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**EU-StORe**  
**Research paper**  
**Research on open learning material and open  
educational resources**

**Partner 2- University of Paderborn**

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## **Research on open learning material and open educational resources**

Open education resources received a high interest in the 21<sup>st</sup> century of teaching and learning. With the title “Giving knowledge for free- the emergence of open educational resources” of the year 2007 the OECD describes an extraordinary trend in higher education. Learning resources as an intellectual property become more and more a resource for everybody. Institutions and individuals are sharing digital learning and teaching resources over the internet openly and without any charges and costs.<sup>1</sup> This kind of shared materials are called OER- Open Education Resources.

The UNESCO (2002) defines OER as follows:

*“The open provision of educational resources, enabled by information and communication technologies, for consultation, use and adaptation by a community of users for non-commercial purposes.”<sup>2</sup>*

The European Commission describes OER with the following words:

*“Digitised materials offered freely and openly for educators, students and self- learners to use and reuse for teaching, learning and research; it includes learning content, software tools to develop, use and distribute content, and implementation resources such as open licenses; OER also refers to accumulated digital assets that can be adjusted and which provide benefits without restricting the possibilities for others to enjoy them (Ibid.).”<sup>3</sup>*

In the simplest form the concept of OER describes any educational resources and materials that are openly available for use by educators, teachers, students and everyone who is interested in this kind of educational resource.

Anyone with internet access can download different types of teaching and learning materials. One of the first universities which provide a wide range of OER is the Massachusetts Institute of Technology (MIT). OER can include learning software, use and distribute content, learning and teaching content, worksheets, curriculum maps, course materials and implementation

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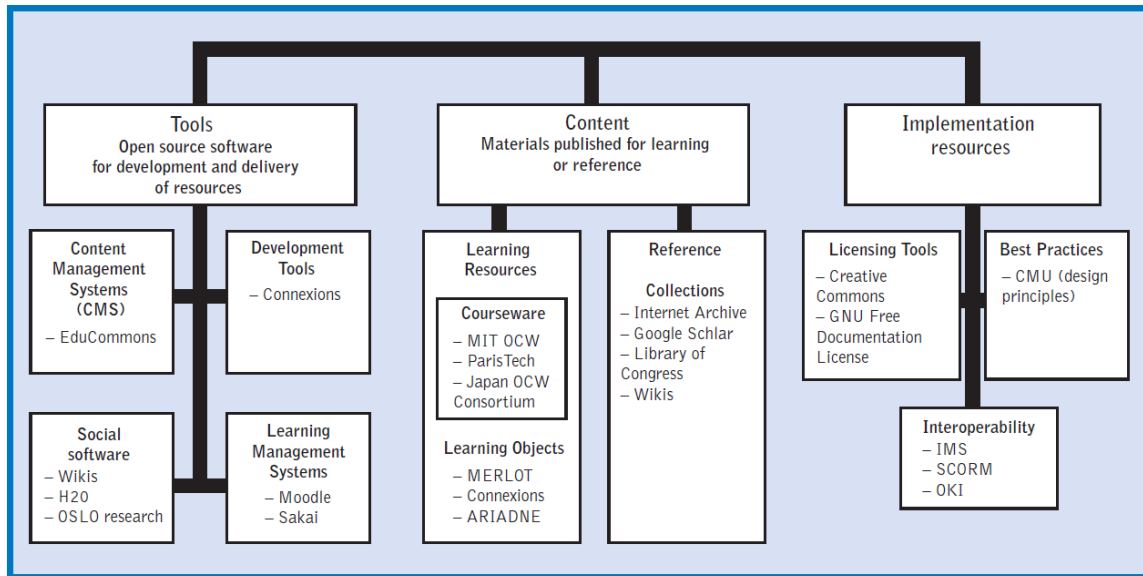
<sup>1</sup> OECD (2007): IMHE Info, Programme on Institutional Management in Higher Education, July 2007.

<sup>2</sup> UNESCO, Final Report (2002): Forum on the Impact of Open Courseware for Higher Education in Developing Countries, p. 25.

<sup>3</sup> [http://ec.europa.eu/education/ects/users-guide/glossary\\_en.htm#open-educational-resources](http://ec.europa.eu/education/ects/users-guide/glossary_en.htm#open-educational-resources), Stand 28.10.2015.

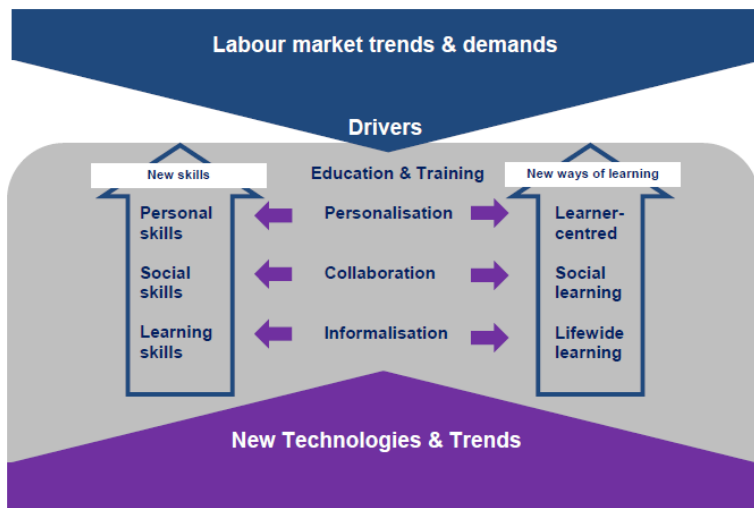
resources such as open licenses.<sup>4</sup> Moreover, the learning objectives can include websites, simulations, sound and audios, images, pictures, text files and many more different resources.

The conceptual map by Margulies (2005) illustrates the different elements of OER:



Source: Margulies, 2005.<sup>5</sup>

With the focus of the influence of new technologies and new media, the educational sector



has to become open to integrate the trends and visions into the daily life of classroom education, training, teaching and support. In cooperation with the IPTS 2011 the European Commission shows the influence of the new media and technology in the following graphic.

Graphic: Conceptual map of the future of learning<sup>6</sup>

<sup>4</sup> See <http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52013SC0341&from=EN>, p. 6. Based on IPTS 2011, p. 43.

e, OECD (2007): IMHE Info, Programme on Institutional Management in Higher Education, July 2007.

<sup>5</sup> See, OECD (2007): IMHE Info, Programme on Institutional Management in Higher Education, July 2007.

The future trend, which is the European Commission 2013 calls “Opening- up Education” will be boosted with the following future trends, too:

**“Constants amongst the change**

1. *The world of work is increasingly global and increasingly collaborative.*
2. *People expect to work, learn, socialise, and play whenever and wherever they want to.*
3. *The Internet is becoming a global mobile network — and already is at its edges.*
4. *The technologies we use are increasingly cloud-based and delivered over utility networks, facilitating the rapid growth of online videos and rich media.*
5. *Openness — concepts like open content, open data, and open resources, along with notions of transparency and easy access to data and information — is moving from a trend to a value for much of the world.*
6. *Legal notions of ownership and privacy lag behind the practices common in society.*
7. *Real challenges of access, efficiency, and scale are redefining what we mean by quality and success.*
8. *The Internet is constantly challenging us to rethink learning and education, while refining our notion of literacy.*
9. *There is a rise in informal learning as individual needs are redefining schools, universities, and training.*
10. *Business models across the education ecosystem are changing.*

**Ten future technological trends**

1. *e-Books: dynamic formats, and innovative uses*
2. *Publisher-led short courses: offering self-directed, CPD learning opportunities;*
3. *Assessment for Learning: changing the focus of assessment from assessment of learning outcomes towards assessment for feedback to enhance the learning;*
4. *Badges: awarding ‘non-formal learning’ through a widely-recognised honour or badge system;*
5. *MOOCs: massive open online courses bring open-access education to the masses;*
6. *Changing nature of academic publishing: the continued development of open-access scholarly publishing initiatives;*
7. *Seamless Learning: learning across multiple locations, platforms, formats in a continued way;*
8. *Learning Analytics: emphasis on obtaining data to learn more about the learner and their contexts in an effort to improve learning opportunities;*
9. *Personal Inquiry Learning: focus on the learner as an active, exploratory learning agent involved in discovery and inquiry learning processes;*
10. *Rhizomatic Learning: learning occurring through multi-facets/avenues of inquiry, taking contexts and previous knowledge and experiences into consideration, using social and personalsources of learning to foster a personal learning network.”<sup>7</sup>*

Reading the trends and the amount of changes it is clear, that the topics all around OER has to be forwarded by the educational sector to stick with the 21th century.

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<sup>7</sup> <http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52013SC0341&from=EN>, page 6.

Based on: The Future of Education: The 2013 NMC Horizon Project Summit Communiqué. <http://www.nmc.org/pdf/2013-Horizon-Project-Summit-Communiqué.pdf> and Sharples 2012: UK Open University’s Innovating Pedagogy 2012 Report [http://www.open.ac.uk/personalpages/mike.sharples/Reports/Innovating\\_Pedagogy\\_report\\_July\\_2012.pdf](http://www.open.ac.uk/personalpages/mike.sharples/Reports/Innovating_Pedagogy_report_July_2012.pdf).

## Idea of Sharing

The idea of sharing and free education is not new, quite the contrary, one of the basic characteristics of education is to share knowledge, insights and information with others, upon which new knowledge, skills, ideas and building of understanding.<sup>8</sup>

One new aspect of shared knowledge has to be seen in combination with our new, intercultural, global and online environment. The importance to share learning resources increase in the last century. People want to learn, but in a free and individual environment. Never before, was a bigger discussion about work-life-balance and the fitting of business and family. With the opportunity of OER, everyone, can manage his learning time individual and based to his private live.

Today, there is a strong community and many different platforms which provide the OER. The reasons for institutions and individuals to use, to produce and to share OER can be totally different. So can be mentioned altruistic or community supportive reasons as well as widening participation in higher education.<sup>9</sup>

One of the biggest German OER platform is 4teachers.de. This platform provides OER from teachers for teachers and includes many different subjects and their working materials. The majority of producers of resources and OER projects are located in English- speaking countries. In 2007 the OECD identified over 3000 open courseware courses from over 300 universities.<sup>10</sup>

Attached there is a short overview of some German- language OER platforms:

<b>4 teacher GmbH</b>	<a href="http://www.4teachers.de/?action=show&amp;id=9">http://www.4teachers.de/?action=show&amp;id=9</a>
<b>Deutsches Institut für Internationale Pädagogische Forschung (DIPF)</b>	<a href="http://www.edutags.de/suche/0?search=Oer">http://www.edutags.de/suche/0?search=Oer</a>
<b>Elixier</b>	<a href="http://www.bildungserver.de/elixier/">http://www.bildungserver.de/elixier/</a>
<b>Landesbildungsserver des Landes Baden-Württemberg</b>	<a href="http://www.schule-bw.de/aktuelles/">http://www.schule-bw.de/aktuelles/</a>
<b>Schweizer Medieninstitut für Bildung und Kultur</b>	<a href="http://biblio.educa.ch/de">http://biblio.educa.ch/de</a>

<sup>8</sup> See, <http://www.oeconsortium.org/about-oecon/>.

<sup>9</sup> See, OECD (2007): IMHE Info, Programme on Institutional Management in Higher Education, July 2007.

<sup>10</sup> Neil Butcher, Asha Kanwar, Stamenka Uvalic- Trumbic (2011): Open Educational Resources (OER).

<b>Schweizer Medieninstitut für Bildung und Kultur</b>	<a href="http://unterricht.educa.ch/de/search/worksheet">http://unterricht.educa.ch/de/search/worksheet</a>
<b>Jörh Pöhland- Diplomlehrer für Fremdsprachen</b>	<a href="http://www.englisch-hilfen.de/lehrer/">http://www.englisch-hilfen.de/lehrer/</a>
<b>2013 Medienberatung NRW, Bertha-von-Suttner-Platz 1, 40227 Düsseldorf</b>	<a href="http://www.learnline.schulministerium.nrw.de/learnline/search?search=Arbeitsbl%C3%A4tter&amp;edmond[]=">http://www.learnline.schulministerium.nrw.de/learnline/search?search=Arbeitsbl%C3%A4tter&amp;edmond[]=</a>
<b>Metz &amp; Metz GbR</b>	<a href="http://www.lehrerfreund.de/schule/kat/unterrichtsmaterial">http://www.lehrerfreund.de/schule/kat/unterrichtsmaterial</a>
<b>Eduversum GmbH</b>	<a href="http://www.lehrer-online.de/unterricht.php?sid=20566645050066769842710891089120">http://www.lehrer-online.de/unterricht.php?sid=20566645050066769842710891089120</a>
<b>rpi-virtuell</b>	<a href="http://www.rpi-virtuell.net/material">http://www.rpi-virtuell.net/material</a>
<b>Projekt am Historischen Institut-Universität zu Köln</b>	<a href="http://www.segu-geschichte.de/">http://www.segu-geschichte.de/</a>
<b>Serlo</b>	<a href="https://de.serlo.org/">https://de.serlo.org/</a>
<b>TarGroup Media GmbH &amp; Co. KG</b>	<a href="http://www.bwl24.net/skripte/">http://www.bwl24.net/skripte/</a>
<b>Uniwise Media UG</b>	<a href="http://www.unidog.de/#d=5&amp;o=rating&amp;t=fi,1,bb.,&amp;h=5">http://www.unidog.de/#d=5&amp;o=rating&amp;t=fi,1,bb.,&amp;h=5</a>
<b>Eduversum GmbH</b>	<a href="http://www.lehrer-online.de/grundschule.php?sid=21800850413059143430977137713310">http://www.lehrer-online.de/grundschule.php?sid=21800850413059143430977137713310</a>
<b>WS- IT GmbH: web solution-informations technologie</b>	<a href="http://vs-material.wegerer.at/inhalt01.html">http://vs-material.wegerer.at/inhalt01.html</a>
<b>Simplicity GmbH</b>	<a href="http://www.wiwi-treff.de/home/index.php?mainkatid=1&amp;katid=12&amp;sid=41&amp;limit=">http://www.wiwi-treff.de/home/index.php?mainkatid=1&amp;katid=12&amp;sid=41&amp;limit=</a>
<b>LegaKids-Stiftungs GmbH</b>	<a href="http://www.legakids.net/eltern-lehrer/info-ueber-lrs-co/neues/">http://www.legakids.net/eltern-lehrer/info-ueber-lrs-co/neues/</a>
<b>Kerstin Breuer</b>	<a href="http://materialwiese.blogspot.de/p/kostenlos.html">http://materialwiese.blogspot.de/p/kostenlos.html</a>
<b>Pharetis GmbH</b>	<a href="http://www.uniturm.de/alle-unterlagen/0?order_by=subject_name&amp;sort=desc">http://www.uniturm.de/alle-unterlagen/0?order_by=subject_name&amp;sort=desc</a>



<b>Lernbiene Verlag GmbH</b>	<a href="http://www.lernbiene.de/gratisdownloads.html">http://www.lernbiene.de/gratisdownloads.html</a>
<b>Bundesministerium für Bildung und Forschung</b>	<a href="http://www.bmbf.de/de/6201.php">http://www.bmbf.de/de/6201.php</a>

### **Why are people sharing for free?**

On fundamental question anyone arguing for free and open sharing of documents, contents, pictures, audios and all kind of educational materials has to answer the question- WHY? why should individuals give anything away for free? And what can be possible gains for doing this?

This question and some other regarding this topic has to be explored for a better understanding of human behavior in sharing their knowledge. The OECD (2007a) give some first research results why individuals, institutions as well as governments producing and sharing their intellectual properties. The causes of sharing and producing educational materials as well as other OERs of can be divided into different topics:

- Technological drivers
- Economical drivers
- Social drivers
- Legal drivers
- Altruistic drivers
- Etc.

In summary there can be intrinsic and extrinsic motivations which initiate the individuals and companies to this behavior.<sup>11</sup> For OER- platform providers this information is essential for the work with the providers and is an essential prerequisite for an online community's longterm existence.

Moreover, the barriers of internet access and the opportunity of using the internet periodically has decrease in the last century for a wide amount of people all over the world. Even citizens of rural countries are connected with the World Wide Web and use this media for knowledge exchange, sharing and to stay in connect with friends and family. Furthermore, the economic costs decrease for broadband, hardware and software and the willingness to share, contribute and create online communities increased.<sup>12</sup>

The table: drivers, inhibitors and motivations for developing and sharing open educational resources give an overview of the OECD research 2007a:

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<sup>11</sup> Rheinberg, 2004: Motivationsdiagnostic, Hogrefe Verlag. OECD, 2007a: Giving Knowledge for free, the emergence of open educational resources, p. 57- 70.

<sup>12</sup> Ibid.



<b>Governments</b>	<b>Institutions</b>	<b>Individuals</b>
Widening participation in higher education	Altruistic reasons	Altruistic or community supportive reasons
Bridge the gap between non-formal, informal and formal learning	Leverage on taxpayers' money by allowing free sharing and reuse between institutions	Personal non-monetary gain
Promote lifelong learning	"What you give, you receive back improved"	Commercial reasons
	Good public relations and showcase to attract new students	It is not worth the effort to keep the resource closed
	Growing competition – new cost recovery models are needed	
	Stimulate internal improvement, innovation and reuse	

<b>Underlying drivers</b>	<b>Underlying inhibitors</b>
Technical: Increased broadband availability; increased hard drive capacity and processing speed; new and improved technologies to create, distribute and share content; simpler software for creating, editing and remixing.	Technical: Lack of broadband and other technical innovations
Economic: Lower costs for broadband, hardware and software; new economic models built around free content for recovering costs.	Economic: Lack of resources to invest in broadband, hardware and software. Difficulties to cover costs for developing OER or sustaining an OER project in the long run.
Social: Increased use of broadband, the desire for interactivity, increased skills and willingness to share, contribute and create online communities.	Social: Absence of technical skills, unwillingness to share or use resources produced by someone else.
Legal: New licensing regimes facilitating sharing of free content.	Legal: Prohibition to use copyrighted materials without consent.

Table: OECD (2007a), p. 70.

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## **Licenses on OER**

Because of the fact, that OER are free and not include any charge for using the materials we need to focus at the topic free. A problem can occur if the author doesn't refer to any kind of open licenses. So the user is not allowed to work free with the resource.

Therefore, there are several open content licenses developed like the Creative Commons and the GNU Free Documentation Licence. Open licensing provides a way of controlled sharing with some rights reserved to the author and have the benefit of introducing certainty and clarity into the process of obtaining permission to use the work of others.<sup>13</sup> It reduce the administrative burden of having to clear rights.

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The author can decide between six different stages of licenses which allows e.g. commercial use or not, rewrite the document or not etc.

Attached the licenses different types of Creative Commons:

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<sup>13</sup> See, Jan Hylén (2006): Open Educational Resources: Opportunities and Challenges, p. 3..

<sup>14</sup> <http://creativecommons.org/about> (Feb. 2015)

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Source: The Licenses<sup>15</sup>

## OER and open access publishing

Moreover, there is a difference between OER and open access publishing, what shows that the open access publishing is nearly related but distinct from OER, too. While open access is typically referring to all kind of research publications of some kind released under an open license, OER refers to teaching and learning materials released under such a license.<sup>16</sup>

<sup>15</sup> <http://creativecommons.org/licenses/?lang=en>

<sup>16</sup> Neil Butcher, Asha Kanwar, Stamenka Uvalic-Trumbic (2011): Open Educational Resources (OER) p.9.



## References

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**Neil Butcher, Asha Kanwar, Stamenka Uvalic- Trumbic (2011): Open Educational Resources (OER).**

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**OECD (2007): IMHE Info, Programme on Institutional Management in Higher Education, July 2007.**

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**OECD (2007a): Giving Knowledge for Free, the emergence of open educational resources.**

**Link: <http://www.oecd-ilibrary.org/docserver/download/9607041e.pdf?expires=1440140005&id=id&accname=ocid177295&checksum=A99E92B533BA1BA1CC5A0C64D3839885>**

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**See, Jan Hylén (2006): Open Educational Resources: Opportunities and Challenges.**

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## Online References

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