

The advancement of Lifelong Learning through Open Educational Resources in an open and flexible (self)learning context¹

Fred Mulder
Rector Open Universiteit Nederland (OUNL)²

Introduction

“Lifelong learning is a sine qua non if the Lisbon objectives are to be achieved.”
(José Manuel Barroso, President of the European Commission)

“The most promising initiative in e-learning is the concept - and the developing reality - of Open Educational Resources.”
(Sir John Daniel, former Vice-Chancellor UK OU, UNESCO, Commonwealth of Learning)

These two citations, if we read them in relation to each other, summarize the rationale for this paper ...

The promising, developing reality of what we call today Open Educational Resources (OER) indeed seems to offer good opportunities for what the European Union (EU) considers key for a successful transition to a knowledge-based economy and society, namely significantly raising and widening participation in higher education, in particular in a lifelong learning context.

We will explore this observation, realizing that it actually requires a new wave in the OER movement, which centres on independent (or: autonomous) learners rather than on learners who are dependent on teachers. The potential of the OER movement, being large already, may considerably increase by such a change in perspective, since this will empower the learners to really study on their own, with no need of a teacher, a classroom or an educational institution. Not only is this instrumental for reaching the EU goals, it also is crucial when the educational system is seriously lacking money or has a structural shortage of (good) teachers. This generally is the case in the developing countries.

MIT pioneer in global movement, carried by the Hewlett Foundation and UNESCO

In 2001 MIT (Massachusetts Institute of Technology) launched its OpenCourseWare (OCW) Initiative. This was (and still is) a massive project of many years, which would make virtually all the materials used in their courses freely available via the Internet for any non-commercial or research use. The origin of this revolutionary action has been nicely described in a partly retrospective paper from former MIT President Charles Vest. In Vest (2006) we read that in 1999 MIT was considering its position in the use of educational technology and distance learning. The broad conclusion of a special committee was that for the advanced-level education at MIT *“distance education was likely to be complicated, highly competitive, and unlikely to make money.”* Instead the committee recommended that *“we give away all of our course materials by putting them on the Web.”* In the context of this paper it is important to note that MIT sees OCW as a Web-based publishing venture, not as teaching at a distance. Metaphorically, it puts the books on the library shelves. Lerman (2006) surveys in an interesting paper both how the OCW Initiative has developed over the last few years and how its users have received it. He indicates a few lessons learned and describes OCW's impact as setting the scene for a global movement.

¹ Presented at the Dies Natalis in a short version.

² With input from: Paul Kirschner (Professor of Educational Technology, OUNL), Peter Varwijk (Strategy and Programme Management, OUNL), Jasper von Grumbkow (Professor of Psychology, OUNL) and OUNL Students.

Clearly, one may conclude that OCW did not harm MIT at all. On the contrary, it generated very positive publicity worldwide, while the student's interest to enrol in the exclusive MIT on-site study programmes remained invariably high. The OCW Initiative has inspired an ever-growing number of institutions around the world to set up similar projects (Johnstone, 2005; Johnstone and Gourley, 2006), recently resulting in the formation of the so-called OpenCourseWare Consortium with already more than 50 members (Lerman, 2006; URL OCW Consortium). An almost complete and up-to-date overview is offered by the website of the William and Flora Hewlett Foundation, which has significantly funded virtually all these projects and has been instrumental for the OER movement (URL Hewlett Foundation). Another organization with a decisive role was (and is) UNESCO, having promptly recognized the paramount relevance of OER, especially for the developing countries, and successfully promoting the OER approach (d'Antoni, 2006; URL UNESCO). It was UNESCO that has introduced the notion of Open Educational Resources, see below.

The definition of Open Educational Resources and UNESCO

The term Open Educational Resources (OER) was coined by UNESCO in 2002 at a meeting in Paris with support from the William and Flora Hewlett Foundation on 'The Impact of Open Courseware for Higher Education in Developing Countries' (d'Antoni, 2006).

According to this 2002 view OER is to refer to digitised materials offered freely and openly for educators, students and self-learners to use and re-use for teaching, learning and research.

In the final declaration of the same meeting, the participants of the session expressed their: *"...wish to develop together a universal educational resource available for the whole of humanity, to be referred to henceforth as Open Educational Resources. Following the example of the World Heritage of Humanity, preserved by UNESCO, they hope that this open resource for the future mobilizes the whole of the worldwide community of educators."* (d'Antoni, 2006).

By 2004 OER was defined to include (Johnstone, 2005):

- > Learning resources:
courseware, content modules, learning objects, learner-support and assessment tools, on-line 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 assure the quality of education and educational practices.

The Lifelong Learning condition in the EU Agenda

Europe wants to become a strong, competitive knowledge-based economy as well as a high-quality, cohesive and inclusive knowledge-based society. This has been expressed in the Lisbon ambition about six years ago. Recently it has been underlined again, but also adapted to become a so-called renewed Lisbon strategy, as elaborated in a Communication document of the European Commission called 'Growth and jobs: working together for Europe's future. A new start for the Lisbon strategy' (URL EU-a). This implies a boost of investments in human capital through better education and skills. Lifelong Learning has been identified as a crucial condition for an appropriate implementation of this strategy. Backed by the adoption of a Lifelong Learning Programme 2007-2013 (URL EU-b), the measures should lead indeed to growth of participation in higher education and the creation of more and better jobs. Besides the evident economic benefits the Commission considers education to be an integral part of our social model, embodying and transmitting values such as equality and tolerance. Education also has a positive effect in many areas, including health, crime, and our quality of life in general. This was the clear conclusion of a recent Commission Communication on 'Efficiency and Equity in Education and Training systems' (Figel', 2006; URL EU-c).

Although the participation rates in European higher education have generally risen, it is only the Nordic countries that belong to the premier league of countries around the world with a high participation in higher education. In order to considerably raise and widen participation in higher education throughout Europe, access to the educational system should be made easier and more attractive and the value as well as the pleasure of learning should be promoted. Recently the European Commission has expressed its concern regarding the progress that universities show in this respect. They seem to be failing to address the Lifelong Learning agenda and therefore to substantially increase participation in their educational programmes. It is noted that universities tend to offer the same courses to the same age groups and are not really open or fit to other types of learning and learner groups. They scarcely provide, for example, courses appropriate for students in later stages of life, non-degree retraining courses for adults, or gap-filling courses for students not progressing through the traditional learning routes (Van Dorp et al., 2006). This is one of the important ingredients addressed in the Modernization agenda for Europe's universities, as has been communicated recently by the Commission (Figel', 2006; URL EU-d).

In this respect Europe may well be served by its Open and Distance Learning (ODL) universities. Since the 2004 Conference of the EADTU (European Association of Distance Teaching Universities), organized by the Open Universiteit Nederland (OUNL), the umbrella label Lifelong Open and Flexible (LOF) learning is in use, as a successor to the ODL label. This ideally characterizes those universities in terms of both the specific target groups (Lifelong learners) and the educational model (a truly Open system with Flexible learning paths). Where the conventional universities are still fixed on 18-25 years old students, in a 'closed' educational system (with little freedom), emphasizing onsite face-to-face teaching and far away from flexible offerings, the LOF learning universities are in a good position to build and expand on their tradition and experience. They focus on the development of learning materials in a distance learning context, primarily meant for independent self-study. Therefore their content is rich in pedagogy and didactics and incorporates learning guidance and tutoring elements. It is designed to be accessible to individuals, studying at home or at work, appropriate for their circumstances and meeting their needs. The learning process takes place in an online (or: virtual) learning environment, which supports various kinds of interaction: student-student as well as student-tutor or teacher, both individual and grouped. Here the concept of learning communities or networks comes in.

New wave in Open Educational Resources

In order to fulfil the Lifelong Learning condition in Europe apparently the Open Educational Resources concept needs another perspective. The freely available content on the Internet should empower learners to really study on their own in an open and flexible learning environment, with no (avoidable) references to a teacher, a classroom or an educational institution. This does not happen by accident or through the deployment of ad hoc initiatives, but rather requires structural and explicit learner-centred content design instead of the conventional teacher-centred content approach.

Along three lines-of-thought one could argue that in the notion of 'Open Educational Resources':

1/ the word 'Open' should imply much more than offering open access to a large content base (even if this would be filled completely by highly reputed universities like MIT)

2/ 'Educational' should rather be read as 'Learning', putting the learner in the centre (be it in a formal or a non-formal or informal setting) instead of the formal educational system and its key knowledge providers (the teachers)

3/ 'Resources' should be interpreted very broad, going beyond the initial focus on a new online delivery mechanism for digital content towards web-based facilities and instruments supporting dialogue, interaction, collaboration and more in general learning communities.

Note that the 2004 definition of OER could allow for this other perspective in its first of the three categories, 'Learning resources'. But a stronger focus on the learners themselves would justify an adaptation of the definition by separating a new category called: 'Resources to support learners'

as an analogue of 'Resources to support teachers' (and with the first category 'Learning resources' then standing for 'Content resources').

Lines-of-thought 1 and 2 are well in line with the profiles and positions of the LOF learning universities, more than is the case with their conventional campus-based colleagues. This is different for line-of-thought 3 where the global OER movement has already shown some interesting initiatives (e.g. from Utah State University, Rice University, Carnegie Mellon University - see Johnstone, 2005 and Johnstone and Gourley, 2006; URL Hewlett Foundation). In this area the LOF learning universities certainly have experience also, but more than with 1 and 2 they have to extend their activities and explore more intensively their opportunities (Vincent and Mulder, 2006; Van Dorp et al., 2006). For all universities committed to OER line-of-thought 3 is very relevant and requires an R&D agenda with controlled and scalable pilots and experiments.

Where the LOF learning universities can easily offer significant added value to the global OER movement in areas 1 and 2, in area 3 they still have a way to go, just like the other universities. Progress in all three areas is important in order to further strengthen the basis and acceptance of the OER concept, notably regarding its capacity to increase the average level of knowledge and skills in society. Its potential seems to be considerable, not only for the Lifelong Learning condition in the EU Agenda, but even more so for the developing countries where the level of education generally is very low and any increase-at-scale is hampered by serious financial constraints.

Initiatives of European Open Universities

Europe lags behind in the worldwide OER movement. The very few projects that run (Figel', 2006) do not have a strong profile measured along the potential that OER may have. Recently we have witnessed the start of three leading-edge initiatives of European Open Universities that draw their inspiration from the views and perspectives outlined in the previous section.

These 'new wave' OER initiatives are:

- > OpenLearn of the UK Open University (UKOU)
- > OpenER of the Open Universiteit Nederland (OUNL)
- > MORIL (Multilingual Open Resources for Independent Learning) of the European Association of Distance Teaching Universities (EADTU), initiated and led by OUNL.

Detailed information on all three projects can be found at URL Hewlett Foundation.

Mulder and Vincent (2005) have pointed out the relevance of Open Educational Resources for Lifelong Learning, more specifically for increasing and widening participation (see also Johnstone and Gourley, 2006), while these three initiatives were all still in preparation. The three have been presented in a compact overview at the recent EU eLearning Conference in Helsinki (Vincent and Mulder, 2006) and will be presented more extensively in a paper session with various presenters at the upcoming 2006 OER Conference at Utah State University (Van Dorp et al., 2006; URL OER Conference).

In this paper we will confine ourselves to an overall and comparative approach.

First of all we mention the common characteristics among the three initiatives:

- 1/ they are the first OER initiatives that are specifically learner-centred, focussing on the offering of high-quality learning materials in a distance learning context, primarily meant for independent self-study
- 2/ the Lifelong learners are the ones targeted
- 3/ they share the ambition to increase and widen participation in higher education (scale!), providing a new gateway to higher education for different target groups
- 4/ the learning materials they provide can be used in the setting of informal learning on the Web by interested individuals as well as in the formal educational system, thereby aiming at bridging the gap between informal, non-formal and formal learning

- 5/ web-based facilities and instruments supporting dialogue, interaction, collaboration and more in general learning communities are to be developed and deployed
- 6/ they will be explored as a preparation for new business models where sustainability is the key factor
- 7/ research, experimentation and evaluation are important components of all three initiatives
- 8/ they all are (partly) funded by the Hewlett Foundation, and do not (yet) receive funding from EU programmes
- 9/ the three are linked and share expertise and experiences.

There are also differences between the three initiatives, the most prominent being:

- A/ the stage of operation: the UKOU initiative OpenLearn has started as the first and will launch its first courses by October 26, the OUNL initiative OpenER will be launched with its first courses by the end of 2006, and the EADTU initiative MORIL is in its preparation stage
- B/ the course base is different in size, with OpenLearn having the largest one
- C/ in OpenER and MORIL all courses will be of the entry bachelor level, in OpenLearn also higher-level courses will be included
- D/ the unit size for the courses is 1 EC (= 25 hours of study) in OpenER, 2 EC in MORIL and varying in OpenLearn
- E/ OpenER and OpenLearn both are single university initiatives for single language learning communities, where OpenLearn of course can easily reach out to many people around the world because of the English language being used
- F/ MORIL is a multilingual initiative, to be run by a consortium of ten LOF learning universities in nine European countries: Netherlands, UK, Germany, France, Spain (2), Portugal, Italy, Turkey, and Russia; this may serve as an interesting reference model for further collaboration or for other initiatives
- G/ in MORIL an important aspect is to facilitate (virtual) cross-country learning experiences, as well as the translation and the so-called localization (adjusting to culture) of the content; also the mutual recognition of courses in the various national educational systems is specific for this initiative
- H/ OpenER and MORIL have explicitly adopted a two-track approach where the same learning materials are available for both the informal and the formal learning tracks, with the latter leading through formal testing to certification
- I/ OpenLearn offers two websites: the LearningSpace for the learners, and the LabSpace for the educators; the other two initiatives are not very outspoken in this respect
- J/ OpenER is the only initiative receiving substantial government funding, besides the Hewlett Foundation grant, so that outcomes may be considered in the context of the national (higher) education policy.

Putting the three European initiatives in perspective, we are witnessing a paradigm shift in education that requires a combination of cautious consideration and vigorous action.

Lerman (2006) concludes that:

“they add an important dimension to the Open Educational Resources movement that will be very influential both here (note: in Europe) and abroad.”

Figel' (2006) states:

“Open Educational Resources have the potential to be powerful instruments for attracting a much wider audience to the activities within universities. In doing so, they support the lifelong learning agenda and they respond very well to the point I made earlier about opening up universities to their communities.”

And:

“As of next year, all the Community education and training programmes will be integrated in a single Lifelong Learning Programme, and the total resources available will be double those of previous years. Open Educational Resources projects will, of course, be eligible for support.”

Indeed it would be more than appropriate and elegant if the US-based funding from the Hewlett Foundation would be at least flanked by significant European funding, since the relevance of initiatives like these for the EU Agenda is crystal-clear. Eligibility for support in my view is an interesting but very weak condition. This should be replaced by a concerted EU action line, certainly if Europe becomes aware of its great opportunities in the further development of learner-centred OER around the world. Because of its successful and extensive network of LOF learning universities, its multilingualism, and its relatively favourable political profile in the world (as compared to the US - see also Vest, 2006), Europe is in an ideal position to become a 'continent-in-demand' regarding the supply of high-quality digital content for independent self-study as well as learning services around this content.

Student survey

In order to get some insight into the views of our students regarding Open Educational Resources (more specifically the OpenER project) we have undertaken a survey among a selected group of students who all are participating in one or more of our student advisory committees and student bodies. 42 students were approached directly, another 75 indirectly through the Student Union. The response was 35, by far most of them belonging to the group of 42. The survey consists of 15 statements with a 4-points scale ('fully disagree', 'somewhat disagree', 'somewhat agree', 'fully agree') plus room for optional explanation, and a category 'don't know'. The major outcomes have been collected in Table 1.

Almost unanimous is the student's opinion on the importance that the OpenER courses are of academic level and that OUNL guarantees their quality (statements 1 and 2). The argument is that if OpenER is to play a role in the decision to start a study, the level of the learning materials should be representative.

Again, almost all respondents consider OpenER courses more attractive if they do not only contain content, but also learning guidance and exercises (statement 3), with the same argument that the OpenER courses are then more representative for the other OUNL courses. Moreover these elements are often viewed as a necessary help for learning. A high agreement score also holds for statement 4 ('OpenER courses are more attractive if they can be finished with a test or exam'). This is supposed to enhance the possibility to test whether one can really manage the level of the content, and to offer a better representation of the learning process. It may also contribute to a better motivation.

Many respondents think it's more attractive if OpenER courses can be part of a Bachelor programme (statement 5), for example by including them in the open, optional space in the programme (statement 6). On the one hand this is considered as motivating for those who want to continue after OpenER, because then no effort will be lost. On the other hand it enlarges the optional possibilities.

More variety in the scores (not shown in the Table) can be found in those OpenER aspects that are related to study orientation, the experience of what a study implies, and the selection of a particular study. One sees OpenER certainly as representative for a study of learning materials at the academic level, but much less as a possibility to experience what it means to accomplish a complete study programme through distance learning. One does expect a stimulating and breaking-down-barriers effect on those who want to give study a try. But approximately half of the respondents replies 'don't know' on the statement that OpenER will lead to higher enrolments for higher education, including the OUNL (statement 7). To our students OpenER still is relatively unknown and much will depend on publicity and communication around the OpenER initiative, which should be intensive. Those who are explicit on the agreement score do expect a positive effect on the OUNL enrolments.

We should be aware that this student survey has not been done with a random sample. This should make us cautious with conclusions, but the preliminary indications from the outcomes are supportive for the potential of Open Educational Resources in a setting of Lifelong, Open and Flexible (LOF) learning.

Table 1 Major outcomes of OUNL Student survey on OpenER

<i>Statement</i>	<i>Agreement score^a</i>	<i>'Don't know' response^b</i>
1/ It is important that OpenER courses are of academic level	4.62	1
2/ It is important that OUNL guarantees the quality of the OpenER courses	4.94	0
3/ OpenER courses are more attractive if they do not only contain content, but also learning guidance and exercises	4.66	0
4/ OpenER courses are more attractive if they can be finished with a test or exam	4.55	4
5/ OpenER courses are more attractive if they can be part of a Bachelor programme	4.27	5
6/ OpenER courses are more attractive if they can be included in the open, optional space of OUNL programmes	4.00	4
7/ OpenER will lead to higher enrolments for higher education, including the OUNL	4.18	18

a/ The maximum score is 5 ('fully agree'), other scores are: 4 ('somewhat agree'), 3 ('don't know'), 2 ('somewhat disagree'), and 1 ('fully disagree'). The 'agreement score' is the average among all respondents (category 'don't know' excluded).

b/ In this column the number of students replying 'don't know' is shown (total response: 35).

From Wikipedia to Wikiversity

In August 2006 a new initiative was launched under the name of Wikiversity. Yes indeed, a daughter of the well-known Wikipedia initiative, building on the same inspiration and concepts, but now directed towards education and learning rather than the delivery of encyclopaedic knowledge. It is included in this paper just to show how fast developments are progressing. Of course, Wikiversity still has to prove itself. But keeping in mind what happened to Wikipedia in the last couple of years, both quantitatively and qualitatively as well as in terms of popularity, we'd better be prepared for far-reaching consequences emerging from the Wikiversity initiative, leading to a definite settling of the OER movement. From the perspective of the three European initiatives described in this paper, Wikiversity should be applauded as a new and very relevant player in the OER development, with whom collaboration should be considered seriously.

We refer below to a short description of Wikiversity. For more information see URL Wikiversity.

What is Wikiversity?

Welcome, newcomers!

Wikiversity is a community for the creation and use of free learning materials and activities. Wikiversity is a multidimensional social organization dedicated to learning, teaching, research and service. Its primary goals are to:

- Create and host free content, multimedia learning materials, resources, and curricula for all age groups in all languages
 - Develop collaborative learning projects and communities around these materials
- Learners and teachers are invited to join the Wikiversity community as editors of this wiki website where anyone can edit the pages.
- Information about many aspects of Wikiversity is linked at the community portal. Participants communicate via various media, such as the colloquium, discussion pages, a mailing list and Internet relay chat.

To be continued ...

At the 22nd World Conference of ICDE (International Council for Open and Distance Education) in Rio de Janeiro in September 2006 it was announced that ICDE will start a global Task Force on Open Educational Resources, in close collaboration with UNESCO. OUNL has the privilege - on request of ICDE - to chair this Task Force, which through the chairmanship of the EADTU Task Force (also OUNL) is explicitly linked to the European rich source of activity in this area. The aim of the ICDE Task Force is to explore a variety of relevant OER issues and to come forward with a position paper that should lead to guidance and possibly orchestration of further activity in the global OER movement. The first meeting of this Task Force will take place in the beginning of November 2006. Meanwhile UNESCO / IIEP (International Institute for Educational Planning) will continue to facilitate the global OER debate (URL UNESCO). And the Hewlett Foundation will continue to contribute to the global OER movement (URL Hewlett Foundation), while the OpenCourseWare (OCW) Consortium will distribute, share and further build on all the expertise of its members (URL OCW Consortium).

We are witnessing a fascinating development and - more than that - a development that may fundamentally change the way we teach and learn. At the same time there are (still) some important and interesting issues to be addressed:

- > the long term sustainability and new business models
- > barriers regarding intellectual property rights (IPR)
- > changing roles of the public and private sectors, funding mechanisms
- > achieving and maintaining quality (updating!) of the learning materials
- > further development of learning communities support
- > bridging the gap between informal, non-formal and formal learning
- > creation of public awareness of the availability, quality and benefits of the OER approach
- > internationalization versus localization of content (regarding language and culture)
- > expected effects on participation in higher education have to become manifest
- > possibilities for expansion and extension of the model (secondary and primary education?)
- > potentials for developing countries (even though there is still a huge divide around the world in high-speed access to internet).

At the end of this paper we once again quote Charles Vest, the MIT President at the time of the creation of the OpenCourseWare initiative.

Vest (2006) introduces the concept of the meta-university:

"My view is that in the open-access movement, we are seeing the early emergence of a meta-university - a transcendent, accessible, empowering, dynamic, communally constructed framework of open materials and platforms on which much of higher education worldwide can be constructed or enhanced."

And:

"If this view is correct, the meta-university will enable, not replace, residential campuses, especially in wealthier regions. It will bring cost-efficiencies to institutions through the shared development of educational materials. It will be adaptive, not prescriptive."

And also:

“The emerging meta-university, built on the power and ubiquity of the Web and launched by the open courseware movement, will give teachers and learners everywhere the ability to access and share teaching materials, scholarly publications, scientific works ... thereby achieving economic efficiencies and raising the quality of education through a noble and global endeavour.”

We would just like to complement this vision - as we have explained in this paper - with the learner-centred approach, the use of learning rather than teaching materials, the concept of on-line instead of merely on-site learning networks, and a campus that has a virtual rather than a residential appearance This makes Vest's vision even more promising and powerful.

References

- d'Antoni, S. (2006), 'Open Educational Resources: Deliberations of a Community of Interest'. Presentation ICDE SCOP Meeting, 11-13 June 2006, Lillehammer, Norway. See URL ICDE.
- Dorp, K.-J. van, Lane, A., Varwijk, P., and Kirschner, P. (2006), 'Open Educational Resources in Europe: A triptych of actions to support participation in higher education'. Joint paper to be presented at the 2006 Open Educational Resources Conference at Utah State University (COSL), 27-29 September 2006. See URL OER Conference.
- Figel', J. (2006), 'The Modernisation Agenda for Europe's Universities'. Dies address Open Universiteit Nederland, 21 September 2006, Heerlen, The Netherlands (this publication).
- Johnstone, S.M. (2005), 'Open Educational Resources serve the world'. *EDUCAUSE QUARTERLY*, 3, 15-18.
- Johnstone, S.M., and Gourley, B.M. (2006), 'Open Educational Resources, a new paradigm for Higher Education'. Presentation ICDE SCOP Meeting, 11-13 June 2006, Lillehammer, Norway. See URL ICDE.
- Lerman, S.R. (2006), 'Open Educational Resources: Building a Global Movement'. Dies address Open Universiteit Nederland, 21 September 2006, Heerlen, The Netherlands (this publication).
- Mulder, F., and Vincent, D. (2005), 'Widening participation in Higher Education through an e-Learning Infrastructure and Open Educational Resources'. Presentation 2nd ASEAN-EU Rectors Conference, 17 November 2005, Leuven, Belgium.
- Vest, C.M. (2006), 'Open Content and the Emerging Global Meta-University'. *EDUCAUSE review*, May/June, 18-30.
- Vincent, D., and Mulder, F. (2006), 'The Advancement of Lifelong Learning in Europe through the introduction of Open Educational Resources'. Presentation EU eLearning Conference, 4-5 July 2006, Helsinki, Finland.

URLs

EADTU: <http://www.eadtu.nl>
EU-a: <http://europe/eu.int/growthandjobs/>
EU-b: http://ec.europa.eu/education/programmes/newprog/index_en.html
EU-c: http://ec.europa.eu/education/policies/2010/back_gen_en.html
EU-d: http://eur-lex.europa.eu/LexUriServ/site/en/com/2006/com2006_0208en01.pdf
Hewlett Foundation: <http://www.hewlett.org/Programs/Education/OER/openEdResources.htm>
ICDE: <http://www.icde.org/>
OCW Consortium: <http://www.ocwconsortium.org>
OER Conference: <http://cosl.usu.edu/conferences/opened2006>
OUNL: <http://www.ou.nl>
UKOU: <http://www.open.ac.uk>

UNESCO: <http://www.unesco.org/iiep/>

Wikiversity: http://en.wikiversity.org/wiki/Wikiversity:Main_Page