Article 1 -
Does the phenomenon of Open Educational Resources lead to new didactic models? "It depends"

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Do OER didactics actually exist?

This contribution starts with the question of whether there is a direct relationship between OER and didactics. Is there such a thing as "OER didactics"? In the same way as a decade ago the usefulness and need for specific digital didactics were questioned,[1] one can also raise questions regarding specific didactics for OER. Simons (2003) defined digital didactics as "knowledge and expertise regarding the use of ICT to facilitate learning". A parallel definition of OER didactics would therefore be: "knowledge and expertise regarding the use of OER to facilitate learning". More generally, one might define specific didactic models as "knowledge and expertise regarding the use of X to facilitate learning", with X then being replaced by specific tools or technologies, for example online video, virtual worlds, or serious games. The question is then: Is it in fact valuable to think of specific didactic theories, models, or practices specifically for Open Educational Resources? Are OER didactics a specific discipline within digital didactics, or within didactics in general?

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1 Simons, P.R.J. (2003). Eindelijk aandacht voor didactiek van e-learning. HRD-Thema: E-learning: meerwaarde of meer van hetzelfde, Volume: 4 (2003), pp. 18–26.

What drives didactic innovation?

Is the existence and increasing availability and accessibility of Open Educational Resources in itself a reason for changes in the practice of teaching and learning – i.e. for educational innovation? Or is there, rather, a broader palette of intervening developments regarding digital learning materials, digital media, and digital social networks that help determine new trends in didactic concepts in higher education? The authors of the recent report *The Future of Learning*[2] distinguish a number of simultaneous ICT trends, with OER being only one of many, as shown in Figure 1 below. The report identifies three trends in the thinking and practice of education: (a) an increasing emphasis on personalisation, (b) the growing importance of collaboration, and (c) an increase in informal learning. Besides these three general trends, we ourselves identify a fourth – albeit a less clear-cut one – namely a growing movement that strives for "Open Education" in the broad sense, focusing on the broader accessibility of education in the light of globalisation and technological development. We consider that the didactic use of OER can be seen as part of that more fundamental movement towards openness, embedded in a much-changing context of education and learning, as shown in Figure 1.
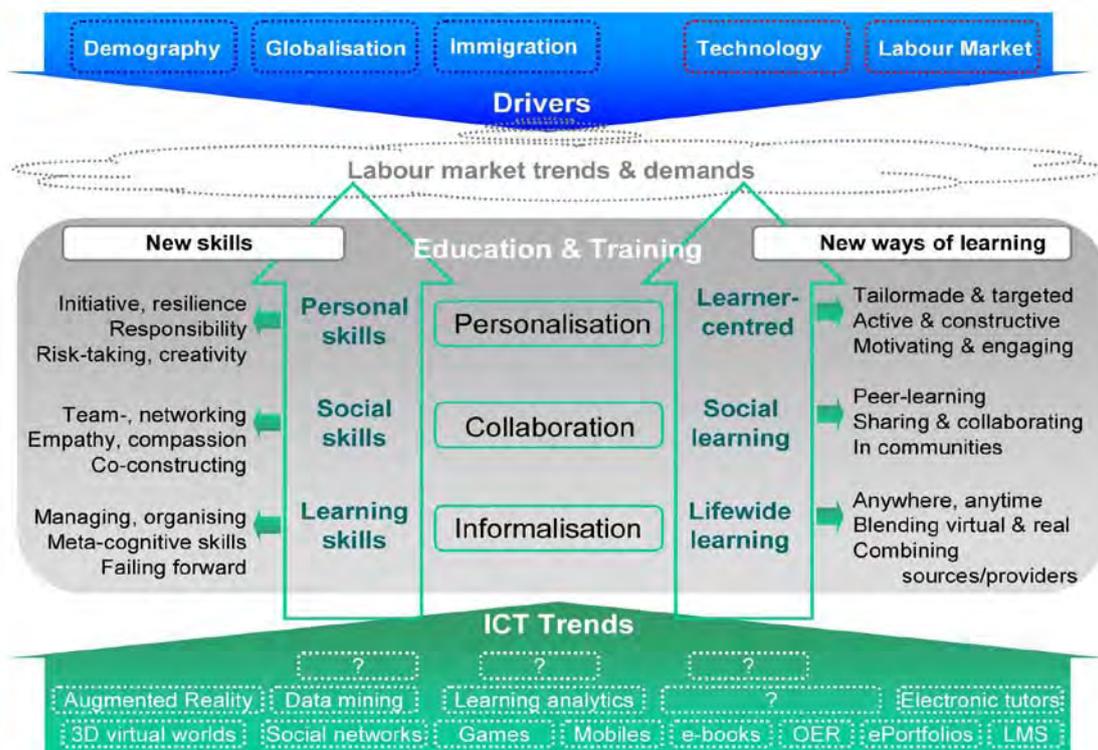
Figure 1: Conceptual chart of the future of learning (Redecker et al. 2011, p. 43)

To summarise: our position at the start of this article is that there is no simple direct relationship between OER and possible trends in "didactic models". Didactic work using OER fits within a complex interplay of a number of parallel developments. In the light of the above-mentioned trends, it would be inappropriate for us – as the authors – to present you with a cut-and-dry opinion as the sole truth. For the purposes of this article, we have therefore decided to bring together a number of observations that can perhaps best be referred to within this context as "something to think about". If a trend can indeed be observed, it is up to you – the reader – to deduce it, construct it, or even to imagine it if you wish.

Old wine in new bottles?

One striking feature in the starting phase of MIT's pioneering OpenCourseWare project was that the university made all the material that it utilised in its traditional face-to-face instruction openly available, free of charge, on its website. Those

2 Redecker, C., Leis, M., Leendertse, M., Punie, Y., Gijsbers, G., Kirschner, P., Stoyanov, S., & Hoogveld, B. (2011). The future of learning: preparing for change. JRC Scientific and Technical Reports. Seville: Joint Research Centre - Institute for Prospective Technological Studies.

educational resources were designed and developed for teaching groups of students in the context of a lecture theatre, and consisted mainly of the presentations and source material used during lectures, later followed by audio or video recordings of lessons. An initiative such as the British Open University's OpenLearn provides materials that are indeed intended for independent study, but that only provide a taste – a kind of extensive "teaser" – of the courses that can be purchased at the university. Starting from the familiar didactic model, finished learning resources are made available free of charge to anyone who wishes to use them. The OER offered reflect existing didactic models but do not immediately lead to innovation in the underlying didactic approach. One of the aims of offering open learning resources of this type is to lower the threshold to existing higher education, although it is sometimes dismissed as purely marketing.

This approach starts from the existing range provided by the institutions (institution-centred) and makes that range partially available. But as Figure 1 indicates (learner-centred), educational institutions find themselves increasingly confronted by demand from groups of students who are unable to find what they need within the existing range and who approach the institution from the perspective of their own situation and with a specific demand or list of requirements.

Different times, new formulas?

Students approach the education providers' portal or webshop individually or in ad hoc groups. That student population is extremely diverse as regards prior education, what they wish to learn, cultural background, work experience, social position, and age. Within these "customer groups", one can distinguish two important categories:

a) On the one hand, there are people whose main – or even sole – reason for wishing to study is to achieve a level of education/training (or a higher level) within an existing field. These students demand efficient and effective guidance towards gaining a certificate. In response, educational institutions offer part-time programmes, work-study programmes, or other variants.

b) On the other hand, a growing number of individual students, groups of students, and organisations come with a more "open" demand for learning. This may, for example, involve a sector-specific training programme at the boundary between senior secondary vocational education (Dutch "MBO") and higher vocational education (Dutch "HBO"), with a research component, for which creative variations on existing programmes are insufficient. After all, such students require a programme tailored to their particular wishes.

This trend has all kinds of far-reaching consequences for the traditional educational models and educational institutions, with the boundaries between "formal" study programmes leading to a certificate and non-formal or informal learning activities – whether or not supervised – becoming blurred. Figure 1 refers to this movement as "informalisation". One major consequence of the "open demand" will be that for these groups or individual students providers will still only be sporadically able to put together a suitable package within the frameworks of the existing institutionalised educational structure. Besides the familiar "academic" curriculums, "open learning" packages are increasingly developing, with the final objectives being defined broadly, but with the actual packages and subject matter being filled in flexibly.

Quite apart from its organisational and commercial consequences, this movement will have a major impact on the role and duties of instructors. The concept of the instructor is being defined in an increasingly open manner, because the tasks of an instructor can be undertaken by various different individuals, including not only "normal" higher education instructors – from both within and outside the institution concerned – but also student peers and external experts engaged on an ad hoc basis. In order to meet the demand for this type of study, increasing use is being made of the "broad" network around an institute, programme, instructor, or team of instructors.

Is the future "open"?

In this article, we have now come across the term "open" four times: Open Educational Resources, open demand for learning, open learning packages, and an open definition of the concept of the instructor. Within the movement towards "Open Education", a number of aspects of openness are distinguished. Conole (2011 – see Figure 2[3]), for example, distinguishes between:

a) *open design* of educational resources, activities, and/or packages;
b) *open delivery* of sources, educational resources, activities, and/or packages;
c) *open dialogue* between students, instructors, experts, and/or others; and
d) *open research*, with research activities and results being shared freely and arising within various types of co-creation.[4]
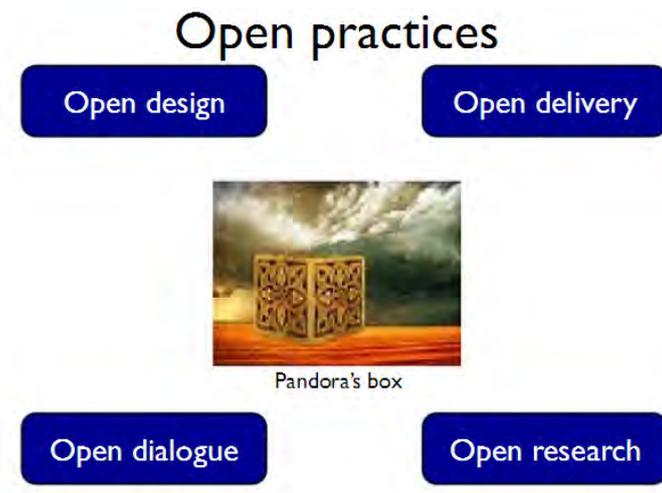
Figure 1: Four types of openness in education (Conole 2011)

Within this movement towards open education, one sees an increasing number of types of co-creation and user-generated content, not only as regards educational sources and materials, but also educational activities and packages.

One final type of openness not included in the above description is open assessment. Where the "monopoly" on formal evaluation of learning results previously lay with accredited education providers, the boundaries are now becoming blurred. One extreme example of this is the peer-to-peer university, at which assessment of what students have learned is carried out by their peers,[5] but there are also experiments with crowd-sourced assessment.

With all these aspects of openness, various gradations are conceivable and can in fact be discovered in actual practice. Gradations could be introduced for OER according to the 4 Rs scale, for example: Reuse, Redistribute, Revise, and Remix. There are many examples of teachers who share their educational resources (website, presentation, or learning pathway) with one another as an end product, with options for reuse and/or redistribution. It is far less common for half-finished products and the associated source files and manuals – with options for revision and/or remixing – to be shared. As far as we know, these aspects and their various possible gradations have not yet been systematically surveyed. Nevertheless, all these aspects with their gradations demand an extremely wide range of skills and competencies on the part of an instructor who wishes to make effective use of OER.

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3 Conole, G. (2011). Pandora's Box – the Implications of New Social and Participatory Media. Keynote presented at the SVEA Final Conference "Next Generation Learning - How to Integrate Social Media in Vocational and Adult Training", Brussels, November 23rd 2011. http://www.slideshare.net/grainne/conole-svea

4 Cf. the recent literature on the "digital scholar", for example Weller, M. (2011). The Digital Scholar. London, England: Bloomsbury Academic.

5 For example http://p2pu.org/en/groups/open-badges-and-assessment/ or http://wiki.p2pu.org/w/page/30114082/assessment%20resources.

On the way to an OER instructor?

We have already pointed out that the role of the instructor is changing. The concept of an instructor is in fact a strange one where open learning is concerned because every participant in a learning process can be a teacher, a supervisor, an expert, and a learner. Concepts such as instructor and scholar embody institutional connotations. Instructors will need to be equipped to quickly and flexibly design and put together open learning packages for students and groups of students, and to design, coordinate, and implement guidance for those packages. Instructors no longer find themselves in a "learning environment characterised by scarcity" but in one with an oversupply of sources, information, and knowledge. That learning environment requires a "pedagogy of abundance", supplemented by a "pedagogy to support learners". [6] An instructor or learning guide needs to be able to navigate through a sea of materials so as to be able to suggest the right sources at the right time, but must also be able to provide assistance with personalised learning programmes and processes. He is a "scaffolder", coach, and facilitator, not only as regards shortcomings in knowledge and specialised competencies but increasingly also as regards providing assistance with "21st-century skills", in particular functioning within the social network, both in the real and virtual settings (see also Figure 1).

Being able to function within a social network (whether online or offline) is also an important competency for the OER instructor himself/herself (see the concept of "collaboration" in Figure 1). The professional learning network[7] is a source of knowledge sharing and filtering: in the "environment of abundance", the filtering role of a properly functioning network is indispensable, particularly when an instructor quickly requires useful and appropriate OER materials to fit into a package. The learning network also provides a large number of external instructors, experts, and alumni who can contribute to the learning package or the guidance. If – finally – the learners are invited to become part of the learning network, the wheel will have come full circle, with a flywheel effect being created for the "open" learning culture.

Besides the importance of network competency, educational literature in the 21st century is devoting increasing attention to digital literacy (often also referred to as "media wisdom") to support instructors who have to make the transition from "searching for appropriate materials within a small market" to "finding the appropriate answer within a gigantic market". An interesting perspective in this connection is the concept of transliteracy, which has been defined as follows:

> Transliteracy is the ability to read, write and interact across a range of platforms, tools and media from signing and orality through handwriting, print, TV, radio and film, to digital social networks.

Transliteracy offers enormous opportunities for dynamic and "open" learning packages – with "open" also meaning platform-open. The choice of a media platform is no longer a question of EITHER-OR but of AND-AND-AND…

Technologically less exciting but didactically at least as "interesting" is the similar trend from multicultural to transcultural education. The increasing international mobility of the instructor and his/her development into a "world citizen", i.e. a "world instructor", will mean that education will have to be designed from a more transcultural context as regards its structure, content, and didactics. That is good news above all for developing countries. Just what transcultural education and transliteracy will demand in the way of didactic action and whether these trends will bring forth entirely new didactic models remains to be seen. That is why the present publication is a trend report.

Exploring the boundaries

We foresee that these trends will in any case – and definitely – bring about major shifts, some of which can already be glimpsed here and there. Here are just a few of those shifts (in random order):
- As various examples in the Netherlands and Flanders have shown, open learning models can be applied not just in higher education but also at secondary and even primary schools. One striking example can be found in the work of Maarten Hendrickx, a group 7/8 teacher at a small school in the Belgian province of Limburg (http://mees.ws/). Maarten has been working since 2005 with a class blog and a podcast, and since 2008 with Twitter. He now has more than 900 "followers" in his Twitter network, and he makes active use of that network in his classroom teaching.

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6 Kop, R., Fournier, H., & Mak, J. (2011). A pedagogy of abundance or a pedagogy to support human beings? Participant support on massive open online courses. The International Review of Research In Open And Distance Learning, 12(7), 74–93. Retrieved from http://www.irrodl.org/index.php/irrodl/article/view/1041/2025

7 Sloep, P., Klink, M. v. d., Brouns, F., Bruggen, J. v., & Didderen, W. (eds.). (2011). Leernetwerken: kennisdeling, kennisontwikkeling en de leerprocessen. Houten: Bohn Stafleu van Loghum.

- Open platforms such as http://www.oerglue.com/ are being created that enable instructors to construct open learning materials within learning packages and provide them to their students.
- Open source authoring tools have been created with which to construct learning materials such as the GLO-Maker (Tom Boyle, London Metropolitan University) in which a number of didactic templates are provided but in which the interim products are also shared so that they can be customised.
- Another initiative worth mentioning is Salty Chip (Kathy Hibbert, University of Western Ontario). Didactics is not about "you can lead a horse to water but you can't make it drink" but about feeding the "horse" a lot of "salty chips" so as to arouse its thirst. Higher education acts as the supplier of salty chips. If that's not a new kind of didactics!
- A shift is taking place from the *classroom handbook* model to *dynamic online content* models, including the consequences of, for example, full-scale availability ("any time and any place") of a dynamic sourcebook. There are an increasing number of examples of this in higher education, such as those used by Erik Duval (Leuven, Belgium), Helen Keegan (Salford, UK), or John Boyer (Virginia Tech, USA).
- One extreme type of open education consists of Massive Open Online Courses (MOOCs), in which participants learn in open ad hoc online learning communities. Open content, experts, and/or peers are brought together within a minimalist structure and with only a minimal predefined didactic approach. In recent years, a wide range of MOOC "courses" have developed – which followers of the MOOC philosophy prefer to refer to as MOOC "events" – in which each learner paves his/her own way, reflects, and shares his/her reflections with peers and experts. It is chaos with very many levels of freedom, and in that sense a great challenge, as shown diagrammatically in Figure 3. One recent example of a MOOC is the Change 11 course by Stephen Downes, George Siemens, and Dave Cormier in Canada.
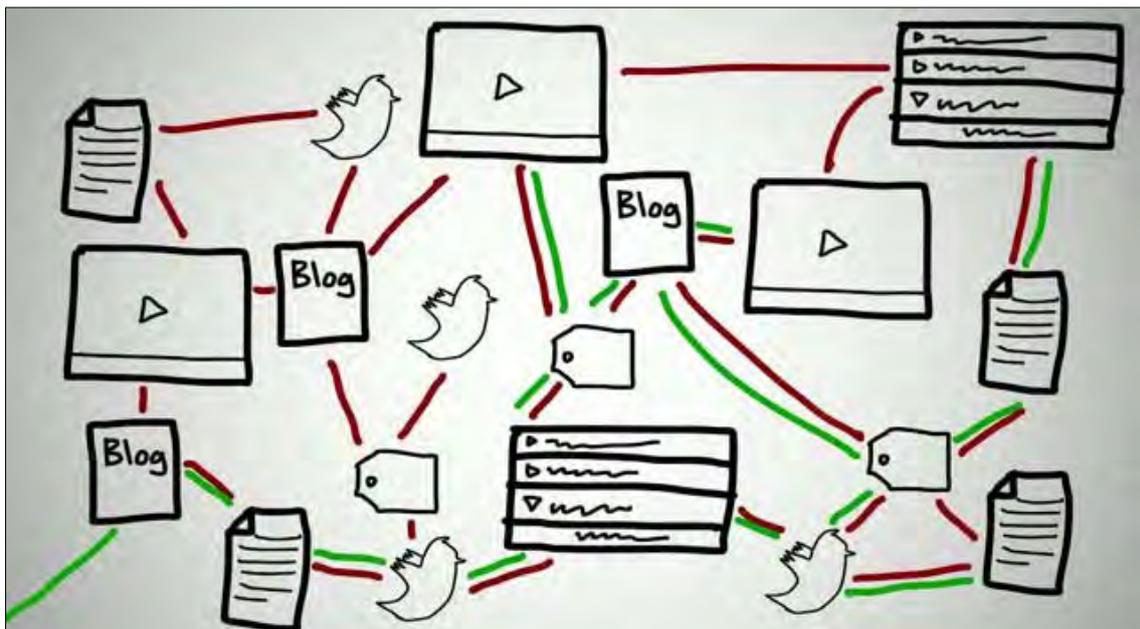

Figure 2: Learning environment of a Massive Open Online Course, explained in the film clip:
http://www.youtube.com/watch?v=eW3gMGqcZQc

Final considerations

Why does our title say "It depends"? Our reflections show didactically relevant initiatives that relate to the use of OER; but OER didactics do not exist in isolation. It is clear that within a complex playing field and a more "open" and highly dynamic educational structure, all sorts of types and variants of open didactics will develop that cannot automatically be related to OER.

Flexible types of "scaffolding" (i.e. support and guidance from instructors) will be prominently present within an "open" mix of pedagogical-didactic approaches, with situational learning (for example in the workplace) and networked learning predominating within open educational packages, according to the lines of personalised, collaborative, and informal learning (see Figure 1) in an increasingly open World of Learning. "Scaffolding" as such will also be of a distributed ("open") nature. It will be constructed not only by the "instructor" and the "student" but by a wider range of temporary actors from the current learning network (social and otherwise). The didactics will also focus less emphatically on filling in gaps in knowledge; social and network deficiencies must also be worked on.

But as with all major innovations, it is precisely at the interfaces that surprising and unexpected new ideas, products, and services arise. The key question here is whether our higher education institutions and individual instructors can afford to adopt a "wait-and-see" attitude in the light of these movements. Asking that question in fact amounts to answering it!