OpenER, a Dutch initiative in Open Educational Resources

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Over the period 2006–2008, the Dutch Open Universiteit Nederland conducted an experiment in which Open Educational Resources (OER) were offered in an effort to bridge the gap between informal and formal learning and to establish a new style of entry portal to higher education with no barriers at all. OpenER received considerable attention both in terms of visitors and in the media. About 10% of the visitors reported that OER influenced their decision to start some formal learning track at academic level. Lessons learned were both from users and from inside the Open Universiteit. The experiment changed the attitude towards OER within the university itself and led to a growing awareness in the Netherlands of the value of OER in general, in other educational levels as well as among policy-makers and politicians.

Keywords: lifelong learning; open access; e-learning; open content; Netherlands education

Introduction

Giving away courses for free: this sounds really appealing in the Netherlands! In 2006 the Open Universiteit Nederland (OUNL) decided to run an experiment named OpenER, to find out what effects it would have on the number of people starting a learning path at the higher education level. The experiment was also to give insights in the consequences for the organisation (e.g. effects on each of the schools of our university).

In this article we review this experiment. First, we will describe the OUNL and its mission. Subsequently, we consider the motives for the experiment, its organisation and activities, the current status, lessons learned and future strategy.

The article aims to share the experiences of OpenER with organisations that are planning to undertake an Open Educational Resources (OER) experiment.

Open Universiteit Nederland

The OUNL was founded by the Dutch Government in the early 1980s, with The Open University UK in mind. It is the youngest university in the Netherlands and the only university in the country that provides open-access higher distance education targeted at lifelong learners. It does so with self-study materials and e-learning facilities, and from its official opening in 1984 offered higher education without setting prerequisites regarding the prior education of students.

The OUNL offers people who have never had the opportunity to enrol in higher education the chance to do so. The OUNL offers fully accredited academic programmes

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at bachelor and masters levels in seven schools: Cultural Studies, Education, Informatics (broadly viewed computing), Natural Sciences (with a focus on sustainable development), Law, Management (including Economics), and Psychology. For those who do not want to follow a full academic programme, there are over 400 individual courses to choose from. Early in 2004 the 250,000th student was welcomed, and during the past several years total enrolment averaged over 20,000 per year.

Mission

> Working together within networks and alliances, OUNL develops, provides and promotes higher distance education of top quality. The university is a pioneer in the innovation of higher education and aims to meet the wide-ranging needs of its students, the market and the community at large. OUNL seeks to be an institution that is strongly anchored in the Dutch higher education system through its educational research and innovation activities. (OU, 2008)

Together with the national educational broadcasting company and the national infrastructure organisations for education and research, the OUNL is a major initiator of a national initiative in the field of lifelong learning in which the employer's organisations, the trade unions and the various educational branch organisations participate. This is like the foundation Kennisnet, a public organisation aiming at national and regional cooperation with schools, branch organisations and governments to provide information technology (IT) support within a broad spectrum of educational target groups. This national programme aims at realising a national learning infrastructure for lifelong learning by targeting individual learners, and thereby bridging the gap between formal and informal learning.

OpenER initiative: context and characteristics

As part of the so-called Lisbon agenda of the European Union, aimed at increasing the competitiveness of Europe's economy, the government of the Netherlands has formulated ambitious objectives concerning increased participation in higher education.

According to the most recent information (HOOP, 2004), about 30% of the working population in the Netherlands has enjoyed education at university or college at a higher professional education level. (These days we distinguish research universities and universities of applied sciences.) This percentage needs to be increased dramatically up to a figure of 50% in order to remain competitive as a nation in the world economy.

The basic approach for solving this problem is the principle that, at all educational levels, students, the employed and the unemployed should have full opportunity to develop their talents and skills in such a way that they can attain the highest educational level possible for them to achieve. The Dutch Education Council, the advisory body to the government in education matters, indicated three courses of action: creating a wider range of learning pathways, creating more diversity in higher education and bringing more non-traditional groups (i.e. employed and unemployed people) to higher education by extending opportunities for lifelong learning based, amongst other options, on an e-learning approach.

OpenER relates to the third course of action. OpenER is compatible with observations indicating that, to achieve higher participation in higher education, existing

thresholds must be lowered and the willingness of individuals to invest in educational activities must be stimulated. Ease of access and transfer is required at all educational levels.

Characteristics of OpenER are as follows:

- OpenER is flexible, open, time independent and easily accessible. This is important because in the Netherlands the high workload makes it hard to find a place for learning activity in daily life.
- OpenER requires an individual to invest time and effort, but not to incur any out-of-pocket expenses. The content is self-contained. No learning materials have to be bought.
- Due to the technology used, OpenER is simple and inexpensive for the learner to use. He/she is not required to make any investments in software or specific supplies. A standard personal computer with Internet access and web browser is sufficient.
- OpenER gives the individual (e.g. an intermediate vocational student) the opportunity to become familiar with studying at higher educational level without having to make an immediate financial investment. Additionally, there is no 'stress' because it involves online self-paced learning in the learner's own environment. The learner can then decide whether he or she is ready to take the step to formal recognition of a performance by means of the additional services we provide for assessment and certification.
- OpenER is compatible with the goal of using e-learning to achieve the strategic objective of promoting maximum participation in education. Educational institutions are expected to use e-learning to make their education available to people outside traditional target groups. With OpenER, individuals can be given easily accessible experiences with online learning, even those who do not belong to the generation that has grown up from the outset with computers and the Internet (digital natives, screenagers, homo zappiens). OpenER both complements and facilitates access to e-learning.

The OpenER experiment received grants from the Directorate Learning and Working, established by the Dutch Ministry of Education, Culture and Science and the Ministry of Social Affairs, as well as from the William and Flora Hewlett Foundation, in total approximately €660,000. The project was planned to deliver at least 16 courses, each with a study load of 25 hours (about one European Credit).

In order to fulfil the Lifelong Learning agenda in Europe, the common OER concept needs another perspective. Freely available content on the Internet should empower learners to really study independently in an open and flexible learning environment, with no need for reference to a teacher, a classroom or an educational institution. This does not happen by accident or through the deployment of *ad hoc* initiatives, but requires a structured and explicit learner-centred content design instead of the conventional teacher-centred content approach.

Reflecting on the three lines-of-thought inherent in the term, 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 such as Massachusetts Institute of Technology).

(2) *Educational* should rather be read as 'learning', putting the learner at 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 broadly, 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 (Mulder, 2006).

Aspects 1 and 2 are in line with the profiles and positions of open universities, much more so as compared with the so-called traditional universities. Regarding Aspect 3, open universities certainly have experience in this area, but they will need to extend their activities and explore more intensively their opportunities (van Dorp, Lane, Varwijk, & Kirschner, 2006; Vincent & Mulder, 2006). Offering OER in the context of the second and third lines of thought has been named OER 2.0 (OERwiki, 2008).

The OpenER experiment is offering courses along aspects 1 and 2.

Activities during the experiment

The experiment started in August 2006 with the selection of a Content Management System for publishing the courses, the initiating of the course development process and building a project organisation.

To circumvent interference with the existing IT infrastructure, the OpenER system was implemented on a separate IT system. This guaranteed a quick start without being dependent on the busy schedules of the IT Department. After a short selection process, the open Content Management System eduCommons, developed by the Centre of Open and Sustainable Learning at the Utah State University, was chosen. This selection was mainly motivated by the support for implementation and use promised by Centre of Open and Sustainable Learning and the positive user experiences of other users of eduCommons.

An OpenER course was to fulfil the following requirements:

- 25 hours study load;
- Bachelor level entry;
- content to be handled as a subject on its own;
- the intellectual property of the material rests with the OUNL;
- representative for a regular OUNL course (both in form and content); and
- the Dutch language should be used, avoiding foreign-language barriers (even with English or German).

The initial idea was to derive courses for OpenER from existing regular courses. For each of the schools, this meant identifying an appropriate course, selecting a complete subject within this course, and creating the material (self-contained, creation of an introductory text, providing a self-test).

A tour around the schools revealed that there were already three courses available that to a great extent satisfied these requirements. This process also made clear that some schools hesitated to cooperate in this experiment because of busy agendas of their staff with no room for new activities like OpenER.

The project organisation was built around the following process for creating and publishing a free course (see Figure 1).
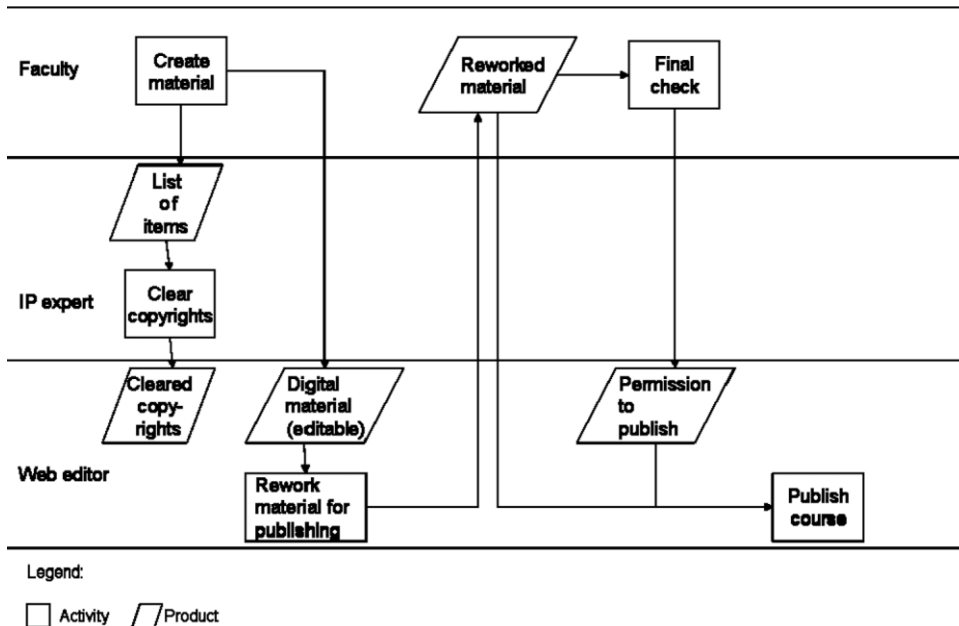
Figure 1. Process for publishing a free course.

In addition to the Intellectual Property (IP) expert and the web editor, the project team consisted of a communication officer, a web developer and a project leader. All the people involved spent only part of their time on this project. In total about one full-time equivalent (total over all courses) was used during the project.

After publishing a course, press releases were made public at the OUNL website. To inform the employees of the OUNL about the project, the project leader started a weblog on the internal website to describe facts and developments.

To collect feedback from users, several initiatives were undertaken. A mail service was initiated by which registered users received an email when a new course was published. These registered users were asked to cooperate in evaluating the experiment. Furthermore, a general survey was added to the site to collect user experiences with the site in general. To each course a survey was added to gather feedback about the specific course.

While the project was running, some initial principles were changed and some features were added. Table 1 presents these changes and additions.

Results of the experiment

When the site was launched it attracted significant media attention, due to a front-page article a week before the launch in a national newspaper (Reijn, 2006).

Although the site only consisted of three courses, the media attention resulted in 25,000 visitors during the first week. Currently, the site attracts about 800 unique visitors per day.

Some figures about the courses and the website as of July 2008 are as follows:

● Number of unique visitors since 5 December 2006: 750,000, of which 90,000 are returning (12%).

Table 1.   Principles changed and features added during the project.

Change or addition	Motivation
Allow courses with a study load different from 25 hours	To find out what load is judged optimal by the users. Current courses have study loads between four and 45 hours. Most courses published have a study load of 25 hours
Inclusion of one course in English	To find out to what extent a foreign language is a barrier
Add courses that were developed from scratch	To offer an opportunity for schools to launch a course they always wanted to develop, but never started as it was not in the regular programme
Add a 'read-aloud version' of some courses	To make courses available for students with visual impairments
Add courses at an advanced level	To make the site more attractive for other users than the initial target group

- Currently, there are 24 courses available on the website. The last course published is an online game in which players learn about human metabolism. The format in which the courses are delivered ranges from text only (in downloadable PDF files) to fully web-based and highly interactive (e.g. the game). Some courses include a video podcast of a presentation and a study guide for a book.
- All courses have been published under a Creative Commons licence (Attribution, Non-commercial, Share Alike; see http://creativecommons.org/licences/by-nc-sa/2.5/). In some cases, parts of the course have been published under a more restrictive licence because of copyright issues (e.g. the owner of the intellectual property rights on a picture did not give permission for reuse of his picture by other parties than the OUNL). For some parts (photographs or short texts), an amount ranging from €50 to €300 had to be paid to the owner before publishing under the Creative Commons licence was granted.
- About 5700 users registered voluntarily.
- Costs for creation of the material range from €3000 (for a course derived from an existing regular OUNL course, delivered as PDF files) to €30,000 (for the game).
- Five courses can be completed by a formal examination, which – if successful – leads to a certificate. This service costs €50 for a user. About 85 learners applied for a formal examination.
- About 2000 feedback forms have been submitted.
- One course was linked to a series of broadcasts about Dutch history on an educational channel on Dutch television. Each chapter of the course was linked to a broadcast in this series. Each broadcast was made available on the Internet after the original television airing. The course provides a hyperlink to each television episode.

Two surveys were conducted to measure the effect of OpenER, including data collection on the number of users that take the step from informal learning as offered by OpenER to formal learning as offered in our regular programmes.

To gather evidence that OpenER influences users in their purchase of a regular course, a question was added to the electronic order form: 'Was taking a *free* OpenER course a reason for ordering this course?' Users were obliged to answer this question

with either 'yes' or 'no'. The first results in a period of four months showed that in 9% of the orders the question was positively answered.

This result was more or less in line with a finding of the survey that was conducted among visitors of the OpenER site who had registered themselves voluntarily. A total of 5769 surveys was sent out, with 980 responses. The question 'Did you apply for a (formal) study programme or did you buy some (non-free) course?' was answered as follows:

- Yes, at the OUNL: 42%
- Yes, at another university: 4%
- Yes, at a polytechnic: 5%
- Yes, at a commercial institute: 7%
- No: 30%
- Not filled in: 12%

The two surveys generated 2000 feedback forms that reveal a lot of valuable information for continuation of the project. Table 2 presents some findings from these surveys. There were two slightly different types of surveys. One was addressed to those users who only visited the site without going through a full course (Type A surveys) and the other was addressed to those who had gone through a course (Type B surveys). About 1600 forms were of Type A and 400 forms were of Type B.

There were some unplanned outcomes. Maybe the most significant result is a growing awareness of the value OER can have for Dutch education. Because of the OpenER experiment, which was a pioneering OER initiative in the Netherlands, the OUNL became a credible national spokesman for the OER movement and its applications for Dutch education.

Lessons learned

Users make remarks in the surveys and in other feedback forms, indicating that:

- for some users a language other than Dutch is a barrier;
- courses of four hours study load were considered too short to obtain a good idea of what it means to study a subject at this educational level;

Table 2.   Survey findings.

Question	Result
Are you currently taking some form of formal education?	No: 70%
What is your highest level of education? (Only Type B)	Level below higher education: 43%
Are you satisfied with the courses offered?	Yes: 93%
Do you have any plans to start a formal study? (Only Type B)	Yes: 85%
Does offering these free courses affect your study plans? (Only Type B)	Yes, I know I want to start some form of higher education: 49%
	Yes, I know I will NOT start some form of higher education: 3%
What is your age? (Only Type B)	25–54 years: 67% (these are people working and still far from retirement)

- for courses that were fully web-based and did not offer a print option for the course text, users asked for a printed version;
- errors in the courses were reported by the learners; and
- the read-aloud versions were hardly used – the main cause reported was the automatic generation of a read-aloud version of a webpage (using *Readspeaker*) with errors in pronunciation.

Within the OUNL, opinions about offering free courses changed dramatically during the project. At the start there was some hesitation about the idea ('Are you out of your mind to offer our crown jewels for free?') and some reluctance to cooperate because of time constraints. Due to the positive media attention and the large number of visitors, this attitude changed in a positive manner.

Schools each had their own objectives in selecting and developing the free courses. Schools noted that the free courses should:

- give a good indication of the main subject areas in the school;
- show how entertaining learning can be; and
- also be attractive for their own students (this school had a lot of materials considered to be of high importance for their own students, although they were not part of a regular course; instead of making a CD-ROM of these materials, they were published as OER).

This change in attitudes and opinions was also a result of consistent internal communication via the internal web site and through the blog of the project leader.

Although there were restrictions set for the courses offered, authors were pleasantly surprised by the degree of freedom they had in the development of a free course. Experience had shown that conscientiousness about the quality of course materials is very high among authors at the OUNL. Relying on this conscientiousness motivated us to set only a few restrictions on the format of the course. This also contributed to the spirit of willingness to cooperate.

Still, because of the tight work schedules and the fact that OpenER was an extra activity for most schools, authors found it difficult to adhere to the schedules set. The deadlines agreed upon were exceeded in most cases, sometimes by many weeks. In the future, creating free courses should be a regular task for schools, so resourcing can be planned. This is especially important when OpenER will be used in cases where third parties will pay for extra services around the use of the free course materials.

Future scenarios

Although the grant period ended on 1 July 2008, the OUNL will continue to offer free courses and will increase its offerings. Part of the investments can be earned back with an increase in course selling as the first results have indicated. Furthermore it would be wise to capitalise on the growing reputation that the OpenER project has generated for the OUNL.

Several scenarios as a follow-up on OpenER are currently available but still under consideration. They can be adopted individually or in combination.

Participation through the temptation scenario

This scenario represents a modest continuation of OpenER by expanding the course base by 50%, maintaining this course base at a high-quality standard, and introducing a strong marketing effort in order to tempt individual informal learners in the OpenER context to become formal learners by enrolling as regular students. It should be noted that, during the project period, specific OUNL marketing was not allowed because OpenER was to be considered as an entry portal for all Dutch higher education institutions. If this condition is dropped, an effective marketing strategy could be developed.

Spin-off scenario

The repository of free courses is an asset with which unforeseen target groups can be reached. As an example, a secondary school in the Netherlands has decided to use the free courses to introduce the children to education at this level to prepare their pupils for university or polytechnic study. They can use these courses for the exploration of a field of study of their own interest to find out what they really want to study. The school has asked the OUNL to organise courses for their teachers on how to support learners using this self-study material and also plans to extend the possibilities to have a formal examination. These additional services will be paid for. Other schools appear to be interested in this approach.

Niche scenario

In the Netherlands, the National Research Council has awarded the so-called Spinoza Premium every year since 1995 to three or four excellent researchers. This is the most prestigious and substantial science award in our country (€1.5 million). During the next Spinoza Premium award ceremony in November 2008 the National Research Council and the OUNL will launch the so-called Spinoza series in OpenER. In this series, Spinoza laureates can develop a compact course on one of their research topics, supported by OUNL educational specialists. This is meant to become a 'Hall-of-Fame' of Dutch top scientists and can make OpenER even more attractive. At the same time, it offers an opportunity to open up the National Research Council to a broader audience. The first two Spinoza courses are on their way.

New markets scenario

Collaborating with a variety of partners in an open network, the OUNL is working on a plan to start a nationally operating Networked Open Polytechnic, based on OER. Free courses will be offered to students who combine their study with a job in a workplace learning setting. Appropriate partners are the polytechnics (in Dutch: 'Hogescholen'), but also companies, employer's organisations and trade unions. The goal is to substantially increase the share of people with higher education in the workforce in our country, which parallels an important government ambition to further the development of the Dutch knowledge-based society. Some pilot activities are in preparation in order to progress to a large-scale operation, step by step.

OER expert scenario

The OUNL could profile itself as the outstanding OER expert in different educational markets. The Networked Open Polytechnic addresses one such market. Another market could be at the secondary-school level where OER would constitute an important innovation. Currently we are further developing the OUNL as the OER spokesman and champion in the Netherlands, addressing ourselves to different stakeholders and to the media. This could very well lead to an OER wave among secondary school teachers and their school organisations.

The Full OER Scenario

The OER Expert Scenario would be most credible if the OUNL was to convert all its own educational programmes and learning materials into OER, thereby establishing the ultimate Full OER Scenario. Please note that this is not happening…yet.

In conclusion, experimenting with OER has resulted in many positive experiences and enough confidence in its potential to continue offering OER.

Acknowledgements

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