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European Learning Industry Group

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Open Education: a wake up-call for the learning industry?

Is open education fundamental to a sustainable learning industry
or a noble but commercially flawed cause?

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a wake up-call for the learning industry?

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Key Message

Based on research from across the breadth of the learning industry, there are clear indications that the commercial learning industry has not yet fully engaged with open education (OE) or open educational resources (OER). The commercial hesitation to adopt OE is in large part due to a perceived lack of associated new business models. It is also due to the perceptionof OE being a potential threat to existing learning business models. This view neglects the important innovation potential that OE brings to the learning market. We present evidence that OE is growing quickly – e.g. in the academic world– even though only few industry members are currently supporting it. This creates a potential for market disruption – in similar ways as the music industry has experienced with the rise of Internet filesharing or the software industry with the rise of Open Source. To not proactively engage with open education, its production, use or practices, could present a serious threat to the sustainability of the current learning market.

What is open education?

Emerging from the Web 2.0 culture of highly accessible and scalable publishing techniques combined with interactivity and collaboration, open education (OE) aims to make good quality learning support tools and educational materials freely available via the internet. A working definition of 'open education', taken from 'The How and Why of Open Education' (Collaborative Creativity group, UNU-MERIT) is:

> ".... the free and open access to, the usage of and the right to modify and re-use
> digital open educational resources and digital educational tools, and the free and open access
> to the related virtual educational communities, in order to learn, teach,
> exchange or advance knowledge in a collaborative and interactive way."

The acceptance of such a definition is evident from the word cloud below constructed from survey responses to the question – **'What does OE mean to you?'**

Figure 1. 'What does OE mean to you?'

Other concepts are embedded within the notion of open education: open educational resources (OER), open educational services (OES) and open educational practices (OEP) to name a few, and each has its own potential for impact on the learning industry. OE has arisen from within the academic world which also gives us the best high profile examples such as the MIT Open Courseware site and the UK Open University's OpenLearn initiative.

The ELIG Open Education Survey 2011

During 2011, the European Learning Industry group (ELIG) completed a two-stage investigation, with a survey and interviews, aimed at establishing insights into the extent, nature and implications of the full learning industry ecosystem's engagement with OE, OER and OEP. The key objectives of the survey and the follow-up interviews were to:

- determine whether the Learning Industry had embraced OE
- identify the incentives and barriers that learning industry members indicate impact on their level of engagement with open education
- identify examples and gain insight where the Learning Industry is engaged
- uncover business and service models which the Learning Industry might benefit from

From this investigation, covering learning industry players both public and private sector, insights into the broad perception of open education have emerged alongside four key findings significant to the future relationship between the established OE communities and the commercial providers of learning products and services.

Most OER/OE is currently produced for higher education

The ELIG survey findings confirm the perception that academia is the current source of most initiatives on OE and also the most consistent users of OER. Although some examples of OE, utilised by and produced from private sector organisations, do exist they were limited in number and have tended to arise out of collaborations between academia and industry. Funding for these projects, in the widest sense of time and money, was predominantly provided by a mix of private organisations, public grants (money only) and academic institutions (often contributing content, time and money). A graphical illustration of the European learning industry framework – that ELIG has developed - is useful in order to understand the current context in which diverse learning suppliers build a service environment around learning content (Fig.2). Understanding how OE and OER might be adopted demands a rethink of the entire value creation in the learning industry. It would be misleading to conduct this discussion narrowly on the content part only.

Figure 2. The current European Learning Industry Framework*

OE has not matured.

Open education is often compared with the Open Source Software (OSS) initiative, which originated in the 1990's within the academic and public sectors but which is now fully embraced and embedded within the commercial sector. In contrast OE is in a relatively immature state of development compared to milestones of OSS development as confirmed by the survey findings from perceptions of those working in the OE field. Signs of this immaturity are in;

- the lack of spread of OE from its origins – confirmed by the demographic of the respondents to the ELIG survey,
- the lack of take-up by industry, and
- the source of its funding remaining unchanged.

Many of the industrial concerns towards OSS in the 90's where similar to the concerns now expressed in the learning industry towards OE. However care must be taken to distinguish where the analogy between OE and OSS breaks down and what the specific conditions of OE are which could drive a maturation path very different from OSS.

Looking at the analogy in detail both OSS and OE have the same starting point – a conviction that being willing to open a developing resource to public access and development is a right, powerful and appropriate way to develop a facility, such as software, that had previously been developed in a private and proprietary environment. For OSS this model meant that source code for fundamental operating systems and applications was opened up to public access and modification – but not without some carefully managed controls; a point we will return to. For OSS the development and the licensing of software became open. The expectation might be that the development of OE will follow the same progression as that of OSS. OSS started as an activity driven by a relatively small number of committed coders and was initially scorned by commercial software developers who saw it a possible threat to their market.

Open Source Software Cases – from projects to global commercial impact:

In the late 90's, Martin Dougiamas created his first OSS learning management system and called it Moodle. By 2011 Moodle was used in 214 countries and by close to 45 Million users[1].

In the early 90's Linus Torvalds started his work on a terminal emulation that has let to the Linux operating system. By 2008, the revenue of servers, desktops, and packaged software running Linux exceeded $35.7 billion and Linux is as of 2011 estimated to run on 60% of all web servers.

A prominent early commercial move towards OSS was the creation of Mozilla as an OSS side activity of Netscape in 1998, later followed by the full spin out of the AOL Netscape development into the Mozilla Foundation in 2003. At the beginning of 2011, Firefox had a 48.3 % share of the global browser market.

Now, in 2011, OSS has been fully embraced by the commercial IT industry and beyond, to become the backbone of many products which, as consumers, we purchase without knowing their dependence on OSS, such as smart phones, satellite boxes and computers. The originators of the OSS are still involved and developing the code but they do so supported by, and in collaboration with, large open communities and commercial industry players who have found business models which allow them to make gains from an open activity which had earlier seemed to threaten their dominance. OSS has become a necessity in the software market and wholly embraced by the commercial software industry.

1 Marketshare information on Firefox, Moodle and Linux from Wikipedia – September 2011

Will OE also become a necessity? Like early OSS, OE is currently driven by a committed few. The initiatives that are already in place are considered very successful e.g. Wikipedia, MIT open courseware, the Open Courseware Consortium, OU OpenLearn (see appendix for full listings and explanations) and what is more have made a real change to the way people find knowledge, learn and develop within formal education, workplace leaning or through informal learning.

Open Educational Resources Cases:

In 2000 the Nupedia project was founded by Jimmy Wales and Larry Sanger as a platform for peer-reviewed expert articles licensed as OER. Wikipedia was created in 2001 as a side project to allow collaboration on Nupedia articles. In 2003, Wikipedia UK had already over 100.000 articles. In 2011, Wikipedia UK passed the 3.6 million mark and became the world's 7th most popular website[2].

In 2011 the MIT started its Open Courseware Initiative (OCW) and started to subsequently release all MIT course material as OER. In 2011, the MIT OCW includes material from over 2000 courses which is estimated to be shared by 100 million learners worldwide – further strengthening also the MIT brand and impact globally.

The appendix of this whitepaper lists over 20 further examples of OE and OER initiatives that were highlighted by survey participants as reference cases. There is clear evidence that OE and OER is a steady growing phenomenon in the learning world.

However, the fundamental differences between OSS and OE, which suggest that although OE can mature it is unlikely to do so in the way that OSS has matured, is highlighted by others (see bibliography). In contrast to OSS the 'O' in OE is not just about licensing and development. OE is also about content, its quality, its provenance and its specific didactic context (school level, university level etc). Unlike the governance in OSS projects, there is no organized moderation authority overseeing how the parts relate to the whole. OE is dispersed. OE can only happen with a whole ecosystem of players and activity in place to create value for all stakeholders - producers and users (see Figure 3).
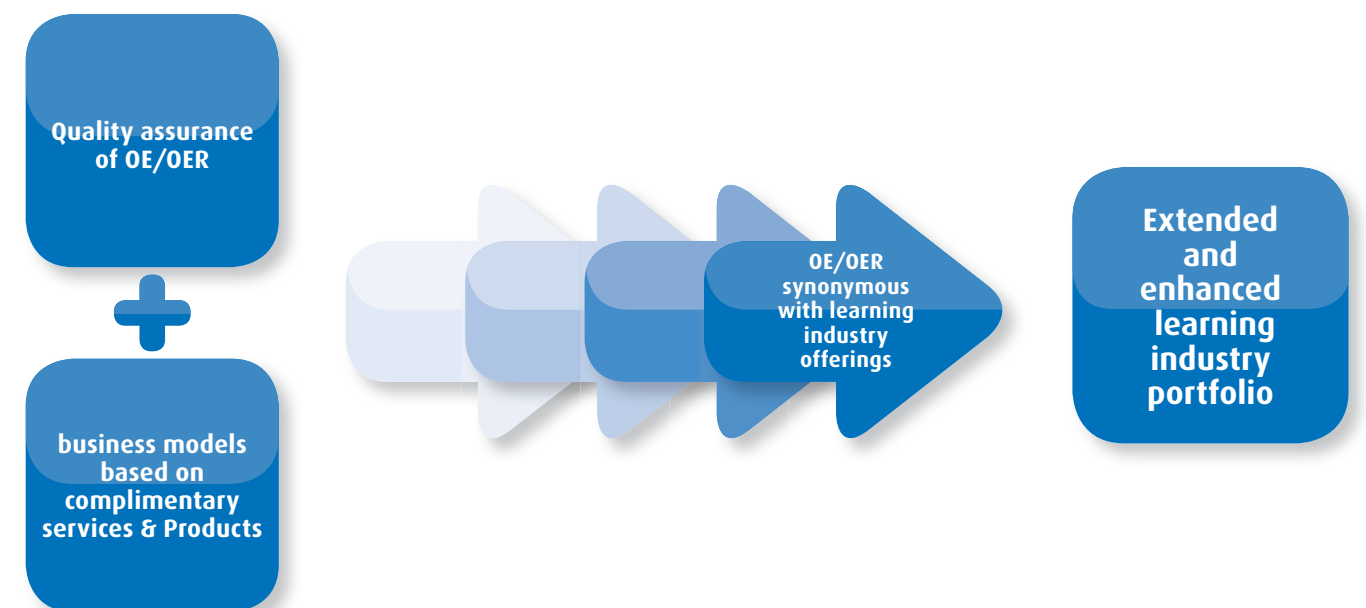

Quality assurance of OE/OER

business models based on complimentary services & Products

OE/OER synonymous with learning industry offerings

Extended and enhanced learning industry portfolio

Figure 3. Embedding OE/OER in the learning industry portfolio

2   source: Wikipedia – "History of Wikipedia" – September 2011

The development of OE/OER is perceived to be reliant on public/grant funding and a social agenda.

Significant public-funding was not needed and was not a part of the development of OSS. Production of OE/OER requires high levels of man-hours to prepare, refresh and manage content on top of a technological infrastructure. Our study showed that respondents believed the production and use of OE and OER was only possible in Europe because Universities, National Governments and the European Commission are primary sources of funding. Commonsense tells us a reliance on this kind of public funding is an unsustainable model for OE and OER in the current European economic climate. But also OSS is not only living on voluntary activities; funding and grants are important in the OSS world as well – but here these are primarily private funds from commercial entities. For example, the Mozilla Foundation benefits from over 75 Mio Euros of yearly grants and distributes funding to many projects in the OSS world. A large donor to Mozilla has been Google[3]. Alternative support-models in the OSS world are donations of code from commercial projects and donations of developer time. An example for this is IBM that donates large developer capacities to Linux. Another example is Moodle that is largely supported by the Open University. These examples also indicate that there is a business strategic element in the commercial support of OSS: it comes as no surprise that the financial support of Google to Mozilla, is closely related to the priority integration of their search function into the Firefox browser.

With few isolated exceptions, no comparable business and funding models have yet emerged in the learning market that would make OE suitably attractive to the commercial sector and independent from public funding. Also the business strategic aspect is less developed. If OE and OER do not develop to include concrete business models which generate real value for the whole, or at least parts of, the learning industry then they are unlikely to prevail. Governmental agencies may do better to provide access to venture capital to seed new innovations and sustainable models for OE, which could see a far wider impact than funding individual projects.

The disconnect between the OE community and commercial learning industry is a barrier to OE's maturity

From the findings of the ELIG survey we would argue that finding a value creating business model, which will drive OE into a new level of maturity, cannot be achieved by the community who have driven OE forward to date on its own. They simply do not have the resources to take OE to the next level. OE cannot develop without a real engagement from the remainder of the learning industry, which includes the commercial sector. On the other hand, the commercial learning industry cannot afford to ignore the force of OE which is so strongly aligned to people's preferences for learning styles in today's world.

The two communities need to establish connections on which they can build a viable marketplace, which includes all we can learn from OE, in keeping with its ethos of free and open access, whilst incorporating commercial models that ensure sustainability for OE and the learning industry. ELIG predicts a strong interdependency between OE and the rest of the learning industry. The commercial viability of the practice of openness in education (OEP) is already evident in the success of learning management tools such as Moodle. Moodle is fundamentally an open-source software solution but also the basis for many open educational practices and commercially very successful. The wide support for open standards by learning platform and technology providers is further underlining commercial viability of OEP.

To what extent do initiatives such as MIT Open Courseware and OU OpenLearn plan to be commercially successful in the long-term initiatives or are they considered to be strategic but come at a cost which the organisation will bear?

3   sources: Wikipedia – "Mozilla Foundation" – September 2011

The experiences from the OSS world indicate that non-commercial and commercial activities can co-exist and become mutually enforcing. In OSS, this has led multiple commercial partners to fund and support open activities.

For OSS, and with the benefit of the hindsight, a mix of pre-commercial collaboration with the IT industry and post-commercial development of specific solutions enabled OSS to develop to a new level. So the learning industry should identify attractive high-value, high-quality initiatives to collaborate on to achieve the true potential for OE. The learning industry should also deeper investigate the strategic possibilities of such OE value constellations.

The Future of Open Education

There is huge enthusiasm, mixed with a sense of uncertainty, for OE from the participants in the survey, seen here in the responses to the question on how the future for open education is seen (Figure 4).

Figure 4. 'How do you see the future for open education?'

ELIG's view is that OE, in the wider sense of content, resources, open technical standards and practices will become a necessity in the learning lives of citizens. How easily it can make that transition is in the hands of the OE community and the wider learning industry together; neither one nor the other can achieve the transition alone. But with a productive interdependency the impact on the learning industry framework could be dramatic, as shown in Figure 5. ELIG, as the primary industry group in Europe, is committed to supporting this productive dialogue[ii].

Predicted OE/OER learning market value chain
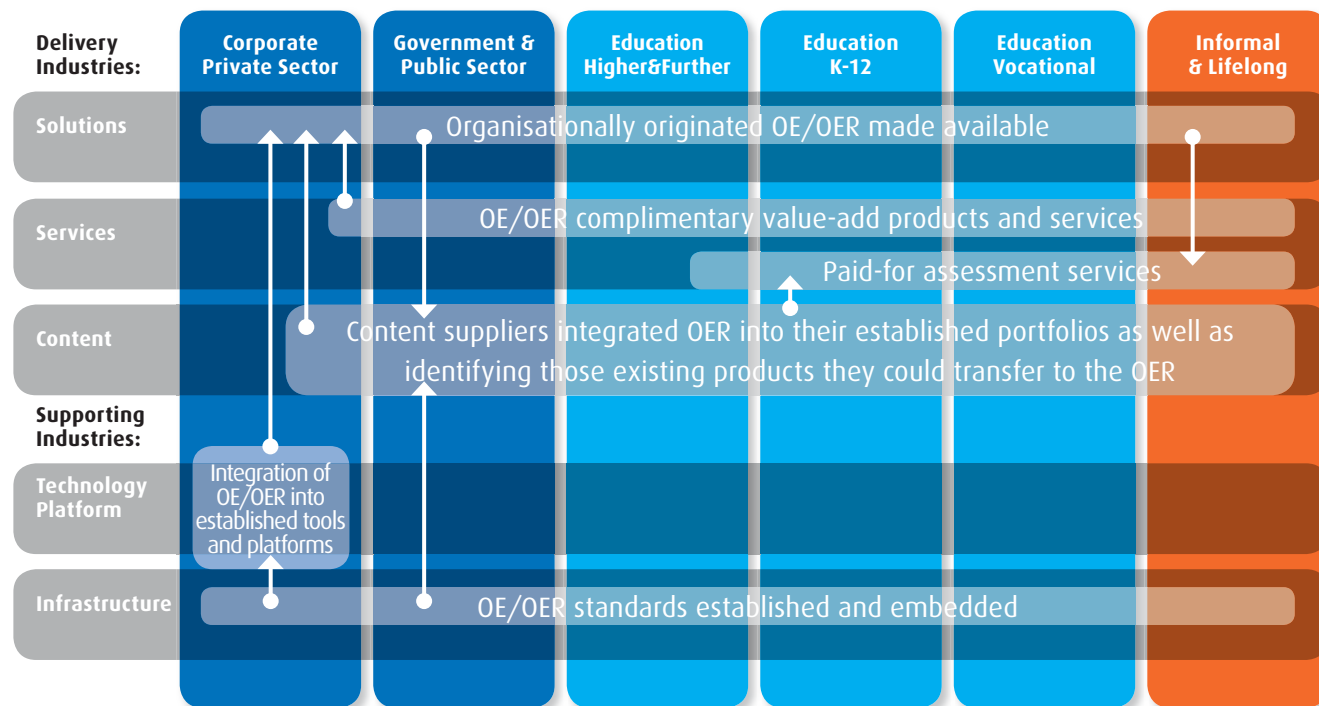
Fig. 5. Predicted European Learning Industry Framework following embedding of open education and open educational resources into extended business models *

Conclusions

It is risky for the commercial segments of the learning industry to ignore OE. But it is more than that. OE also provides an opportunity for the whole industry to create wide impact, innovate in related products and services and to address the needs of new learner groups such as the Internet-savy young generations that are growing up with collaborative and sharing-oriented working and learning schemes. Open education models have already proven to allow engagement of large and global communities (see further OE case examples that were highlighted by our survey participants in the appendix). It is time to discuss how these benefits can be matched with commercial interest and support. Analogies to the world of Open Source Software are helpful in this respect.

A productive discourse between the OE community and the rest of the learning industry needs to continue to the benefit of both. The key to a productive discourse would include:

- The commercial learning industry to appreciate the innovation opportunities, the new cultural and behavioural aspects of OE and to focus on the pragmatic, business strategic and sustainable elements of OE rather than stressing ideological differences.

- The OE community to become aware of the potential business requirements, threats and commercial factors associated with OE in order to drive commercial attention, funding and support to OE.

- A dialogue on the level of pragmatic collaboration opportunities, funding schemes and business models.

- A dialogue with policy makers on funding schemes and procurement policies – e.g. in the public educational sector - that would better support OE commercial activities and not implicitly regard OE as non-commercial.

Bibliography

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Appendix 1: ELIG Open Education Survey Overview

Context
The survey was organized by the European Learning Industry Group (ELIG). ELIG is a neutral observer of diverse open education practices and aims to collect viewpoints from a representative range of stakeholders of the learning industry - including learning provide rs, publishing houses, learning service- or technology providers. This survey is partially funded by the European Commission under the Life Long Learning Programme projects openSE and openED 2.0.

Prior to the survey being initiated it was felt there was a lack of engagement of the learning industry in Open Education. Open Education initiatives were seemingly dominated by academic input and drivers.

The intention of the survey was to

- establish whether these perceptions were true and if so;
- determine why the Learning Industry had not embraced Open Education
- identify the incentives and barriers that learning industry members indicate impact on their level of engagament with open education
- identify examples and gain insight where the Learning Industry is engaged
- uncover business and service models which the Learning Industry might benefit from

Ultimately our purpose is to inform the industry and provide input to EU policy and regulatory direction.

Definitions:
OPEN EDUCATION: An educational offering which offers no barriers to entry, including financial or academic ones

OPEN EDUCATIONAL RESOURCES (OER): digitised materials offered free at the point of use for educators, trainers, students and self-learners to use, re-use and in some cases modify.

OPEN Standards: A technical or conceptual specification that is openely accessible, is used in multiple organisations (e.g. for interfaces, competence models or content formats) and that is royalty free.

OPEN SOURCE SOFTWARE (OSS): open software tools such as learning management systems for which the source code is available under an open licence and that does not imply licence fees.

The survey had seven sections as follows:

- Participant profile (6 questions in the survey)
- Production of open educational resources and open education (12 questions in the survey)
- Use of open educational resources and open education – (13 questions in the survey)
- Current perceptions of OE and OER (7 questions in the survey)
- The future of OER (7 questions in the survey)
- OpenSE and OpenED projects (4 questions from the survey)
- Definitions – definitions of key terms used throughout the survey

An overview of response rate and participant profile

- Good spread of respondents around Europe
- Highest responses from public sectors - TBD, from private sectors – TBD
- Most represented public sector market – HE, most represented private sector market – Corporate Training
- Participants reflect dominance of OE by HE

Number in Survey = 81 (57% public organisation, 26% private for profit, 18% private non-for-profit)

Producers of OE/OER: 43% respondents produce OE & OER, 6% produce OE only, 13% OER only, 39% neither

Users of OE/OER: less than 13% respondents use OE in any capacity, no respondents use OER extensively but 29% use OER to a limited or greater extent

Responses from Europe = 82% - (28% from UK, remainder from Germany, The Netherlands, Spain, France, Belgium, Switzerland, Norway, Finland, Italy, Latvia, Lithuania, Romania, Eire, Greece and Portugal) 18% responses from outside Europe (6% from USA remainder from UAE, Australia, Costa Rica, Tanzania, Kenya, Uganda and Canada)

Most represented sectors = Higher Education (37% respondents)
Research (29%)
Lifelong / Informal learning (25%)
Content (24%)
Technology/ICT (22%)
Corporate Training (20%)
Mobile Learning (16%)

Most represented marketplaces = Higher Education (29%)
Lifelong / Informal learning (21%)
Formal Education – vocational (14%)
Corporate Training (13%)
Formal Education – K12 (11%)
Consultancy (9%)
Knowledge Management (9%)

Most represented roles = C suite (17%)
Innovation & Research Manager (16%)
Tutor / Teacher (11%)
Director (7%)
Professor (6%)
Lecturer (6%)
Content Manager / Owner (6%)
Commercial Manager (4%)
Co-ordinator (4%)

Appendix 2: Key Survey Findings

The survey findings are summarised for each section

- Production of open educational resources and open education (12 questions in the survey)

- Use of open educational resources and open education – (13 questions in the survey)

- Current perceptions of OE and OER (7 questions in the survey)

- The future of OER (7 questions in the survey)

- OpenSE and OpenED projects (4 questions from the survey)

- Definitions – definitions of key terms used throughout the survey

Headlines for Production of OE

- Most OER/OE produced for higher education
- Producers are not driven by profit motives – motives are quite diverse.
- Perceived to be reliant on public / grant funding and social agenda not on concrete business models.
- According to the study barriers for production are mainly time and budget – ELIG would say time and purpose
- More understanding of commercially-relevant business models needed, multiple significant barriers are seen for adopting new business models
- Service models reflect dominance by academia
- OE is not mature (contrast with mature OSS) – this is a practical problem to solve
- EU could drive the evolution of OE faster by putting funding into the commercial sector
- Collaborations and partnerships are important for breaking into new ways of servicing customers
- Recognition of authorship and effort more important than financial gain from producing OER

Types of OE/OER being produced   Question 7

- Most respondents are producing OER/OE for higher education confirming the original hypothesis for this study that academia currently dominates this market

- K – 12 has the least OE/OER produced for it and this is mainly non text-based

- Workplace training – OE/OER mainly for full courses/programmes and non text-based learning – very few producers of OE textbooks

- Knowledge management – mainly producers of text and non-text learning

- Informal learning - mainly producers of text, non-text learning and parts of courses few textbook producers or full course producers

- Gaps – there were no producers of OE textbooks for vocational training

Importance of goals and benefits to the production of OE/OER (Question 8)

- Assisting developing countries and becoming independent of publishers are the least important goals and benefits for production of OE/OER. All other goals and benefits are important to some extent

- The most critically important goals and benefits were conducting research and development and gaining access to the best possible resources

- Also considered very important were creating more flexible materials, improving quality of products and services, and building sustainable partnerships

- Other goals and benefits included raising the awareness of an organisation or making a web site more sticky

Service models utilised for OE/OER producers   Question 9 and 10

- Delivery for free through open access via internet is by far the most popular service model

- Consultancy roles were also cited as a service model for OE/OER (does this mean providing OE/OER as part of a consultancy agreement or using OE/OER to attract consultancy clients)

- 33% of respondents also participate in reciprocal exchange of OER with partners

- Co-branding/co-marketing and co-authoring just as popular as paid subscription/free content models

- Majority do not expect to use any other service models in the next 3 years

- 'Freemium' (fee for services/products but content free) was the only other type of service model being considered for the near future

Business & funding models and drivers for OE production   Question 13 and 14

- Profit is the least critically important driver (and sustainable funding model) for OE production – most important are encouragement of co-operation between organisations for mutual benefit and access to grant / public funding. Also very important to be seen to be contributing to the open education movement

- Public funding seen as critical to the sustainability of OE production. Also funding as part of a social responsibility agenda. Profit is important but seen as the least sustainable funding model.

- Lack of a business model for open content initiatives was seen as a significant barrier to both production and use of OE

Quote from survey "grant funding is great but also need strategy for when it dries up - need to be flexible in approach"

Barriers to the adoption of business models to support the production of OE/OER   Question 35

All the listed barriers are seen as significant barriers except perception of risk to organisational brand which is mainly considered a moderate risk. Significant barriers were:

- Conflict with existing content and service models
- Business case unclear
- Lack of willingness to enter into new business models
- Concern over loss of intellectual property
- Concern over ability to recoup investment & set-up costs
- Perception of commercial risk involved

Participant comment - 'as the accountants do not understand a model where something is given away for free these alternative models are rejected'

Involvement in ventures with other producers of OE/OER

Question 11

- About two thirds of respondents are involved in ventures with other producers and a third of these were looking at cross-nation ventures
- Categories of ventures include
  - Public – Opencourseware Consortium, 2012 Learning Legacy (Olympics legacy venture), African projects, European projects, international university community, Erasmus mundus curriculum
  - Commercial & vertical – Healthcare, Higher education
  - Other Commercial – e.g. LAMS International
  - Operational – content sources, co-location, video production, apple apps production

Barriers to production

Question 12

Major barriers seen as lack of time, lack of reward for employees devoting time and energy and lack of budgetary provision. There do not seem to be major barriers from skills lack, business case, cultural differences in learners or perception of value in OE.

What is important to the producers of OER?

Question 15

- Of least importance to the majority were agreeing proposed changes to the OER before they are made and to have group/dept/organisation financially compensated for the creation of the OER. However it was seen as more important to be personally rewarded in other ways for producing OER such as through workplans, awards, promotions etc.
- Of most importance to the majority were to be acknowledged as the creator whenever the OER is used, changed or adapted and to know how the OER is used.
- Pointed out in comments that there are serious risks associated with changing some content without reference to some recognised authority e.g. food safety content

Use of licenses to claim copyright

Question 16

- CC BY-SA (Creative Commons Attribution ShareAlike) is most used (39%) followed by CC BY (Creative Commons Attribution) (18%) and GNU FDL (Free Documentation License) (11%)
- 18% used no licences
- Others = CC BY_NC_SA (Creative Commons Non Commercial Share Alike), National (Irish HE) licence

Do the producers of OER use OER or OE themselves?

Question 17

- 39% use both
- 25% use OER only
- 7% use OE only
- 30% use neither

Headlines for Use of OE

- Few organisations use OER, even less use OE. Where it is used it comes from diverse sources
- Bringing down cost of learning development is not the main point for using OE
- Most of the current reasons for using OE are commercially valid rather than nice to have
- Room for more innovation in service models for the future
- Value of use of OE and how best to use it are not well understood
- Not seen as having particularly commercial drivers
- Free content with payment for assessment or accreditation look like important models for sustainability in the use of OE/OER
- Users want to know where OERs originate from and acknowledge the originator

Use of OER & OE

Question 18 and 19

- less than 13% respondents use OE in any capacity, no respondents use OER extensively but 29% use OER to a limited or greater extent
- of the users of OER 48% use it in the same way between countries, nationalities and employees

How are organisations using OE/OER with different groups of learners? (Question 22)

- The highest use across all categories of OE/OER is with learners in higher education

Where do OERs provided come from? (Question 20)

- Only 23% of organisations providing OER produce all of it in house and only 18% freely download all of it from the internet. None purchase of of it or take all of it from collaborations
- The most common profile is less than 20% comes from any one source (In-house, internet, co-operation with another organisation or purchased

Drivers for encouraging the use of OE/OER

Question 27

- The most important drivers are
  - encourage co-operation betwen organisations for mutual benefit
  - to access grant/public funding
  - to reduce development costs
  - to be seen to be contributing to the open education movement

But none of these is regarded as especially critical.

- Notions of accessing funding or turning a profit do not feature as especially important

Benefits and barriers to use of OE

Question 23 and 26

- No single outstanding benefit driving the use of OE

- Top 5 most important reasons are gaining access to the best possible resources, promoting scientific research and education as publicly open activities, bringing down costs for students and customers, creating more flexible materials, improving quality of products and services

- No single critical barrier for using OE but top two barriers are no perceived value in open education and lack of understanding of how to use open education.

Service models for use of OE

Question 24 and 25

- By far the most common service model is delivery for free through open access via internet (87% of responses)

- All other service models were utilised by at least 25% of respondents suggesting broad range of service models are utilised.

- Not many alternative service models anticipated – Fremium model (Freemium is a business model that works by offering a basic product or service free of charge (such as software, web services or other) while charging a premium for advanced features, functionality, or related products and services) and a shift to co-creation of flexible curricula mentioned as next steps

Rating of different commercial models for providing sustainable revenue for the use of OE/OER

Question 28

- Diverse views but grant/public funding and free content but payment for learning assessment stand out in the critically important group.

- Free content but payment for learning assessment stands out as an overidingly important driver as does free content but payment for learning accreditation and funding by own organisation to strengthen R&D/innovation

- Fully funded for profit whilst not unimportant as a sustainable revenue model shows a shift aware from importance compared to other models i.e. it is the most unimportant model.

Barriers to the adoption of business models to support the use of OE/OER

Question 36

- Conflict with existing content and service models &Business case unclear are mainly seen as sig nificant hurdles.

- Lack of willingness to enter into new business models, Concern over loss of intellectual property and Perception of risk to organisational brand

- are mainly seen as moderate barriers

- Perception of the commercial risk involved is seen mainly as a slight barrier

- Participant comment: not-made-here syndrome and the role and autonomy of teachers is a significant barrier

What do users of OE/OER see as important?

Question 29

- Users feel it is important to acknowledge the originators of OER, even when it may have been adapted or changed by someone else and to know who produced it. Informing the originator of changes seemed important too.

- Similar to producers users do not see personal compensation or reward for OER as particularly important. Quality reviews do not seem especially important to users either

License preferences by users of OE/OER

Question 30

- CC BY-SA (Creative Commons Attribution ShareAlike) is preferred (46%) followed by CC BY (Creative Commons Attribution) (41%) and GNU FDL (Free Documentation License) (14%)

- 14% prefer no licence

- Others = CC BY_NC_SA (Creative Commons Non Commercial Share Alike

Headlines for current perception of OE & OER

- Regardless of academic definitions OE means the following to people - free of cost, free to access and independent of location and time, regardless of who the learner is

- For some OE has implicit political and philosophical meaning

- Strong perception as a 'fringe' rather than 'mainstream' activity valued more for informal learning and lifelong learning than commercial activities such as Corporate Training and Organisational Knowledge Management.

- Little understanding and involvement in all the aspects of open learning practices, tools and facilities that could be brought to bear in OE

- MIT is the most cited example of good OER

The perceived value of OE/OER

Question 34

- In the main OE/OER is perceived as very highly valued for Lifelong Learning and Informal Learning and highly value for K-12 education but only quite valued for HE and Formal Vocational Training. In contrast it is perceived as hardly valued for Corporate Training and Organisational Knowledge Management.

How widely used are various open education practices?

Question 37 and 38

- Open software tools (e.g. LMS) and social technologies are most widely used.

- Specific open standards for learning and certification of open learning are least widely used

- Open materials for building elearniing capability amoung employees, open assessment tools, open facilitation of learning, and open feedback tools were in general used very little

- Participant quote: "In general most in education are unaware or confused on the value and use of OER"

- The majority of participating organisations had little involve with any of the educational practices included in the survey

- The practices organisations were least involved with were open standards for learning and certification of open learning

- The practices they were most involved with were open learning forums and social technologies.

In the words of the participants what being 'open' in an educational context means to them   Question 32

Key themes are primarily content that is free of cost, free to access and independent of location and time, regardless of who the learner is.

However many include a notion of the purpose of being 'open' i.e. for creating opportunities for change, for re-use or for common good and collaboration. Often associated just with the self-learner. Most focus on the learner, only one participant saw open education as content for teaching.

For many openness is a political state that represents either a democratic development model free from control and therefore implying free to grow quickly or a mechanism for democratising education.

Some refer to the openness as the state of mind of the learner rather than the resource i.e. 'open to people, places, methods and ideas or free to chooose.

Quality seems to be implied by many in the term 'open' which could be seen to be in conflict with the seeming lack of control over content that many associate with openness.

So open education is used as a term of purpose, a philosophical concept and a political concept. Given there is no single universally accepted definition for open education it is no wonder there is such a broad interpretation of what it means, what it is for and its value is. Moreover the philosophical and political colouration of open education seems to hold it in place in peoples minds as a 'fringe' rather than mainstream activity or an activity that could, in the future, be the cornerstone of education for the global population.

Headlines for the future of OE/OER

- ♀ Limited plans by organisations for increasing their use of OER and even more limited for use of OE.
- ♀ Open standards are considered very important for learning and killer application for Open Standards in future is learning content and it's structure and semantics
- ♀ European or National open standard platforms provided by public/private partnerships are much more likely to be accepted than those provided by commercial service providers
- ♀ There is general optimism about the future of OE but uncertainty on the exact form the future will take and the recognition of many challenges, technical and commercial
- ♀ The majority believe OSS will be beneficial to building shared platforms for education

Do organisations plan to increase their use of OE/OER   Question 21

- ♀ For OE and OER the majority say their organisation will increase its use in principle but it is not specifically in their plan
- ♀ More respondents say they will increase their use of OER (and they have either included it in the plan or are actively do so) than their use of OE

The use and creation of specific Open Standards for learning   Question 40

- ♀ 84.8% of respondents consider the use and creation of specific open standards for learning to be important.

Most applicable domains for use and creation of open standards   Question 41

- ♀ Learning content was considered the most applicable domain, closely followed by structure and semantics of learning content, technical interfaces and competencies.

Willingness to use an open standard-based platform,   Question 42
shared by multiple providers for use or production of education

- ♀ Respondents are strongly unwilling to use a platform provided by a commercial service provider. A platform from a specific or group of educational institutions or a public/private partnership at national, european or international level was considered much more acceptable.

Challenges for using an open standard based shared platform   Question 43
for the production or use of education

- ♀ All the challenges respondents were asked about were recognised as challenges at a significant level. The most significant were security issues, support issues and language options, the least significant was technical functionality.

Role of open source software (OSS) in building a shared platform   Question 45
for the production or use of education

- ♀ Although the majority of respondents believe OSS is beneficial to building a shared platform for education some of the reasons given are quite diverse
    - – simply useful for people to use same/similar platform for interoperability and sharing
    - – reasonable to build any shared OE activities on top of something that is about openness, collaboration and mutual benefit
    - – particularly useful for eLearning solutions like Moodle
    - – OSS model delivers education at a lower cost

Market Segments (purchasers)

- ♀ Corporate, private market
- ♀ Corporate, public market
- ♀ Higher education
- ♀ Further education
- ♀ K – 12 education
- ♀ Vocational education
- ♀ Informal and lifelong

Industry Segments (suppliers)

- ♀ Solutions providers – includes mobile, cloud and innovation solutions
- ♀ Services providers – includes project management, communications services, knowledge management services, consultancy, distance services, blended learning services and training services
- ♀ Content providers – includes traditional and new media publishers
- ♀ Technology providers – includes traditional ICT, new media technology, mobile technology and cloud technology
- ♀ Infrastructure providers – includes the infrastructure for new media, mobile and cloud and the physical infrastructure for training centres, libraries, universities, colleges and schools

Appendix 3:

Good examples of open educational resources production or use

Question 33

Top five examples of good OER, in order

- MIT (33%)
- Wikipedia (15%)
- Opencourseware Consortium (11%)
- OU UK Open Learn (11%)
- TESSA (Teacher Education in Sub-Saharan Africa) (7%)

All examples given:

Example	Describtion	URL
Digischool	an educational website maintained by approximately 35 teachers from primary and secondary schools throughout the Netherlands	www.digischool.nl
OpenCourseWare Consortiuum	a collaboration of higher education institutions and associated organizations from around the world creating a broad and deep body of open educational content using a shared model	www.ocwconsortium.org
JISC Score	Support Centre for Open Resources in Education (Open Uni UK)	http://www8.open.ac.uk/score/
Rice University Connexions	dynamic digital educational ecosystem consisting of an educational content repository and a content management system	http://cnx.org/
MIT Open Courseware	a web-based publication of virtually all MIT course content.	http://ocw.mit.edu/index.htm
OpenLearn	OpenLearn gives you free access to learning materials from The Open University, UK	http://openlearn.open.ac.uk/
JISC UKOER programme	A £5M programme for the release, use and discovery of OER	http://www.jisc.ac.uk/oer
WikiWijs OER Africa	Dutch Government initiative. An open entry site for learning materials	http://www.wikiwijs.nl/sector/
TESSA	Open education resources for teachers in Africa	http://www.tessafrica.net/

Example	Describtion	URL
Stanford University	an institutional repository that makes publicly available the working papers, published articles, and other materials produced by the faculty, staff, and students at Stanford University School of Education.	http://openarchive.stanford.edu/
Open Spires Oxford University	OpenSpires makes Oxford podcasts available as Open Content Resources (OER); content that is available for reuse and redistribution by third parties globally, provided that it is used in a non-commercial way and is attributed to its creator	http://openspires.oucs.ox.ac.uk/
HEAT programme (OU UK)	Health Education and Training	http://www.open.ac.uk/africa/heat/
JorumOpen	Through Jorum, you can find, share and discuss learning and teaching resources, shared by the UK Further and Higher Education community.	http://www.jorum.ac.uk/
LabSpace (part of OpenLearn)	OpenLearn's LabSpace makes many different open educational resources (OER) available to you from a wider OER community associated with The Open University. You are encouraged to take away, re-use and remix these open educational resources to suit your needs as an educator. Content and Tools.	http://labspace.open.ac.uk/
NeuroBlend project	neuro blend is an international framework for blended learning neuroscience nurses	http://www.neurorevalidatie.nl/neuroblend1.html
LAMS (LAMS International)	LAMS is a tool for designing, managing and delivering online collaborative learning activities	http://www.lamsinternational.com/
Wikipedia	Free encyclopeadia that anyone can edit	http://en.wikipedia.org/wiki/Main_Page
MIUR SOS students project Rai educational		http://www.educational.rai.it/
The Khan Academy	The Khan Academy is an organization on a mission. We're a not-for-profit with the goal of changing education for the better by providing a free world-class education to anyone anywhere	http://www.khanacademy.org/

Example	Describtion	URL
GLOBE	GLOBE (Global Learning Objects Brokering Exchange) is a one-stop-shop for learning resource broker organizations, each of them managing and/or federating one or more learning object repositories. GLOBE makes a suite of online services and tools available to its members for the exchange of learning resources	http://www.globe-info.org/
TED	a nonprofit devoted to Ideas Worth Spreading	http://www.ted.com/
Wikiversity	a Wikimedia Foundation project devoted to learning resources, learning projects, and research for use in all levels, types, and styles of education from pre-school to university, including professional training and informal learning.	http://en.wikiversity.org/wiki/Wikiversity:Main_Page
Progetto TRIO	the web-based learning system in use in Italy's Tuscany Region, is helping individuals enhance their skills. TRIO makes available, to citizens, public and private organizations, a free catalogue of over 1,600 training courses covering 16 thematic areas.	www.progettotrio.it
TRAKLA2	an open source project originally developed in Helsinki University of Technology, but now-a-days hosted by a company called By The Mark	http://www.cse.hut.fi/en/research/SVG/TRAKLA2/ http://www.bythemark.com/
World Bank Development Reports		http://wdr2011.worldbank.org/home
OpenScout	OpenScout stands for „Skill based scouting of open user-generated and community-improved content for management education and training.	http://www.openscout.net/

openED

openSE
open educational framework for
computer science Software Engineering

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openED
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open educational environments

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