeting, one is in spring and the other one is in autumn. In the spring meeting we get approval of activity and financial report on the previous fiscal year and also get approval of activity and financial plan on the current year. Main purpose of autumn meeting is exchanging the opinion and experiences among members.
Member recruitment

JOCW has been started with universities only at the beginning and in 2006 some non-profit organizations related to higher education joined. And as members got increased, financial weakness had become actual and in 2007 to solve this issue we introduced the membership dues and created a new member category, a supporting member for private company.

Transition of members are shown in Fig.1 and courses distributed from all of JOCW member universities are shown in Fig.2.

![Transition of JOCW members](image1)

![Transition of courses from JOCW](image2)

Opinion poll

It is essential to raise awareness of OCW and get feedback from users. At first we tried to put questionnaires on the Web site, but we could get few answers. So we asked the internet provider who offers opinion poll service on the internet. First poll was carried out in 2007 and since then we have carried out same poll annually. Poll of each year consist of 37 questionnaires and number of respondent are 1,200, which consist of each 200 from teens to sixties.

Main findings are following;

- Generally evaluation on OCW is very positive, which is 90% and more.
• If the lecture from the university which locates near distribute their lecture video on the internet, 80% and more replied that they wanted to watch it.
• Top ranked lecture information is lecture note, and syllabi, lecture video are followed by.
• Regarding purpose of use, cultural interest is highest rate but certificate and career up have got increased recently.
• Awareness has been still low, about 80% does not know.

Some result of poll are shown below:

![Fig. 3 Example of poll-1](image1)
![Fig.4 Example of poll-2](image2)
![Fig. 5 Example of poll-3](image3)
![Fig.6 Example of poll-4](image4)

**Current Issues**

Eight years have passed since establishment of JOCW and globally new stream of Open Education has started. For example in many projects big shift from provider centric to learner-centric and MOOCs has been launched with many institutions.

However in Japan there are very few such activities.

There might be some reasons behind this issue.

• Financial weakness; no big grant comes from government or foundation
• Low consciousness of faculty members; very few positive faculty members
• Traditional teaching style
• Very tight IPR low; big obstacle to increase courses, no fair use consensus

**References**

Expanding the OER Community by Showcasing a Development Model that Works

Mohamed Noor Hasan, Norah Md Noor

Abstract

The concept of open educational resources was relatively new among public universities in Malaysia. In 2011 only two universities were registered as a member of the Open Courseware Consortium and Universiti Teknologi Malaysia (UTM) was one of them. However, in a period of less than one year after becoming a member of the consortium, UTM managed to publish 70 courses in its ocw website and this was achieved without any monetary reward given to the course authors. The process used to develop the courses started by selecting potential courses from the university e-learning portal. Authors of the courses were invited to workshops especially designed to assist them in converting the lecture notes into OCW publication materials. The normal procedure in OCW development that is checking for copyright and other issues, identifying figures to be redrawn and designing the course for online publication took place during the workshop. Later, individual graphic designers were assigned to each course to assist the author in recreating the figures, if necessary. The software used as the in the ocw website is the same software used as e-learning platform. Next, the IP of the published material was assigned to the respective authors. As a results of this success story, other universities in Malaysia are now looking at their own potential as contributors to OER and the initiative is now seen as one way to contribute to the society and not as a mere branding exercise. OER development is now is becoming a national project and public universities in Malaysia have agreed in principle to form a national OER consortium. By having a consortium, instead of competing with each other and recreating established courses, the universities will focus on the development of courses related to their niche areas. Based on this positive development, it is hoped universities in Malaysia will become major contributors to the global repository of open educational resources.

Keywords

Open Educational Resources, OER, OER Malaysia, OpenCourseWare.

Introduction

Global trendinteaching and learningis to encouragethe sharing of knowledgethrough the use oftechnology,particularlythe internet. Worldrenowneduniversitieshave long been providing accesstocourses and learning materialproduced bytheireducations, for free. This can be seen as acontributionsto the global community and also as a means ofto attract good students. Todayweseethe emergence ofMassivelyOpenOnlineCourses(MOOCs) offered byleadinguniversities such as Stanford, MIT and Harvard, and taken byhundredsof thousands of students around the world(Kop & Fournier, 2011).

Openeducationalresources(OER) are any educational resources, including course materials, textbooks, video, multimedia applications, which are produced for the purpose of teaching and learning, which are available publicly by educators and students without any license fees orroyalties (Butcher, 2011; Johnstone, 2005). Although OER is always associated with OpenCourseWare pioneered by MIT, it actually covers a much wider scope and not limited to only the course materials.

This paper will describe the implementation of OpenCourseWare initiative in Universiti Teknologi Malaysia (UTM); the strategies used to increase contributions from faculty members and finally plan to form a national consortium of public universities in Malaysia to establish a repository of open educational resources that will be shared with learners from around the world.
OER in Malaysia

Malaysia is a multi-ethnic, multilingual and multi-religious country with a population of about 28 million. At present Malaysia is placing great emphasis on building a knowledge community by increasing the number of citizens with access to higher education. The post-secondary sector in Malaysia is made up of some 20 public and 32 private universities. Additionally, there are some 450 colleges and six branch campuses of offshore universities. These numbers are expected to increase as Malaysia opens up the private education space to international participation. Scores of investors in the education sector, from almost all of the English-speaking countries, are lining up to establish colleges and universities in Malaysia.

Open educational resources (OER) are a relatively new phenomenon in the Malaysian higher education (HE) sector. There are several Malaysian Universities such as Wawasan Open University (WOU), Open University Malaysia (OUM), Universiti Teknologi Malaysia (UTM), and International Medical University (IMU) and also there have been individuals strongly advocating the use of OER in Malaysia (Dhanarajan and Porter, 2013). There are also educators who seem to be reluctant to make their contents freely available to the world. This is due to lack of understanding in the licensing mechanisms and also the absence of policy directions. However, a committee such as Malaysian Public Universities e-Learning Council (MEIPTA) do take a serious look at adopting an institutional policy on OER and digital resources. Their effort might have shown a positive outcome when recently, in 2013, Ministry of Higher Education (MOHE) launches a National OER policy, which could inspire Malaysia towards becoming a leading nation in this area in the coming years.

Brief history of OER in UTM

Universiti Teknologi Malaysia (UTM) is one of the earlier and strong supporters of OER in Malaysia. It is a public university with student population of about 20,000, majoring mainly in the Sciences and Engineering programmes. At present, there are three major projects which can be considered as open educational resources initiatives in UTM. They are the open access UTM Institutional Repository, a video sharing facility called UTMotion and the latest project is UTM OpenCourseWare.

UTM Institutional Repository

One of the early initiatives by UTM to provide free access of the scholarly materials published by the university is through a project called UTM Institutional Repository. The main goal of the initiative is to give free and unlimited access to scholarly publications of academic staff, researchers and students of UTM through the internet. UTM Institutional Repository (UTM-IR) is a collection of scholarly and research publication of the university in digital form. It is a web-based platform which collects and preserves output of university research and publication in compliance with the requirement of open access policy. The other objective is to highlight UTM scholarly works and research output to the global community.

At present, the repository consists of theses, journal articles and conference papers and can be accessed from the following url: http://eprints.utm.my/. Contents of the repository can be browsed by year of publication, by subject matter, by field of studies and by type of publication. A search facility is also available. The latest statistics shows that number of records in the database exceeds 24,000. The repository is also listed in the ’Directory of Open Access Repositories’ (OpenDOAR). This allows contents of the repository to be searched from the URL http://www.opendoar.org/.

UTMotion

Initially, UTMotion was an initiative by UTM Centre for Teaching and Learning to facilitate sharing of multimedia resources, in particular audio and video clips for teaching and learning purposes. Typically, a lecturer would upload a video clip to the server and a link is created in the e-learning portal. Recognizing that this facility can be accessed by users from around the world, the use of UTMotion has been extended to a variety of other purposes such as promoting UTM to the global community, promoting expertise and research findings, archiving important events held in the university, and promoting students and staff activities.

Unlike video services offered by most other institutions, UTMotion is based on the concept of web 2.0 and it opens up a broader space to encourage creative and innovative thinking among its users. All staff and
students not only able to download videos but they can also upload their own videos for sharing with users around the world. Additionally, UTMotion also lets users to form groups with similar interests and to create playlists. To summarise, the facilities available in UTMotion is very similar to those available in the famous online video sharing, YouTube.

![Main page of UTMotion](http://utmotion.utm.my)

**Figure 1**: Main page of UTMotion

UTMotion system can be accessed from [http://utmotion.utm.my](http://utmotion.utm.my) and the audio and video clips are categorized into nine channels, namely:

- Creative Works
- Library Resources
- Research and Development
- Student and Staff Activities
- Teaching and Learning
- University Events
- University on Press
- Vice-chancellor Gallery
- Zoom UTM

For example, lecturers will upload videos related to learning in their class to the Teaching and Learning channel. The uploaded video could be simple animations explaining certain concept or process or a recording of their lecture in the classroom. The videos are accessible by users around the world for free. In addition students are also allowed to upload video or audio recordings that they produce, through creative works channel. At present, there are more than 1,300 videos of various categories have been uploaded and teaching and learning accounted for almost half of these.

**UTM OpenCourseWare**

In March 2011 UTM officially became a member of the OpenCourseWare Consortium which consists of more than 250 universities from around the world. As a member of this consortium, UTMpledged to share
digital learning materials developed by the academic staff based on courses offered in the university with users around the world, at no charge. A screen shot of UTM-OCW website is shown in Figure 2 and can be accessed from http://ocw.utm.my.

There are many benefits that can be gained from UTM’s involvement in the OpenCourseWare project such as users from around the world can share learning materials developed by lecturers in UTM. This partnership is seen as UTM’s contribution towards improving the quality of education among students not only in the country but also worldwide. Second, UTM is often seen as the leading university in the region that offers various programs in science and engineering. Through the learning materials that are distributed through the OpenCourseWare initiative, the community will be able to assess the strength of UTM in the field. Indirectly, this will attract the good students to pursue their studies here at undergraduate as well as postgraduate level.

Since the course materials published on the UTM-OCW website reflect the expertise of its lecturers and the quality of its courses, a development process which puts emphasis on quality must be put in place. The OCW committee has developed a procedure that must be adhered to in the development and publication of OCW materials and it is summarised in Figure 3.

![Figure 2: Main page of UTM OpenCourseWare website.](image)
Figure 3: Workflow for development and publication of an OpenCourseWare in UTM

Development of OCW in UTM

As a member of the consortium, UTM has promised to upload at least ten courses for the first year. However this was not an easy task, considering the fact that the concept of open courseware is relatively new among the lecturers. UTM participation in such a project had also raised many questions by the academic staff with regard to its implementation. Many of them are concerned on the prospect of 'giving away' their lecture notes and also on the copyright issues as stated by Mohamed Amin Embi (2013). Although many academics are willing to share their work, they are often hesitant as how to do this without losing all their rights (Hylén, 2006). To make the existing course materials suitable for Open Educational Resource requires investment, time, and energy. In the case of UTM, the university did not provide any allocation for monetary reward to be given to the course authors that contribute to this project. Therefore, the UTM Centre for Teaching and Learning (CTL) had adopted the following strategies to encourage participation among academic staff.

Strategy 1 – Promotional activities among the community

In UTM, the OpenCourseWare project is implemented by a committee headed by the Deputy Director of Centre for Teaching and Learning. Members of the committee include representatives from the Center for Information and Communication Technology and representatives or champions from various Faculties and Schools in UTM. All Committee members were appointed by the Vice Chancellor of UTM himself. As stated by Yuan et al. (2008), policies that emphasise educational innovation and organisational change in educational institutions are one of the long-term enabler to OER initiatives.

The first decision made by the committee was to use software similar to the university’s e-learning system as a platform for the OpenCourseWare website. The reason for using the same software was to avoid technical difficulties among lecturers who are involved in developing the learning materials. Yuan et al. (2008) also state that one of the inhibitors on OER initiative is if the creation and sharing of OER required considerable effort in training and support.

At the beginning of the project, CTL took the initiative to inform all lecturers about the OCW project. This is to ensure they understand why UTM participates in this project as well as to promote the concept of open
resources among faculty members. Schools and Faculties were asked to nominate names of lecturers who might be interested to participate in the project. They were given a briefing in a half day session regarding all aspects of OCW.

The committee also participated in promotional activities during the university Open Day where brochures were distributed to inform the university community about the project. Lecturers who were interested to contribute their materials were invited to join a two day workshop held during the weekend and away from the campus. The goals of the workshop were for the lecturers to check the contents for copyright issues as well as to redesign the materials, making them suitable for publication in the UTM-OCW website.

**Strategy 2 - Activee-learning courses**

Once the information has been disseminated to the majority of academic staff in UTM, the second strategy that we used to obtain course materials was to invite lecturers who have uploaded their lecture notes to the university’s e-learning system to participate in the project. We were quite fortunate as most of the invited lecturers agreed to contribute to the OCW project. This is probably due to the fact that all their course materials are already in digital format. To ensure a smooth workflow for the implementation of the project in UTM, a special workshop was held to allow owners of the learning materials to edit and refine their teaching materials. During the workshop, owners of the materials updated their lecture notes and more importantly, ensure all pictures and illustrations that appear in their course materials were free from any copyrights issue. Figures with questionable copyright status were re-drawn and re-designed with the assistance of designers and graphic artists from CTL. The workshop produced significant results where more than twenty courses were completed in one session and ready to be uploaded to the University OCW web site.

![Example Course](image)

**Figure 4:** An example of a course from the UTM open courseware website.

**Strategy 3 - Faculty nominated courses**

The third strategy that we used to get contributors to the project is by informing the Dean of all faculties in UTM and requesting nomination from their respective faculty. The names nominated by faculties were asked to join the half-day workshop where they were briefed about the project in detail. Those who are willing to contribute were invited to attend any of the two-day development workshops which have been planned to be conducted at least three times a year. As usual, during the workshop, owners of the materials will edit and refine their notes and to ensure it does not breach any copyrights infringement.
Whenever the workshop date has been set, CTL will send email messages to all lecturers, inviting them to join the workshop voluntarily. This invitation is meant for lecturers who are interested to contribute their materials but they were not nominated by their faculty. This group of lecturers had prior knowledge about OCW from their colleagues or from our promotion activities described above.

The strategies used so far produced encouraging results where on average about twenty courses were completed in each workshop and ready to be uploaded to the University OCW web site. Based on this successful work-flow, the same process will be implemented in the future. At present, more than 80 courses have been published in the UTM-OCW website. The full list of available OCW materials can be viewed at the UTM-OCW website (http://ocw.utm.my).

Through the strategies described in this section, it is expected that UTM will be able to publish about 100 open courses each year. This will guarantee that the target of 500 courses to be published online within the next five years will be accomplished.

**OER Malaysia project**

The success of UTM OpenCourseWare initiative has prompted other public universities in Malaysia to share their resources and one of the initiatives that have been agreed upon is the establishment of Malaysian Open Educational Resources Consortium (OERM). Funding for this project will be provided by the government as well as contributions from member universities.

In order to ensure a smooth running of the project, it is proposed OER Malaysia will be implemented gradually in three main phases. In phase one of project, OER Malaysia will provide an index to existing OER materials that have been produced by academics in Malaysia. All public institutions of higher learning are, by default, a member of the OERM Consortium and each may have their own OER server. Academic staff of university can contribute to OER in their respective universities and be indexed in OER 1M through RSS feed. The quality of uploaded materials will be the responsibility of each university. Therefore, every university should establish their own mechanism for evaluation and quality control. Learning materials can be indexed in the form of general-purpose OER or OCW and must use creative commons license.

In the second phase of the implementation, the OER will act as a repository for open learning materials produced by academics in higher learning institutions in Malaysia. In order to have greater impact, every university should focus on the production of OER materials in their niche areas. This is to avoid repetition and duplication of work in the published materials. Obviously, this second phase requires additional staff to manage the repository, to implement the peer review process as well as technical staff to operate a centralized server. Besides that, training programs related to the development of OER materials will also be implemented in a more systematic way so that academics in Malaysia will be able to produce quality learning materials.

The third phase of implementation of OER will be focused on producing OpenCourseWare and for the implementation of MOOCs where the material published in OER will be ready to be offered for credit to students from around the world. Any student taking courses offered for credit by OER will be recognized by all universities in Malaysia. This encourages student mobility between universities, especially for required courses that must be taken by all university students for graduation purposes.

Some of the objectives for the implementation of OERM are:

- To foster cooperation among higher learning institutions in the country in order to increase the number of citizens receiving training at the tertiary education.
- To provide access to knowledge resources accessible not only to the people of this country but also to educators and students from around the world.
- To provide a platform for academic staff in the country to showcase their expertise in these areas.
- To attract good students from abroad to study in Malaysia.

The existence of OER which will be championed by higher learning institutions will position Malaysia as a contributor to the body of knowledge in the global scene. Since the materials can be accessed from around
theworld, this will increase the visibility of education in Malaysia. Indirectly, this will attract good students from all over the world to pursue their tertiary education in this country. Involvement of public universities in this project will make higher learning institutions more visible on the world map of higher education and will contribute to the branding and global ranking of Malaysian universities.

Conclusion

The implementation of OER project in a university requires sound strategies to ensure its success. In the case of Universiti Teknologi Malaysia several strategies have been adopted and resulted in positive response from the faculty members. The success story of one university had attracted participation by other universities in the region in the OER initiative. This eventually will result in the sharing of resources among universities to establish OER initiative for the country.

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A cloud-based solution for OpenCourseWare system to meet the need of cross-platform learning via various devices in the ubiquitous environment

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Abstract

In the ubiquitous learning environment, educational audiences should feel free to choice or switch their learning devices depend on their personal needs. The rises of new technologies have brought up a wide variety of mobile learning behaviors and design challenges. This study aims to apply the cloud-based solution for OpenCourseWare system to meet the need of learning via various devices. Therefore, we applied the cloud-based solution for National Tsing Hua University (NTHU) OpenCourseWare (OCW) to update the system from Moodle platform to cloud-based platform. Moreover, this study used web metrics tool as the primary research instrument to discover the user’s perspectives with different devices in order to understand the network profiles of users who visited NTHU OCW. The result indicates that the cloud-based platform to provide a flexible and efficient publishing workflow for open educational video resources. Moreover, the cloud-based solution could provide a great accessibility for different mobile devices.

Keywords

OpenCourseWare, cloud computing, ubiquitous learning environment, mobile learning

Introduction

The rises of various new technologies, such as smart-phone, iPad, tablet PC, notebook and desktop, have brought up a wide variety of mobile learning behaviors. Nowadays, mobile technologies have become the default communication channels for people. The mobile devices could be the opportunities to bridge learners to academic experiences and facilitate acquisition of knowledge (Rolfe & Griffin, 2011; Yamawaki, et al., 2011; Albright & Lee, 2012). However, designing and maintaining the OER for the various devices has raised considerable design issues associated with the physical and functional limitations of the devices (Pemberton et al. 2002; Naismith et al. 2005; Yalcinalp, 2010). Therefore, this study aims to apply the cloud-based solution for OpenCourseWare system to meet the need of learning via various devices.

A cloud-based solution for National Tsing Hua University OpenCourseWare System

National Tsing-Hua University (NTHU) launched the OpenCourseWare (OCW) project in 2008 to make top quality higher education resources available for the general public. The initial platform is based on the Open Source Course Management System (CMS) – Moodle – to create online learning sites that allow
learners to access the OCW materials and videos. In 2010, to engage educational audiences and extend the reach and impact of NTHU OCW, we adopted the cloud-based platform to support the various specialized technologies that tend to be used in different learning settings in various ways. Therefore, the OCW files were created in various formats suitable for different devices. The videos published in multiple formats can ensure the accessibility of learners with different needs. Moreover, these videos can meet the technical standards required to ensure that OERs are interoperable across a number of devices, from computers, tablets, to mobile phones, and complying with both Windows, Android, and iOS platform (Figure 1).

![Figure 1. NTHU OCW video format for various devices](image)

The cloud-based system included the web server, media servers, and database server (Figure 2).

All lecture videos are scheduled via several media servers for transcoding into different video formats with different qualities which can be downloaded and displayed on various devices (Figure 2).

![Figure 2. Cloud-based system architecture](image)
Method

This study used web metrics tool as the primary research instrument to discover the user’s perspectives with different devices. The web metrics tool is a cloud computing tools, the Google Analytics (GA), in order to understand the network profiles of users who visited NTHU OCW. GA is a powerful tools for institutes to evaluate its impact through an objective view. It could provide, such as locations, OS, and devices. Moreover, this study interviewed with the production team of NTHU OCW, including faculties, instructors, and teaching assistants, to understand the process of preparing learning materials and the technical skills they used in converting video learning materials in the initial moodle version and updated cloud-based version.

Result

Publishing workflow for open educational video resource

The production team were asked to write down the time they spent in each step of the workflow. The data were collected in both versions (the initial Moodle-based version and the updated cloud-based version) of NTHU OCW (Table 1). The data collected indicate that Cloud-based version has greatly improved the production process of NTHU OCW, comparing to the Moodle-based version. For example, it takes 19 hours for the production team to produce a 3-hour video with the Moodle-based version, but 13 hours with the cloud-based version. The cloud-based solution is more efficient than Moodle version and save the 30% working hours in the phase of transcoding & upload.

Table 1. Workflow between initial Moodle-based and the updated cloud-based NTHU OCW

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Course capture</td>
<td>Course capture</td>
</tr>
<tr>
<td>4 hours * 2 cameramen</td>
<td>4 hours * 2 cameramen</td>
</tr>
<tr>
<td>Video editing</td>
<td>Video editing</td>
</tr>
<tr>
<td>4 hours</td>
<td>4 hours</td>
</tr>
<tr>
<td>Video transcoding and upload</td>
<td>Video transcoding and upload</td>
</tr>
<tr>
<td>6 hours</td>
<td>0.5 hour</td>
</tr>
<tr>
<td>Web editing</td>
<td>Web editing</td>
</tr>
<tr>
<td>1 hours</td>
<td>0.5 hours</td>
</tr>
</tbody>
</table>

The working hours in the production progress (producing a 3hours lecture video)

Mobile device Info of the visitors

To understand whether our approach can match with the needs of users with various devices, this study using Google Analytics (GA) to collect the network profiles of users who visited NTHU OCW in 2012. Table 2 show the top 15 device information of the visitors of NTHU OCW. The learners visit NTHU OCW to learn the OER via considerable various devices. The result indicates that the cloud-based NTHU OCW provides various video formats could be matched with the end users’ needs with various devices. Moreover, the data collected from GA also show that there amount of mobile device learners have grown steadily in 2012 (Table3).
Table 2 Mobile device Info of the visitors

<table>
<thead>
<tr>
<th>Top 20 Mobile Device Info</th>
<th>Visits</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Apple iPad</td>
<td>5,154</td>
<td>39.32%</td>
</tr>
<tr>
<td>2. Apple iPhone</td>
<td>2,486</td>
<td>18.97%</td>
</tr>
<tr>
<td>3. SonyEricsson LT15i Xperia Arc</td>
<td>602</td>
<td>4.59%</td>
</tr>
<tr>
<td>4. Samsung GT-I9100 Galaxy S II</td>
<td>449</td>
<td>3.43%</td>
</tr>
<tr>
<td>5. Apple iPod Touch</td>
<td>241</td>
<td>1.84%</td>
</tr>
<tr>
<td>6. SonyEricsson LT26i Xperia Arc HD</td>
<td>197</td>
<td>1.50%</td>
</tr>
<tr>
<td>7. Samsung GT-N7000 Galaxy Note</td>
<td>176</td>
<td>1.34%</td>
</tr>
<tr>
<td>8. HTC Desire HD</td>
<td>154</td>
<td>1.17%</td>
</tr>
<tr>
<td>9. Samsung GT-I9300 Galaxy SIII</td>
<td>107</td>
<td>0.82%</td>
</tr>
<tr>
<td>10. HTC S710E Incredible S</td>
<td>83</td>
<td>0.63%</td>
</tr>
<tr>
<td>11. HTC Wildfire S</td>
<td>78</td>
<td>0.60%</td>
</tr>
<tr>
<td>12. HTC SensationXE Beats Z715e Sensation</td>
<td>77</td>
<td>0.59%</td>
</tr>
<tr>
<td>13. HTC Desire</td>
<td>66</td>
<td>0.50%</td>
</tr>
<tr>
<td>14. HTC 001HT Desire HD SoftBank</td>
<td>64</td>
<td>0.49%</td>
</tr>
<tr>
<td>15. Asus Eee Pad TF201 Transformer Prime</td>
<td>61</td>
<td>0.47%</td>
</tr>
</tbody>
</table>

Table 3. Mobile device visitor of NTHU OCW in 2012

Conclusion

In the ubiquitous learning environment, this study aims to make the educational audiences feel free to choose or switch their devices to learn depend on their personal needs in the different environments. We expect the NTHU OCW was perceived to be a usable, useful and desirable tool to support video learning and also for gaining new contextual and cultural knowledge. The result indicates that (1) The cloud-computing platform can provide a flexible and efficient publishing workflow for open educational video resources; (2) The cloud video transcoding service can meet the technical standards required to ensure that multiple file formats OERs are interoperable across a number of platforms and devices.
Acknowledgements

This work has been supported by National Science Council under the Grant NSC 101-2511-S-007 -002 -MY3. We owe our sincere acknowledgement to all the NTHU OCW production team and Center for Teaching and Learning Development in National Tsing Hua University for their contributions.

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National Pingtung University of Science and Technology
Open Course Ware Proposal

Mei-Jen Lin

Abstract

Short description
In December 2012 National Pingtung University of Science and Technology (NPUST) has become a member of the Taiwan Open Course Ware Consortium which is coordinated by National Chiao Tung University. The Center of Teaching Excellence of Academic Affairs in NPUST takes responsibility for participating related activities of the OCWC. Through Taiwan OCWC experiences sharing, we devote our faculty and resources overwhelmingly to promote Open Course Ware in order to build an Open Course Ware system in NPUST. We have incorporated Open Course Ware into our Teaching Excellence Program and Developing Technological University Paradigms Program and currently, we have 10 video recording open education courses. Moreover, since Open Courses Ware intellectual property rights could become a major issue, we will also focus our research on this area in the future.

Abstract
Since National Pingtung University of Science and Technology joined the Taiwan Open Course Ware Consortium, static presentation and dynamic video have become two of our common instructional methods in this area. According to the consortium’s analysis, video courses are highly accepted and have gained more popularity recently, so our open education course will mainly focus on specific course recordings. NPUST has built 10 digital media classrooms in ten departments. Each media classroom sets a software platform within the Moodle system, which automatically provides teachers with a record function. This facilitates synchronized recording without spending too much time on setting other devices in order to directly upload recorded courses to the Moodle system. These video courses provide an internet-based teaching and learning platform, which gives students a chance to review content after classes and also allows absent students the opportunity to experience any lessons that they may have missed.

Open education teachers often offer a large number of references for students and this can easily cause patent or intellectual property right infringements. For this reason, our school employs legal counsel which specifically focuses on violations of intellectual property in order to establish open education courses without causing any intellectual property right issues.

One major area of research and education that our school engages in is development of tropical agriculture technology. Recently global agriculture development has been trending toward refinement, professionalization and business continuity. Therefore related agriculture courses such as Forest Management, Dairy Processing, and Biodiversity, will become another new direction of the Taiwan Open Course Ware Consortium in the future.

National Pingtung University of Science and Technology has integrated open course education into our Teaching Excellence Program and Developing Technological University Paradigms Program, and will continue to develop open course education, which assists and empowers eager learners through its course content and design.

Keywords
National Pingtung University of Science and Technology, NPUST, OpenCourseWare, Tropical Agriculture
Current Status

Since NPUST joined the Taiwan OCWC at the end of 2011, we have learned that static PowerPoint presentations and dynamic audio files are the two recording formats most commonly used for open courseware course materials. However, according to the consortium's analysis, video courses seem to be much more acceptable for general audiences. Hence, the open courses in NPUST will be mainly offered in video formats. We have built ten digital media classrooms in ten departments and have embedded a software platform in our existing Moodle system so that teachers will be able to give lectures and simultaneously record their courses directly through Moodle (Fig. 1). Moreover, teachers can easily upload video recordings of lectures and class sessions, and students will have opportunities to review all lecture materials online (Fig. 2). Furthermore, all the course materials will be offered on an online open course site and will be easily accessible to anyone at any time.

In terms of in-class references for open education, it is very important that teachers ensure all the materials they use will not infringe or violate any intellectual property rights. Accordingly, legal advisers have been employed by our school to research any such related issues and prevent teachers from encountering any legal implications or consequences.

Recently, agricultural development in Taiwan has been moving toward refinement, professionalization, and sustainable management. Since the major research and development at NPUST is technology involved with tropical agriculture, the open courses we intend to offer will be mainly in the field of agriculture including such courses as Practice of Forest Management, Processing of Dairy Products, and Oceanography (Table 1). The featured courses will not only differentiate NPUST from other universities in the Taiwan OCWC but also make the Taiwan OCWC stand out from other members globally.

Future Vision

Previously, traditional teaching methods have been generally used at NPUST, so there were less digital teaching materials and video courses available, and in order to avoid violating intellectual property rights, the course recordings were not provided when we first joined the Taiwan OCWC. However, we now plan to offer a variety of courses at a brand new open course site based on the existing departments and future development of NPUST. Currently, we have incorporated the OCW program into our Teaching Excellence Program and Developing Technological University Paradigms Program, and ten digital media classrooms have been established with an embedded software platform for versatile camera systems. With more resources for promoting and building open courseware, there will be more digital media classrooms and recording systems in each department and specific featured courses, such as tropical agricultural science and technology will be recorded in a project-based way.

We hope we can continue to help people from various backgrounds in various fields through making interesting and useful course materials in the future.

Fig. 1. Digital media classrooms with embedded software platform in NPUST’s Moodle system.
Fig. 2. Title animation of NUST’s OpenCourseWare recorded video files.

<table>
<thead>
<tr>
<th>Number</th>
<th>Department</th>
<th>Instructor</th>
<th>Course Title</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dept. of Forestry</td>
<td>Chen Jan-Chang / Lo Kai-An</td>
<td>Forest Management / Practice of Forest Management</td>
<td>Video</td>
</tr>
<tr>
<td>2</td>
<td>Dept. of Animal Science</td>
<td>Lin Mei-Jen</td>
<td>Processing of Dairy Products</td>
<td>Video</td>
</tr>
<tr>
<td>3</td>
<td>Dept. of Aquaculture</td>
<td>Wong Lien</td>
<td>Oceanography</td>
<td>Digital Textbooks</td>
</tr>
<tr>
<td>4</td>
<td>Dept. of Aquaculture</td>
<td>Wong Lien</td>
<td>Ecology</td>
<td>Video</td>
</tr>
<tr>
<td>5</td>
<td>Dept. of Vehicle Engineering</td>
<td>Chen Jung</td>
<td>Calculus (1)</td>
<td>Video</td>
</tr>
<tr>
<td>6</td>
<td>Dept. of Veterinary Medicine</td>
<td>Wu Hung-Yi</td>
<td>Techniques of Molecular Diagnosis</td>
<td>Video</td>
</tr>
<tr>
<td>7</td>
<td>Dept. of Mechanical Engineering</td>
<td>Chou Shii</td>
<td>Introduction to Nano Engineering</td>
<td>Video</td>
</tr>
<tr>
<td>8</td>
<td>College of Agriculture</td>
<td></td>
<td>Introduction of Biodiversity</td>
<td>Video</td>
</tr>
<tr>
<td>9</td>
<td>Dept. of Vehicle Engineering</td>
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<tr>
<td>10</td>
<td>Dept. of Civil Engineering</td>
<td>Yang Chou-Ping</td>
<td>General Physics (2)</td>
<td>Video</td>
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</table>
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INTEGRATING UT’S OPEN EDUCATIONAL RESOURCES (OER) TO FACE TO FACE TUTORIAL. A Case Study in “Integrated Learning” Subject for PAUD Students of UT

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Abstract

Universitas Terbuka (UT) or Indonesian Open University has declared its mission to make higher education open to all. To achieve this goal, UT provides open educational resources (OER) through online that accessible for anyone. Although still incomplete, UT’s open educational resources can already be used for learning a particular topic. Some of the resources are in video streaming formats and they can be found on ITV-UT menu in the website of UT Online which lasted 2-5 minutes each episode. The menu provides a variety of video streaming based on specific topics of learning that have been determined and are divided into several categories. These videos can be freely accessed and downloaded by anyone, not just students of UT. Beside can accessing the video, students can also provide comments related to the display of video streaming whether these facilities are useful and effective to make improvement of teachers’ competencies or not? This advantage of the OER can be used as a supporting learning material to face to face tutorial activities. By integrating the OER with face to face tutorials, we can provide more complete learning experiences to the students. The goal of this paper is to describe a learning strategy that integrate conventional face to face tutorial with communication technology based learning. This study is based on our experiences as well as our research in teaching “Integrated Learning” subject for PAUD (early childhood education) students at semester 5th. The subject requires the students to be able to practice integrated curriculum in their classroom besides successful in final exam. The main learning material for that subject only describes some related theories and examples of curriculum planning. Therefore, the students still need examples in a real situation about how to create an integrated curriculum and how to make it happened in their classroom. We, as their tutor, used the video programs for OER to give them a real situation where the teachers set up an integrated curriculum and used them as guidance in teaching. However, we integrated the video programs with the tutorial syllabi rather than used it as supplement materials only. We also set up pre and posttest evaluation to measure their understanding about the video programs. After that, they were asked to fill a questionnaire about their opinions about the meaningful of video programs as integrated materials to their regular lectures and the quality of the video program itself. They answer positively to the questions in the questionnaire. The students’ responses of questionnaire prove that in one hand UT’s students are able to avail the facility of learning support services provided by UT. On the other hand, they can improve their qualification and competencies as early childhood education teacher.

Keywords: UT’s OpenCourseWare, ITV-UT, integrated learning

Introduction

Indonesian Open University has open and distance learning system. It means anyone, no matter how old he/she is, can register him/herself as a student and has the same opportunity to complete his/her study. To assist its’ students in completing their study, UT has been providing some learning support through some kinds of learning ways including conventional learning as well as communication technology based learning. As long as we concerned, both ways never been used in the same time. Initially, UT provides face to face learning assistance. That is what we call face to face tutorial. Managed by branch of Ministry of Education office in local area, tutorial was conducted eight times during tutorial period of time, that is about
two months. In this period, students have to come to one place where the tutorial is going on, once a week. Some subjects that are assumed as difficult subjects to learn, have a tutor who has responsibility to help the students learn the subjects and pass the final exam. This model of learning has nothing to do with communication technology based learning because almost all face to face tutorials are conducted in conventional way in which a tutor stands up in front of a class and leads their students to learn leaning materials.

Differently, UT launched online tutorial and it is based on communication technology with internet as the main pot for doing communication among people who are involved in this distance learning. Tutorial online helps students communicate with their teachers as well as their friends who are learning the same subject. They can discuss whatever they need to discuss through internet that has been set up for limited participants. To be able to access the online class, a student has to have a password given by UT when he/she register his/herself as a tutorial online participant.

The two kinds of learning models give significant contribution to the successful of study in UT because the students not only have opportunity to comprehend what they are studying but also they have 30 to 50 percent scores by following the tutorial.

In order to enlarge its service to Indonesian society especially they who are teaching everywhere in Indonesia or event around the world, UT provides open educational resources (OER) that can be accessed by whoever needs the resources for enhancing his/her ability in teaching. Basically, this OER is free for everyone. We just have to open UT’s web site and then click ITV-UT menu, after that we can enjoy the show. The length of the show is only 2 to 5 minutes and it is called video streaming. Even though these OER only have limited video streaming, but this is a big step for UT in giving contribution to education in Indonesia.

Considering the advantages of video streaming in UT’s OER, we have an idea to use this program for supplementing our face to face tutorial. The video streaming can be a useful resource that can be assessed by our students where ever and whenever they have time to access the program. What we have to do as a tutor is just give them information which program they have to watch and how to have access to the program. Then we give them motivation by telling them that they will have a test about the program they have seen. However, the program must have a relevance connection with the learning material they are studying in face to face tutorial so this task will be considered as a part of tutorial activities.

References

By the spirit of sharing knowledge and make the world knowledgeable, open educational resources (OER) are born. The now born of this knowledge appearance in online technology has given great opportunity to learners and teachers to have free access to knowledge they need. Teachers who have broader view of a particular knowledge, can act as a facilitator that lead learner to find what they need to know by browsing OER. Therefore, teachers are not the only resources to learn something. Even both learners and teachers can discuss something that they never found before with different perspectives. This condition will not exist in conventional education. For teachers, the rich available knowledge helps them to provide their students with rich and creative, or event real learning experiences. They don’t need to spend time, energy, and money to create the knowledge, just browsing internet and find suitable knowledge to share with learners. So, what is the concept of OER?

The concept of OER was posed in the Forum on the Impact of OpenCourseWare for Higher Education in Developing Countries conducted by UNESCO in the summer of 2002. According to Johnstone (2005) OER included:

- Learning resources – courseware, content, modules, learning objects, learner support and assessment tools, online learning communities
- Resources to support teachers – tools for teachers and support materials to enable them to create, adapt, and use OER, as well as training materials for teachers and other teaching tools
- Resources to ensure the quality of education and educational practices.
The impact of OER initiatives is potentially huge for learners, educators, and educational institution. According to the UNESCO definition (http://unesdoc.unesco.org/images/0012/001285/12851e.pdf), open educational resources are:

“The open provision of educational resources, enable by information and communication technologies, for consultation, use and adaptation by a community of users for non-commercial purpose.”

Based on OER theories defined, we can conclude that OER are digital educational resources that freely accessible for education communities for non-commercial purpose. The word “free” here means free of cost and free to use the materials. Users have freedom to reuse, adapt, modify, and distribute the contents and apply knowledge acquired from it (https://learn.canvas.net/courses/4/wiki/open-educational-resources-definitions).

OER have the high quality and openly licensed as permission to use for anyone who wants to use, share, and use knowledge (http://www.hewlett.org/programs/education-program/open-educational-resources). Thus, the user can access, adapt, and disseminate OER for free (http://www.unesco.org/new/en/communication-and-information/access-to-knowledge/open-educational-resources/). Although open to the public, OER still protecting copyrighted material by the author. Some allow users to copy the source material, but there are also sources that only permit the user to adapt the material provided. One of the best known copyright protections is the Creative Commons licensing framework, which facilitates the use permit legally.

**The Learning Strategy**

When the first time we decided to use OER there were some questions raised. First of all, is there any video streaming that available and fit to the topic being learned in the face to face tutorial? Will the program useful to improve the students’ understanding about the topic? Will they watch the video if they are asked to do so? What strategy is needed to make them want to watch the video? What is the best way to watch the video for the students? How to evaluate their understanding about the content of the video? To answer the questions, we started by browsing UT’s OER (http://itv.ut.ac.id) and tried to find the suitable video streaming (figure 1). At that time we have been teaching “integrated learning in early childhood education” to PAUD (early childhood education) students. Luckily, we found some videos about “project method for early childhood education”. The project method is one of the implementation of integrated learning curriculum especially webbed model (figure 2). After watching the videos we were sure that the video will be useful for the students to improve their understanding about webbed model. To make them willing to watch the videos, we asked them to watch the videos outside the tutorial classroom. It is to say that they were free to choose place and time to watch the videos but no more than two weeks. Before doing the task, we informed that they will have a test about the implementation of webbed model in real life after watching the videos. This strategy made them seriously did the task because usually they don’t want to fail in a test. To make sure that their understanding has improved because of the videos, we gave them pretest in tutorial class before they did the task. During the two weeks we encouraged them to discuss webbed model in tutorial class to make them understand the theory about it so that they will have a complete understanding about webbed model. After the two weeks, we gave them a posttest as we promised before. This strategy has successfully made them learned from UT’s OER.
Methods

To know the impact of this learning strategy to the students' learning, we treated this learning as a research. The method we used was “one group pretest - posttest quasi experiment” in which we gave a pretest to a group of students and a posttest after they had a treatment. The subjects of this research are 15 students who are studying “integrated learning”. Then we count the difference scores between pretest and posttest of each student. The result of the test shows that their posttest scores are significantly
different with their pretest scores. In other words, they have a positive improvement in their learning (figure 3).

Figure 3. The comparison of pre and posttest result

To figure out the meaningful of the videos in the view of the students for their learning, we asked them to fulfill a questionnaire. Actually, there are two parts of the questionnaire. The first part is about the meaningful of the videos for their learning and the second part is about the quality of the videos as an OER. The result is shown on table1:

Table1. Student’s responses after seen video streaming on ITV-UT

<table>
<thead>
<tr>
<th>No.</th>
<th>Statement</th>
<th>Very agree</th>
<th>Agree</th>
<th>Have Idea</th>
<th>no Disagree</th>
<th>Disagree</th>
<th>Very Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Students like to watch the OER</td>
<td>53 %</td>
<td>47 %</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Relevancy of the OER with the material being learned</td>
<td>53 %</td>
<td>47 %</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>OER helps students in understanding learning materials</td>
<td>47 %</td>
<td>47 %</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>OER gives students a broader view</td>
<td>40 %</td>
<td>60 %</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>OER gives students a new motivation to learn</td>
<td>53 %</td>
<td>47 %</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Picture quality of OER</td>
<td>20 %</td>
<td>60 %</td>
<td>7 %</td>
<td>13 %</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Sound quality of OER</td>
<td>20 %</td>
<td>47 %</td>
<td>7 %</td>
<td>27 %</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Plot quality of the OER</td>
<td>20 %</td>
<td>73 %</td>
<td>7 %</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>OER is easy to understand</td>
<td>40 %</td>
<td>53 %</td>
<td>7 %</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>OER is interesting and not boring</td>
<td>27 %</td>
<td>60 %</td>
<td>7 %</td>
<td>7 %</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The results of the research show that the students have positive responses to the UT’s OER. They felt that OER is useful for helping them understanding the topic being learned. The quality of OER is also good according to the students. Generally, the result of this research shows that the OER is meaningful for the students’ learning and its integration into the tutorial class was successful.

Conclusion and Suggestion

Based on the research conducted, we can conclude that students made improvement in their understanding of “Integrated Learning” materials supporting by OER that is video streaming. This is resulted in the students’ posttest score are higher significantly than their pretest score after watched the video streaming program. Although students did improved their understanding of the materials, but they still lack of information about many learning support provided by Indonesian Open University. Thus we suggest Indonesian Open University can provides OER more variously that can support its’ students to study and give more information to the students.

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An Ontology-based Framework to generate Serious Games for Self-Assessment

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Abstract

With the advent of OpenCourseWare (OCW), more Open Education Resources (OERs) have been recognised and acknowledged by global learners, which accelerates the development of the OER repositories. In order to enhance the reusability and interoperability, these OERs are annotated in different metadata models. However, without the general annotation and access mechanism, it is still difficult to discover and use these treasures. In this paper, the Knowledge Point (KP) with Linked Data is proposed to semantically annotate and interlink OERs. The ontology-based framework collaborates with KP to enable the automated generation and customisation of self-assessment in OER courses. It can be divided into four sub-ontologies, Open Courses Ontology for annotating OER, Knowledge Points Ontology for restricting KP, Assessment Pattern Ontology for presenting OERs and User Trace Ontology for history record. Using the KP and framework, the OERs can be reused conveniently to serve the dynamic assessment for learners.

Keywords: Open Educational Resources, Linked Data, eLearning, ontology, assessment, Knowledge point

1. Introduction

In the last decade, an increasing number of universities and organisations have been participating in carrying forward the development of Open Education Resources (OER) since MIT launched the OpenCourseWare (OCW) initiative in 2001. As more OER courses have been recognised and acknowledged by global learners, different OER repositories have emerged in terms of type and scope, from university-based MIT OCW to the regional China Open Resources for Education (CORE) and the international MERLOT (Multimedia Education Resource for Learning and Online Teaching), which has led to the isolated, monotonous and unexciting learning process and eventually results in the poor catch-up for the whole curriculum. What's worse, once OERs are published, there are usually no maintenance or continuous support to them.

Recently, massive open online courses (MOOCs) such as Khan Academy, Coursera and Udacity are trying to provide the consecutive and interactive learning environment. However, the learning videos and assessment are predefined manually, which lacks of universal and open solutions to reuse the existing OERs and generate the dynamic assessment.

In this paper, an ontology-based framework is proposed to automatically reuse the existing OERs and generate the learning assessment. This framework fills the gap between the OERs and the educational assessment application, which is based on the notation of Knowledge Point. Section two introduced the semantic web technologies and related works in the area of education. Section three discussed the research question. And the knowledge point notation is defined and used to annotate the OERs (Section 4). Then in section 5, the whole ontology framework is proposed and discussed.

2. Related work
a. Semantic Web Technologies

The Semantic Web is a web of data (Bizer, Heath, & Berners-Lee, 2009), which is not a separate Web but an extension of the current one, in which information is given well-defined meaning, better enabling computers and people to work in cooperation (Berners-Lee, Hendler, & Lassila, 2001). In the web of data, any kinds of resources/data are represented by URIs and in triples-based structure, namely RDF (Resource Description Framework) triples (resource–property–value or subject–predicate–object).

On semantic web, vocabularies define the mechanisms of describing the resources and relationships between resources. Even though there is no size limitation for vocabularies, it is normally use the term ontology for more complex and explicit specification of a representational vocabulary for a domain (W3C).

In some extent, Linked Data and semantic web are interchangeable (Yu, 2011). And the inventor of the Web, Tim Berners-Lee, has proposed four rules for the Linked Data (Berners-Lee, 2006):

Rule 1: Use URIs to identify things.
Rule 2: Use HTTP URIs which can be understood by both machine and human beings.
Rule 3: With a URI, more related information in same vocabulary/ontology can be found.
Rule 4: One vocabulary/ontology should be interlinked with other vocabularies/ontologies on the web.

In the Linked Open Data project (LOD), contributors can share and publish their vocabularies at Data Hub, where all vocabularies are defined by RDF and follow the Linked Data rules. In addition, it is catching up with the goal of the open data initiatives, linked RDF data (Berners-Lee, 2006).

b. Semantic web for education

By now, many researches are using the semantic web technologies to facilitate and enhance the reusability and interoperability in learning/education. Marieke et al. proposed an ontology-based training game that uses the adaptive education architecture and didactics, meanwhile the behind resource (e.g. knowledge) is represented and managed by the ontology (Peeters, van den Bosch, Meyer, & Neerincx, 2012). Ricardo et al. specially designed an OER ontology based on the specification of DocBook and LOM metadata to boost the reuse, interoperation and repurpose of OER. But both of them created their own ontologies for reusing and managing the knowledge, which is hard to be reused and interoperated by others.

With the popularity of DBpedia project, extracting structured data from Wikipedia and publishing as Linked Data, educational applications are created. Waitelonis et al. proposed a Facebook-based serious game, Who Knows, which utilises the DBpedia to automatically generate quizzes in an semantic way (Waitelonis, Ludwig, Knuth, & Sack, 2011). It not only has funs through the gamification, but also presents a proper method to evaluate and clean up the vocabularies of DBpedia. Muriel Foulonneau presented the streamline to semi-automatically generate data from DBpedia to serve the game-based formative assessment using the IMS-QTI (IMS Question & Test Interoperability Specification) standard (Foulonneau, 2012). Compared with both previous DBpedia-based games approaches, another group researcher experimented an educational game with Greek DBpedia to improve the language problem (Bratsas et al., 2012).
The Linked Data also are used in the secondary media in the area of technology-enhanced learning. Based on the existing multimedia annotation application, Synote, the fragments of online videos from YouTube can be annotated by the Media Fragments URI and published as Linked Data (Yunjia Li, Wald, Omitola, Shadbolt, & Wills, 2012). In addition, the named entities in sync subtitle of videos can be extracted by NERD (Named Entity Recognition And Disambiguation) and linked with the DBpedia(Y. Li, Rizzo, Troncy, Wald, & Wills, 2012).

3. Research Questions

Even though many researchers have heated debates on the definition of OERs (Commons, 2012), they have the consensus that OERs can be freely accessed, reused, repurposed and interoperated by global users, including educators, students and researchers, etc. The existing OERs stored in distributed repositories are not conveniently and easily retrieved, reused and repurposed. In order to facilitate the discovery and reuse, these OERs are annotated by different metadata mechanism, such as IEEE LOM and ADL SCORM, and accessed via individual web APIs/services (Dietze et al., 2013). These mechanisms are normally based on the text description and needs specific approach to access and retrieve the data.

In order to provide an approach to reuse, repurpose this OERs to serve the assessment to improve the interactivities during the learning process, we will research on two questions:

- semantically annotate the OERs;
- reuse, repurpose and interoperate the OERs to generate the assessment.

And the good game-based assessment application that can automatically extract data from OERs and generate customised educational games. A group of students has learned about the HTML. By using this web-scale application, the Q & A or multiple choices assessment of HTML definition and functions can be generated to test their learning outcome. In addition, it can record and track the learning process and prompt students to review HTML and educational games can be flexibly generated and change the difficulties according to their learning history and preference.

4. Knowledge Points

For the purpose of annotating the OERs, the Knowledge Points are proposed to describe and interlink the OERs. According to (Aderson, 1982; Hao, Meng, & Cui, 2008; Pierre, 1999), the knowledge can be classified into two categories, declarative knowledge and procedural knowledge. The declarative knowledge, which is based on fact, has much in common with explicit knowledge and the information of which can be declared verbally, such as concept, theorem, while the procedural knowledge is more implicit and concerns on skills that how to carry out cognitive activities, such as the problem solving, program designing, etc. The KP has already defined by (Hao et al., 2008):

“A knowledge point refers to an independent, completely expressed, and independently usable declarative or procedural knowledge entity such a fact, a term, a concept, a theorem, or an algorithm etc.”
Using the aforementioned example, the HTML can be identified as a term of KP since it has meaning, functions and other information. For an individual KP, related information are required to explain and understand the KP more clearly and accurately. From the semantic web point of view, the HTML is an instance and can be unambiguously identified by URIs, http://dbpedia.org/resource/Hypertext_markup_language (in DBpedia) and http://wordnet.rkbexplorer.com/id/synset-hypertext_markup_language-noun-1 (in WordNet), both of which describe the same entity. The MIME and label of HTML can be accessed and retrieved via the properties of dbpprop:mime and rdfs:label.

Thus, the KP can be defined as a set of entities from the LOD and their relationship. These entities belong to the certain class that describes the category of terms, concepts, theorems or algorithms, etc. In Figure 1, the distributed and heterogeneous OER Repositories store multifarious of OERs data, such as videos, documents, etc. Having been processed by the Knowledge Point Annotation, the single material wrapped in a block or collection can be virtually “cut into multiple fragments”. And a single fragment can be annotated by more than one KP which are acquired or extracted from manifold datasets of LOD Cloud. Based on the KP Annotation mechanism, the RDF of KPs with Linked Data can be published and used in conjunction with higher-level educational applications.

Characteristics of KP include:

- Fully compliant with the best practice: KP is a set of instances from LOD Cloud and complies with the Linked Data principles, such as http://dbpedia.org/resource/Hypertext_markup_language defined in DBpedia.
- Independent and atomic: KP can be operated independently and will not be affected by other KP.
- Specific & accurate meaning: KP has more specific and accurate meaning, which are normally the category of terms, concepts, theorems, algorithms, or relationship, etc. Compared with HTML (http://dbpedia.org/resource/Hypertext_markup_language), language (http://dbpedia.org/resource/Language) is too general and does not belong to any aforementioned category.
- On-demand Fragmentation: An individual OER material can be fragmented on the basis of KP and an OER fragment can be attributed by manifold KPs.
- KP and OER fragments intersupplement: KP annotates the OER fragment while the OER fragment explains the KP. The triple of KP-property-OER consists a fact.
5. Ontology-based Assessment framework for Open Courses

This section presents the ontology-based assessment framework that works with KP to generate the dynamic educational assessment. In Figure 2, it is built on the distributed OERs repositories. This model is divided into two layers: the ontology layer and the Human-computer interface layer. The ontology layer is the core and most complex part and can be further divided into four sections: open courses ontology, knowledge point ontology, serious game pattern ontology and user trace ontology, which are extracted and refined from the existing LOD Cloud Dataset or registered dataset at DataHub.

![Ontology-based Structure for Assessment System](image)

This ontology model collaborates with KP to serve the upper interface. The open courses ontology is the base of this model that semantically annotates the learning materials using the KP. Knowledge point ontology explicitly describes KP category and abundant relationship between KPs. Assessment pattern ontology structures the input & output of the data type and provides a dynamic and gamified environment. User track ontology will record the learning processes of different courses and help users to customise their learning processes within interactive game environment.

a. Ontology for Open Courses

The open courses ontology (OCO) is the foundation of the whole model and the bridge connecting the online open courses with this assessment framework. There are three requirements for this ontology.

First, OCO should construct the subject category and course structures, which can facilitate the courses management. Users can browse courses from different subject areas, such as computer science, arts, etc. Each course is structured clearly that includes how many units and chapters.

Second, OCO will facilitate the KP to annotate the OERs. To a certain degree, the KP can be considered as the learning goals of the annotated OERs. Implicitly, OERs are indirectly interlinked with other OERs via the KP.

Third, OCO will help the KP to annotate different formats of OERs over distributed systems or platforms. For example, the lecture notes from OpenCourseWare are packaged in the format of
OPML, which is a machine-readable and open XML-based format. Therefore, the KP can be easily inserted to annotate the OERs.

b. Ontology for Knowledge Point

The knowledge point ontology (KPO) is an essential section of this framework. It restricts the generation of KP and identifies the properties of the KP.

First, KPO collaborates with other knowledge bases (e.g., Wikipedia via DBpedia) to help KP to be unambiguously generated and identified using URI. And then the OER resources can be interlinked with each other via the annotation of KP.

Second, KPO assists the KP in identifying its properties to avoid some problems, e.g., homonyms and synonyms. It is possible that the same glossary has distinct meanings in different areas. However, the same KP defined in KPO can be linked and reused by multiple open courses, only if the KP expresses exactly the same meaning. Thus, the KPO collaborates with the OCO to clearly describe the KP domain area or other properties.

In addition, the KPO declares their relationship that is roughly inclusion relationship and cognitive relationship. The inclusion presents the complexity of the KP that can be divided into simpler KPs or is part of a more complicated one. The cognitive relationship shows the sequence during learning, which refers to the learning theory of zone of proximal development (ZPD) (Vygotsky & Cole, 1978) and knowledge space theory (Doignon & Falmagne, 1985; Jean-Paul & Jean-Claude, 1998). The ZPD defines the different learning performance between the individual’s ability and under the instruction of an adult or peers. And the knowledge space theory is a mathematical-psychological framework that uses mathematical formalisms to operationalize knowledge structures in a knowledge domain. For example, a group of KPs is called a knowledge domain. The KPs already known by learners are defined as knowledge state. Among the KPs, there are dependencies which are called prerequisite relation. The associated KPs is the knowledge structure, in which there are more than 1 learning path from one KP to another. Applying this theory to open courses, different learners with individual knowledge state and the same learning goals (defined in OCO) can navigate their meaningful and reasonable learning sequence (Albert, Hockemeyer, Kickmeier-Rust, Nussbaumer, & Steiner, 2012).

c. AssessmentPatternOntology and User Track Ontology

Assessment pattern ontology (APO) and user track ontology (UTO) are both user-oriented and facilitate the communication between the OERs and learners. There are some existing ontologies that are similar to APO and UTO. So this project reuses and refines these ontologies to build this assessment framework.

For the APO, the game ontologies can be modified and reused to improve the interactivity of the assessment. However, the APO differs from the traditional game ontology such as Game Ontology Project (Zagal, Mateas, Fernández-Vara, Hochhalter, & Lichti, 2005), Nelson & Mateas game model (Nelson & Mateas, 2007) and Game Content Model (Tang & Hanneghan, 2011). However, they are too heavyweight and complicated to be used for this assessment system. APO should be defined in a higher and more abstract level for the educational game, which presents and packages the KPs in a game way.
UTO has two roles, describing the learners’ profile and their social elements and navigating & tracking learning processes. Using the ontology to annotate the social has been becoming a hot research topic. FOAF and SIOC are two W3C submissions and have been publicly accepted and reused by (Dovrolis et al., 2012; El-Hachem, Shaban-Nejad, Haarslev, DubŽ, & Buckeridge, 2012; Scerri, Cortis, Rivera, & Handschu, 2012; Valencia-García, García-Sánchez, Casado-Lumbrales, Castellanos-Nieves, & Fernández-Breis, 2012; Vidal, Lama, Sueiro, & Bugarin, 2012) in 2012. According to the history records of UTO, APO can automatically changes the assessment configuration.

In addition, with the aid of the social annotation, learners can share their learning processes (e.g. games, rewards, etc.) online to get reputation from peers, find suitable classmates and group the discussion or learning events (Sacco, Dabrowski, & Breslin, 2012).

d. Future work

In this paper, we discussed the Knowledge Point and the ontology-based framework, both of which utilise the semantic web technologies and collaborate to interlink, reuse and interoperate the OERs. This expected framework can reuse and repurpose the OERs to serve the learning assessment for self-learners to enhance the interactivity.

Upcoming efforts that follow this work are to extract the KP from the LOM and annotate the OERs, which requires a smart mechanism to automatically or semi-automatically annotate the OERs. And then the dataset for the framework should be structured to align and KP related data. Furthermore, an expected prototype will be implemented to evaluate this approach.

Reference


From learning to research, an international cooperation model on expending the impact of utilizing OpenCourseWare

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Abstract

In Taipei Medical University (TMU), we began to utilize OER content to facilitate the learning outcome for more than 4 years. The first course, the Basic Computer Concept, is an undergraduate-level general education course. It has adept OER content from a Harvard extension school course, the Computer Science-E1. During 4 years of practice, students tend to consider it is a course with challenges but worth to enroll. Every year, it remains its status of “Hot.”

By the end of 2011, another graduate-level course was designed and practiced in the spring semester of 2012 in TMU. The course, Health information systems to improve quality of care in resource-poor settings, is original taught in MIT. It is a project-based learning course. Students who enroll in this course should team up and implementing the main technology of this course, the SANA technology. Instructors from MIT are willing to expend technology and projects to Asia countries. Thus, the cooperation began. Instructors of TMU and MIT have decided to do a 2-years plan for integration. In the first year, courses are taught independently, but have similar study schedule. As for the results, during the semester of spring, 2012, there were 2 synchronized sessions, one is Farmer’s speech and the other is the MIT project presentation. Then, in the second year, students from MIT and TMU can team up and try to do “international” projects through this course.

In the spring semester of 2012, there were 16 students enrolled in the TMU course. They are from 4 different colleges and from 8 different countries. During the course, they had formed 4 teams and finished the team projects. Some projects are now become topics of either research projects or academic papers.

Keywords

OpenCourseWare, OER, course design, project-based learning.

Introduction

Taipei Medical University (TMU) is a healthcare professional education institute in Taiwan, while all students’ majors are related to health science. The concept of OpenCourseWare was introduced into TMU in 2006. The OCW.TMU was online in 2007, while the first course was online in 2008. Adoption of valuable OCW content was conducted with regular course design at the same time. The first course was the Basic Computer Concept (BCC), one of our computer literacy courses. It was taught by using OCW content since 2007. In 2012, TMU has announced the first graduate course, health information systems to improve quality of care in resource-poor settings, which is integrated with one of MIT OCW content. Not only using the content, we also cooperate with MIT instructors doing course projects. In this paper, we will demonstrate the course design and learning outcomes.
Course 1: Basic Computer Concept

During the past decade, one of the computer literacy courses, Basic Computer Concept (BCC), was taught by the author. Because information technologies and classroom technologies are improved every year, courseware should be updated as well. (Yue and Ding 2004; Yue and Chen 2004) The BCC course has been through several transitions in order to fulfill environmental changes and student outcome suggestions. For example, in 2003, it offered as online video-on-demand lectures due to the SARS. (Wan 2009) Beginning in 2002, Hewlett Foundation has founded various developments of open educational resources to improve quality of teaching and learning. MIT’s opencourseware was one of them.(Atkins D. 2007) “Computer Science E-1: Understanding Computers and the Internet,” (E1) provided by Dr. David J. Malan from Harvard Extension School, was released for self-learners in 2007, (Malan 2011) Since the fall semester of 2007, BCC has used E1 courseware as major teaching materials.

A BCC course usually has several blocks, including introductory to hardware, software, internet, and their applications. The course is consisting of 2 hours lecture each week for 16 weeks. In TMU, it's an elected course with only 60 available seats. However, there were more than 370 students pre-elected this course in 2009. Enrolled students had come from various colleges or schools in various school years.

For students in a medical university like TMU, it’s not very important to train them to be programmers or networking experts. The major objective of this introductory course is to let students learn how to use information technology (IT) tools to facilitate their daily work. For example, students should know why computers can let people work more effectively and efficiently. Also, students should know where to find answers or resources of their homework or research through internet or databases. Of course, they should know how to use IT tools to present their ideas.

The BCC course is delivered on TMU’s learning management system, My2TMU. Topic and instruction are renewed on a weekly basis. OCW content is the major part of course content. Additional learning content is made by Powercam®, ppt, or pdf. We use synchronized platform occasionally, which is done by using JoinNet® or Connect®. (Wan 2009, 2008) It is an e-learning course. Students need to come back at least once a week to find out what they have to do for that week. Students can give feedback through discussion forums or surveys.

Student surveys are major evaluation tools for the BCC course. Satisfactory survey for literacy courses has 15 satisfactory questionnaires plus 1 open question. Students are required to fill the survey at the 14th weeks of every semester. A survey regarding quality of e-learning will be collected at the end of semester. Both of the data were collected through My2TMU. A peer review was done by each student after they viewed each team project. Every team member could give a grade to other members in the same team. Students assessments came from their homework, team projects, discussion attendance, as well as the peer reviews.

From students’ feedback and surveys, some students did think it’s a very good opportunity to learn courseware from Harvard University. However, only a half of the class viewed 75% of the English-speaking courseware. More than a half of students think the English speaking courseware are too hard. Some students said video subtitles would help. Chinese supporting materials is necessary. Translation projects like Opensource Opencourseware Prototype System (OOPS) should be one of the best resources for students to understand those topics more. However, there are only one-third of E1 course has been translated.

About 80% of students liked e-learning course. Generally speaking, they think time-flexibility and activity-diversity are two major benefits from this course. Student surveys also showed that more than 75% of students were satisfied about this course and more than 85% of students want to recommend this course to others.

The original web site of E1 put all materials in one page. (Malan 2011) It might be easy for self-learners to select topics they are interested in. For a regular course, progress checking is relatively important. By using LMSs,
instructors can guide students by arranging topics and activities on a weekly basis. Instructor can check students’ status or progress as well.

**Course 2: Health Information Systems to Improve Quality of Care in Resource-poor Settings**

“Health information systems to improve quality of care in resource-poor settings” is original taught in MIT. This course is based on a mobile technology called SANA that developed by MIT. In 2011, Dr. Leo Celi from MIT visited TMU and mentioned they have produced a full video OpenCourseWare for this course. (Celi, Fraser, Szolovits, & Paik) Instructors from MIT are willing to expend technology and projects to Asia countries. Thus, the cooperation began. Instructors of TMU and MIT have decided to do a 2-years plan for course integration. In the first year, courses are taught independently, but have similar study schedule. In the second year, students of TMU will have same real-time course schedule with MIT and join project team together.

The graduate-level course with the same name was designed and opens for enrollment in the spring semester of 2012 in TMU. It is designed as a project-based learning course. Students who enroll in this course should team up and implementing by using the SANA technology. The first year is loosely coupled, so there were only 2 synchronized sessions during the semester of spring, 2012. One is Farmer’s speech and the other is the MIT project presentation. In the spring semester of 2012, there were 16 students enrolled in the TMU course. They are graduate school students from 4 different colleges and from 8 different countries. During the course, they had formed 4 teams and finished the team projects. After the pilot run of the first semester, we decided to split the course into 2 semesters, one semester is to learn theories from OCW video, and the other is to implement the project into real. It was delivered in fall, 2013. We have chosen 2 projects and submitted to MIT to be topics of projects in spring, 2013 as the cooperative model for the second year.

Then, in spring 2013, there are totally 13 graduate-level students enrolled, 11 from TMU and 2 from other universities of Taiwan. They come from 9 different countries. (As shown in Table 1) Students began its course prior to the TMU schedule, because MIT start course earlier than TMU. There are 2 projects lead by TMU’s instructors which has both MIT and TMU students participate. There are 6 extra students from MIT or Boston area join these 2 TMU projects. The deliverables of this course are project description (a word document), project video (online format), and final presentation and report (a ppt and a word document). Besides of that, teams of TMU should submit prototypes which are built upon SANA technology.

<table>
<thead>
<tr>
<th>Semester</th>
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<th>Projects</th>
<th>Prototypes</th>
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<td>MS</td>
<td>Outside TMU</td>
<td></td>
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<tr>
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<td>12</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>Fall, 2012</td>
<td>1</td>
<td>4</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Spring, 2013</td>
<td>3</td>
<td>8</td>
<td>2</td>
<td>9</td>
</tr>
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After the course, we’ve found that this course provide innovation ideas for students. Some projects have become topics of either their research projects or academic papers. And for some students, they use the technology as a tool in their own research.
Acknowledgements

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References


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Metadata management system for a “materials” repository

Tsuneo Yamada

Abstract

In addition to design individual course in some optimized fashions, one of the essential factors in improving the quality of the courseware and course packs is to find and utilize the quality “materials” (assets, modules or components) of those. At present, both open and proprietary content has been accumulated in various repositories in the world. However, most of them mainly provide their search and retrieval services for the learners as an end-user. When teachers and course providers try to find the materials of their developing courseware or course materials, they have often difficulties to reach the right “materials”.

The Open University of Japan (OUJ) is an open and distance university to promote governmental lifelong learning policies in Japan. OUJ has in-house TV/radio broadcasting studios, and produces and accumulates its own “materials” every year. However, most of them have not been reused because of the complicated management processes, such as reediting in adequate granular level and tagging the metadata. Now, with realizing “personalized” or “customized” learning processes, we have just recognized the necessities of sharing and reuse of smaller-granular content, that is, “materials”. While we have provided a cross-institutional search service for JOCW (Japan Open CourseWare consortium) community, called “JOCW Search”, from October 2006, the main function was a search system by keywords and the searchable information was limited only on the location, abstracts and copyright license. They are not sufficient for the search and retrieval of the “materials”.

In order to examine the requirements of the “materials” repository, we developed a pilot repository and its metadata management system. Using a couple of metadata items of “Technical” and “Educational” in LOM standards, information on the granularity and academic contexts were described with control vocabulary system. In addition, the data on the usage history and user evaluation are also indispensable for promoting the reuse and remix of the content and a data sharing framework based on metadata is also examined.

Keywords

Open education, Lifelong Learning, Metadata, Harvesting, Federated Repository

Backgrounds

OUJ and OER Community

OUJ launched “OUJ OpenCourseWare (OUJ-OCW)” project in 2010 and opened some of this digital content via video streaming in order to contribute through OER movements to the lifelong learning society. As of May 2013, 13 courses and 6 special programs were available as OUJ-OCW (All of the content is in Japanese; http://ocw.ouj.ac.jp/).

Another contribution of OUJ to the OER community is that it has provided a cross-institutional search system. In Japan, the National Institute of Multimedia Education (NIME, the forerunner of the Center of Open and Distance Education [CODE] at OUJ) started an educational information portal service with content and metadata repository functions primarily for higher education in 2003 (Yamada et al. 2003; Yamada et al. 2004). In March 2005, NIME launched a new gateway service on Japanese educational content, called “NIME-glad (Gateway to Learning for Ability Development; cf. Yoshii et al. 2008). Using the
same system, NIME also started “JOCW Search” in October 2006 for the Japan OpenCourseWare Consortium (JOCW). NIME collects the information of OCW, which JOCW member organizations developed, and adds metadata to each content, which is then accumulated in a metadata repository called a “referatory.” Thus, the cross-institutional search system on JOCW content was realized. After the merger of NIME into OUJ, these services were taken over by CODE at OUJ. As of May 2013, 2633 JOCW materials from 15 universities were registered in the referatory.

**International metadata brokerage framework**

As numerous OER have been accumulated in repositories worldwide, some global platforms and strategies for collecting information and content are indispensable in order to find and retrieve quality content efficiently from scattered and distributed sources. In September 2004, the core organization in each country and region, which managed the functions for federated repositories and meta-referatory, established the “Global Learning Objects Brokered Exchange (GLOBE)” consortium (http://globe-info.org/). As a founding member, NIME jointed the metadata sharing network and OUJ-CODE has maintained the functions using federated search and harvesting technologies (cf. Yamada & Morimoto, 2010).

**Emerging Issues**

One of the emerging issues in online learning is to realize the personalization, that is, some customization of learning process in each context. In addition to design individual course in some customized fashions, one of the essential factors in improving the quality of the courseware and course packs is to find and utilize the quality “materials” (assets, modules or components) of those. At present, both open and proprietary content has been accumulated in various repositories in the world. However, most of them mainly provide their search and retrieval services for the learners as an end-user. When teachers and course providers try to find the materials of their developing courseware or course materials, they have often difficulties to reach the right “materials” (cf. Yamada, 2013).

Another emerging issue is to realize the coexistence of scalability and quality in online course development. In MOOCs (Massive Open Online Courses), the dropout rates are still high. In order to improve the quality, some measures for the customization or personalization and some strategies for sharing learning analytics tools and “big data” on the learning processes are indispensable.

Now, in realizing “personalized” or “optimized” learning processes, we have just recognized the necessities of sharing and reuse of “materials”, such as smaller-granular video/audio content, tools and abstract data. In order to examine the requirements of the “materials” repository, we developed a pilot repository and its metadata management system. Using a couple of metadata items of “Technical” and “Educational” in LOM standards, information on the reusability and academic contexts were described with control vocabulary system. In addition, the data on the usage history and user evaluation are also indispensable for promoting the reuse and remix of the content and a data-sharing framework based on metadata should be examined.

**Systems**

**Metadata**

Each object in the OUJ repository was provided with metadata (Yamada & Morimoto, 2010). Most of the metadata elements are based on IEEE LOM (IEEE 1484.12.1 - 2002 Standard for Learning Object Metadata; IEEE, 2002). When we developed a pilot “materials” repository and its metadata management system, we revised our original metadata system by changing the description in a couple of metadata elements of “Technical” and “Educational” in LOM standards in order to describe the reusability and academic contexts of the “materials”. 
The Metadata Database

We prepared a new metadata database with a relational database management system for the research. We adopted “NetCommons” package for the platform and installed on a commercial “cloud” system. “Netcommons” is one of the most popular open-source packages of multi-purpose community-ware, which was developed by National Institute of Informatics (NII, cf. Arai, 2006). “Netcommons” integrates the functions of CMS (Contents Management System), LMS (Learning Management System) and groupware. In Japan, over three thousands of the educational institutions and corporates use as portal sites, e-learning systems, or repository systems. Each “NetCommons” system can have single or multiple database systems, called “WEKO”. We registered the metadata on a “WEKO” repository system and used as a metadata repository. In a “WEKO” system, each authorized user can register and manage each own data. By using the function, we can issue an ID to each content holder and ask him or her to register and manage his or her own metadata. In addition, we prepared OAI-PMH targets for the domestic (NII JAIRO Cloud, cf. Shiozaki et al., 2012) and international (GLOBE) harvesters in order to share the metadata among institutions (Figure 1).

Figure 1 The Metadata Database System

The Content: Open Materials

In order to evaluate the pilot system, we needed the sufficient number of the materials. As it is difficult to prepare for the set in multiple disciplines, we had to choose one of the academic fields and collected them.

We developed a set of learning components on International Volunteer Studies, in collaboration with the International Society of Volunteer Studies in Japan (ISVS, cf. Yamada, 2013). In order to increase their reusability, most of the components are simple videos or photos, which can be used in modules of online courseware, as well as for classroom teaching.
The academic area “International Volunteer Studies” focuses on the theoretical and practical research of volunteer activities in international contexts. The collaborators at the society supported the concept of OER, and so most of the content is open under a Creative Commons license.

Currently, about 1,350 movie clips have been developed with a typical duration of one to three minutes. Each clip is available in two MPEG-4 formats and two WMV formats. One of the MPEG-4 formats has sufficient quality for broadcasting. At the opening, the author information, title and copyright are shown in Japanese and/or English. In addition to the name of the copyright holder, the conditions for use are shown with the icons of the relevant Creative Commons license and more detailed information if necessary.

Progress of the study

Developing the metadata management system for the pilot “materials” repository, we revised our original metadata system by changing a couple of metadata elements of “Technical” and “Educational” in LOM standards.

Reusability

In order to describe the reusability more specifically, more minute description was added in “4.1 Technical – Format”. For example, while we had described as “video/mpeg” in the original system, we did it as “video/mpeg4” or “video/mpeg4 (720 × 480)” in the new system.

Academic contexts

Volunteers from the International Society of Volunteer Studies in Japan (ISVS) also provided materials, which had previously been collected in their own fields and used in their classrooms. As the academic topic was still developing rapidly and the scholars had not established a standardized curriculum, the volunteers also contributed to creating a taxonomy and classifying the keywords. While they have not had any “standardized” textbook, we tentatively chose a textbook and described one of the most relevant chapter title of the textbook in “5.10 Educational – Description” (Table 1).

Table 1. Description in “5.10 Educational – Description” based on the contents of a textbook (Yamada, in preparation)

| 1. On the International Volunteer Studies |
| 2. International Volunteer Activities in Public Health and Medical Cooperation |
| 3. International Volunteer Activities in Educational Cooperation |
| 4. International Volunteer Activities in the Marginalized Villages |
| 5. Fair Trade and International Volunteer Activities |
| 6. International Volunteer Activities for Protecting Children |
| 7. Emergency Support and International Volunteer Activities |
| 8. International Volunteer Activities for Foreigners in Japan |
| 9. International Volunteer as a Career: Life History and Competency |
10. NGO (Non-Governmental Organization) and International Volunteer Activities

11. CSR (Corporate Social Responsibility) and International Volunteer Activities

12. JOCV and Senior Volunteer Program

13. International Volunteer Activities in the World

14. International Volunteer Education in Schools

15. International Volunteer Activities in Great East Japan Earthquake: A Prospect

The Next Step: Issues remained

In the study, while each content holder can author and revise the description of the metadata elements, users cannot record their usages of the materials on the original metadata. However, if the user registers her/his practice as content, he/she can do it in relating with original materials. We need some apparatus to facilitate such metadata tagging. We should collect such “paradata” in different subjects and in various learner characteristics. We expect that the similar processes can be utilized in the quality assurance of massive online courses.

References


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Other Resources

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