

A model for use of WikiEducator for offering free vocational courses

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INTRODUCTION

According to several websites (Braintrack, 2008), (Univ, 2008) there are about 8,000 universities worldwide. There are many other institutions of higher learning, including training centers and community centers. In addition there are tens of thousands of institutions that support “informal” learning—libraries, museums, archives, etc. Sir John Daniels, currently President and CEO of the Commonwealth of Learning in Canada, and formerly Vice-chancellor of the Open University, UK has a startling set of observations (Atkins et al, 2007) about current education system.

- Half of the world’s population is under twenty years old.
- Today, there are over thirty million people who are fully qualified to enter a university, but there is no place available. This number will grow to over 100 million during the next decade.
- To meet the staggering global demand for advanced education, a major university needs to be created every week.
- In most of the world, higher education is mired in a crisis of access, cost, and flexibility. The dominant forms of higher education in developed nations—campus based, high cost, limited use of technology—seem ill-suited to address global education needs of the billions of young people who will require it in the decades ahead.

One of the potential solutions to above problems is the use of open educational resources (OER). The basic goal of OER initiative is to use information technology to help equalize access to knowledge and educational opportunities across the world. This initiative targets educators, students, and self-learners worldwide.

All OER initiatives provide OER informational content for free but require a fee for interaction with instructor. Open and free OER initiatives are equivalent to no access or interaction with faculty. OER provides the content of an education program at an institution. The most fundamental aspect of the learning process at an institution is the interaction between faculty and students and among students themselves. The three OER types described in the related work section of the paper are using community software to support voluntary interaction among users. So it can be said that OER are basic resources necessary for education but are not a credit granting teaching and learning experience. A paradoxical aspect of most OER initiatives to date is that while OER content is published and distributed to the Web, most of the OER content is from and for campus-based classroom use. Though web-based, most OER initiatives are not pedagogically designed for online learning. OER is locked into software hosted by the OER originator making it impossible to reuse by incorporating it into a course management system such as WebCT, Blackboard, or Moodle (Stacey, 2007).

In this paper an attempt has been made to include the interaction of learner with instructor using OER and in the course offering. In the following sections a model has been proposed and implemented using the freely available OERs and offering them through a learning management system (LMS) using Moodle in WikiEducator. There are four sections in this paper. The section one describes the related work in the area of OERs. Section two describes the model for offering a vocational course through WikiEducator. In section three the experiences and the lessons learnt are shared. Section four concludes the discussion.

1. RELATED WORK

The OERs have been in use for quite sometime now. There have been numerous initiatives around the world and they have evolved from static snapshots of course material used by course instructor in a particular manner to courses including the elements of instruction and online learning experience. The OER was pioneered by the Open Course Ware (OCW) initiative by Massachusetts Institute of Technology (MIT) in 2001 (OCW, 2008). Since then more than 1400 undergraduate and graduate courses of MIT have been published to OCW website where these courses become accessible to any user from any where. The faculty of MIT used this published course material for their own class room teaching. Each OCW course includes at least a planning document like syllabus for the course, lecture notes and one type of learning activity like home work, exercises. Most of the courses have PowerPoint slides adobe acrobat format. A few courses have video lectures. The courseware does not take care of the pedagogical aspect of the learning. The content is not redesigned nor reformatted to incorporate online learning experience. These courses can be accessed by anyone with out registration. Being the pioneer effort, the OCW initiative has been very popular and it is now available in Spanish, Portuguese and Chinese.

Another very important OER initiative is Connexions by the Rice University (Connexions, 2008). It contains a variety of learning material suitable for all ages from children, college students to life long learners. Connexions follows a different model than OCW and supports collaborative developing, sharing and publishing of scholarly content. The content available at Connexions is made up of smaller modules which correspond to a concept given in a page or two in a text book. These smaller modules have the advantage of being reusable in as many different contexts possible. Connexions provides a roadmap for helping students navigate through non linear modules. This content is activity based through assignments, exercises, readings etc. The content of Connexions can be accessed without having an account with it. Teachers can not interact with the student. Though the content is published on the web but it is not designed for the online learning. Connexions allows others to use, copy, distribute and make derivative work. It used a different version of Creative Commons Attribution license (Creative Commons, 2008) which allowed the people to use it even for commercial purposes. It is expected that the cheaper books and CD ROMs can be created by allowing the commercial use of Connexions material in developing countries. The Connexions has more than 5000 modules and it is available in several language including Spanish, Japanese, Thai and Chinese.

Carnegie Mellon University is using a different approach called open learning initiative (OLI) which complements OCW and Connexions. OLI grew out of collaboration among cognitive scientists, experts in human computer interaction and faculty who have both a deep expertise in their respective fields and a strong commitment to excellence in higher education. The project adds to online education the crucial elements of instructional design grounded in cognitive theory, formative evaluation for students and faculty, and iterative course improvement based on empirical evidence. The OLI courses are being offered in two different types of learning environment. The first one is for individual self learners who are not associated with any formal learning cohort or institution and they want to access the course free. The second one is instructor led classes. In this mode, instructors around the world are invited to use OLI courses to create their own course specifically for their students. OLI courses are developed in a modular fashion to allow faculty at a variety of institutions to either deliver the courses as designed or to modify the content and sequence. An OLI course includes a syllabus and course materials in a mix of videos, tutors, virtual lab activities and text to provide a varied online learning experience. Text versions of movies make the content enhance accessibility of the content. Virtual lab activities are conducted using fully interactive software. The use of rich multimedia and virtual labs requires users to have specific operating system and browser requirements along with a number of plug-ins including Java, QuickTime and Flash. As of March 2008, As there were ten subject areas with full courses or substantial course materials available in the areas of Causal Reasoning, Statistics, Engineering Statistics, economics, logic, biology, chemistry, Physics, French, and empirical Research Methods. Faculty and institutions in Chile, Columbia and Qatar are also partnering with OLI to localize, extend and develop the courses.

The OER examples are not only freely available but open to modification and adaptation. In response to the free availability of OER materials a number of international initiatives are repurposing existing OER materials for use in other countries. A range of initiatives were profiled in the UNESCO forum. The African Virtual University (Bateman, 2005) partnered with MIT in a project to set up OCW mirror sites at two institutions in Kenya and Ethiopia and as a means of promoting awareness conducted workshops for faculty and students on use. Universia, a consortium of universities in ten countries – Argentina, Brazil, Colombia, Chile, Spain, Mexico, Peru, Portugal, Puerto Rico and Venezuela – has a formal agreement with MIT to translate OCW courses into Spanish and Portuguese (Aranzadi, 2005). The China Open Resources for Education (CORE) initiative has a similar agreement to translate MIT OCW courses into Chinese and make them available to universities across China (Tate, 2005). The University of Egypt is selecting and adapting OCW courses for their local needs including translation into French, adding modules to complete the course, and creating graphics and/or animations to illustrate concepts (Sabry, 2005). All of these international initiatives create a type of derivative OER.

All these are very good efforts and these have been able to make awareness about the OERs. In all of these efforts, the interactive support to the learner is missing. In the following section a new model for offering a course is presented which uses WikiEducator to offer a course with interactivity. This model has been implemented using a LMS in WikiEducator. The offering of this online interactive course has two major parts. These are the presentation of already existing OERs in a particular area by using WikiEducator and handling of interaction through LMS.

2. MODEL FOR OFFERING VOCATIONAL COURSE THROUGH WIKIEDUCATOR

WikiEducator is a website that provides free eLearning content that anyone can edit and use (WikiEducator,2006). WikiEducator was launched by Commonwealth of learning (COL) and piloted in August 2006 at the first course developers meeting for the Virtual University for Small States of the Commonwealth (VUSSC). It is now being used around the world extensively for the development of free educational resources. WikiEducator is a dynamic and exciting community of educators who believe passionately that learning materials should be free and open to all. The WikiEducator is an evolving community intended for the collaborative:

- planning of education projects linked with the development of free content;
- development of free content on Wikieducator for e-learning;
- work on building open education resources (OERs) on how to create OERs.
- networking on funding proposals developed as free content.

In the remaining section, the detail of the course on Computer networks which is offered through WikiEducator is given. The expert who wants to offer a course is required to create an account in WikiEducator. To support interactivity in a course with learners one more account on LMS (Moodle for WikiEducator, 2007) is also required. The learners are also required to have accounts on WikiEducator as well as on LMS. A learner can have access to the content even without having an account but then interactivity will not be supported. The content pages in WikiEducator show the most suitable available online resources. The expert will be creating these pages. The sample page of the course on Computer networks is given in figure 1.

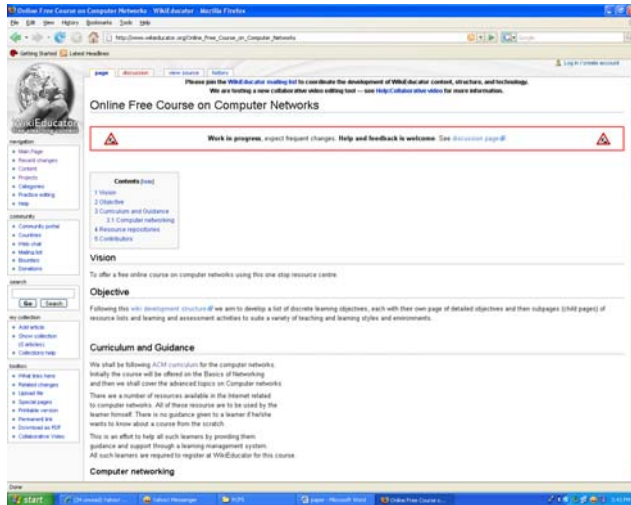


Figure 1: Web page of the course at WikiEducator

The details of the resources related to one particular topic are shown in Figure 2. The resources are in the form of Text, Audio, Video format and can be down loaded or played from the respective websites.

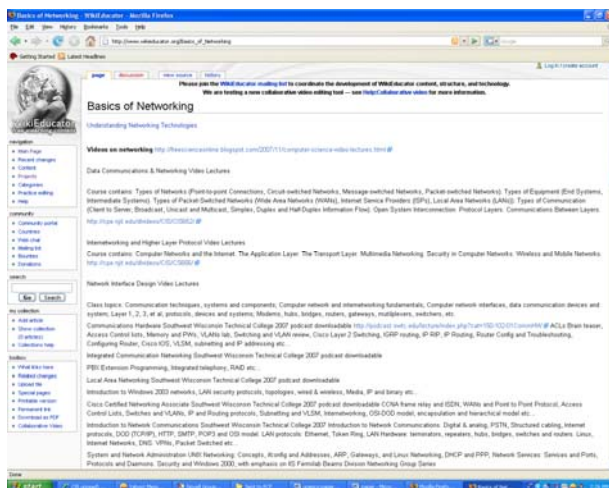


Figure 2: Details of the available resources related to the course

The interactive support is provided through discussion forums which are created in LMS. The expert will be the anchor resource person for coordinating the course and interactivity. S/he will be known as course coordinator (CC) for the course. Each CC will be supported by other resource persons who will help CC in interacting with a group of learners. These resource persons will be called as tutors. Each tutor will be handling the interactive session in a group of 20 learners. The learners can interact with the tutors and also with their peer group. There are tutorial sessions on which the tutor is available online and interacts with the learners. It is assumed that there are five tutorials in each course. The CC can assign a tutor to a group of learners. Once a learner has registered for a particular course, s/he gets access to LMS and s/he can interact with the tutor or the peers group. LMS also has a list of other resources which are

available to the learner. The screen shot showing the announcements, online forum and the list of supplementary material is given in figure 3.

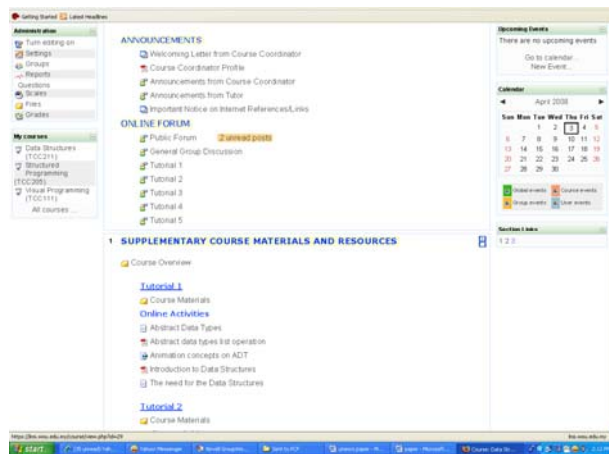


Figure 3: LMS showing different tools available to the learner

A learner can interact with the tutor through online forums. There are different types of forums. Figure 4 shows the types of online forums which are created for the course in LMS.

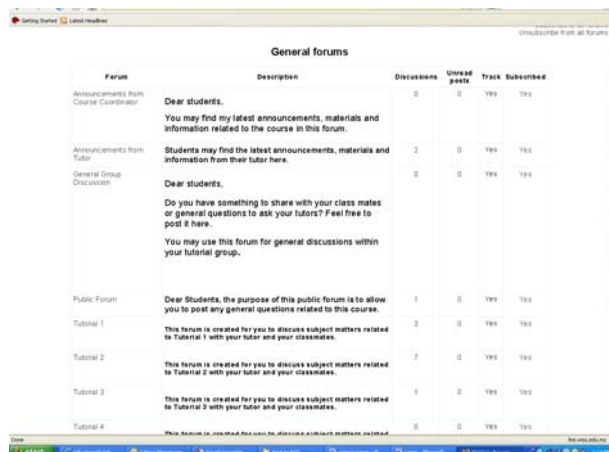


Figure 4: Different online forums at LMS

The discussion on these forums can be initiated by the learners or by the tutors. The forums for interaction among learner are public and it is visible to all the participants. But there are few forums in which the discussion is limited to a small group.

3. EXPERIENCES AND LESSONS LEARNT

This particular vocational course was offered in January 2008 and has only a few learners. These learners are from different parts of the world. A number of learners from India and Malaysia have shown their willingness to join this course. The evaluation the learning is done through self tests, quizzes, assignments and voluntary exams. After the course completion, a learner is also required to fill a questionnaire which has questions related to the effectiveness of the course, interaction. As the number of learners is less and there has been little time since the course was

offered, only a few learners have responded. Initial comments of the learners are related to the problems in accessing multimedia content of the course. One participant who is not related to the Information technology (IT) field has shown interest in this course and he is learning the basic IT skills to join this course.

There have a few lessons learnt while offering this course. Being the sole person to offer this course, my work had been focused on identifying the appropriate and suitable OER for the presented course, creating course pages on WikiEducator and managing the interaction with learners in LMS (Moodle) on WikiEducator. The course offering activity on WikiEducator by an individual of any institution is a daunting task. The Institution support is a must to continue association with such activity. To find a suitable and appropriate OER is equally challenging and time consuming process. There should be a central repository where listing of all the OER initiative is given. This type of repository should be supported by the funding organizations like the William and Flora Hewlett Foundation which has given grants worth millions of dollars to several OER initiatives. In view of the free nature of the courses, there is also a need to have an independent agency which can evaluate the performance of these learners and assign them some certification.

It is also hoped that the discussion forums for this course will have a lot of threads by the time the paper is presented. These discussions will also be analyzed and presented along with the result of the questionnaire the conference.

4. CONCLUSION

In this paper, an effort has been made to indicate the need of using OERs and offering the free courses through platforms like WikiEducator. There are a number of OERs available but they lack interactive support of the faculty with the learner. The model presented in this paper represents the interactive component built in to the course which is offered through WikiEducator. There have been a few lessons learnt which will help future educator on what to do and what not to do. WikiEducator is now gaining popularity so it is hoped that there will be more visits by the learners and more learners will be enrolling in the free courses with interactive support offered at WikiEducator. This type of course offering through WikiEducator using OER with built in interactive component is the need of the hour and the organization like COL, UNESCO and the William and Flora Hewlett Foundation should support this type of initiatives.

5. ACKNOWLEDGEMENTS.

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6. REFERENCES

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