

# Open Educational Practices: Unleashing the power of OER

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## Abstract

This paper presents the initial findings of the OPAL project. OPAL aims to move beyond a focus on the development of open educational resources (OER) to articulation of the associated open educational practices (OEP) around the creation, use and management of OER. In this paper we provide a definition of Open educational practices, along with an associated set of dimensions. We describe how these were derived based on an extensive survey and analysis of OER case studies. The article focuses on three aspects: First it provides a working definition of open educational practices and articulates how better understanding of OEP might lead to enhancements in both quality and innovation in education. Secondly it discusses the ways in which adopting more 'open' approaches to educational practices might impact on the quality of education. Thirdly, the case study findings are presented and the ways in which the different stakeholders involved influence open educational practices are discussed.

## 1. Introduction

Although open educational resources (OER) are high on the agenda of social and inclusion policies and supported by many stakeholders in the educational sphere, their use in higher education (HE) and adult education (AE) has not yet reached a critical threshold. This is posing an obstacle to the seamless provision of high quality learning resources and practices for citizens' lifelong learning. This is explained by the fact that the current focus in OER is mainly on building more access to digital content. There is little consideration of how OER are supporting educational practices, and how OER promote quality and innovation in teaching and learning. The aim of the "Open Educational Quality Initiative" (OPAL) initiative is to extend the focus of OER beyond access to innovative open educational practices (OEP).

In this article we focus on three aspects: First we suggest a working definition how open educational practices can be defined. Secondly it is discussed if and how quality of education is affected if educational practices are opened. Thirdly, case study findings are presented which show how the stakeholders of the educational scenario influence open educational practices.

The article is based on a networked discussion between international experts in the field of OER, higher education (HE) and adult education (AE). The objective of the OPAL project will be to foster OEP in HE and AE in order to improve quality and innovate educational practices, and to establish an international Consultative Group which will work towards

feeding a quality and innovation agenda into existing OER initiatives, and elevate the projects results onto a EU level of perception.

## 2. Defining Open Education Practice

Conole (2010) suggests that Open Educational Practices (OEP) are a set of activities and support around the creation, use and repurposing of Open Educational Resources (OERs). She brings forth three importance dimensions:

The stakeholders engaged with creating, using or supporting the use of OER. These can be further sub-divided into those involved in 'creation and use' of OER and those involved in 'policy and management' aspects of OER, namely the:

- Creators - create the OER, and could be either 'teachers' or 'learners'
- Users - Use the OER, and could be either 'teachers or 'learners'
- Managers - Provide the infrastructure to support the OER (technical and organisational) and the tools/support to create/use OER
- Policy makers - Embed OER into relevant policy

The range of mediating artefacts that can be used to create and support the use of OER. These include:

- Tools and resources to help guide the creation and use of OER
- The technologies to support the hosting and management of them
- The contextual factors which impact on the creation, use or support of OER

OEP can be applied to formal as well as informal (and non formal) educational scenarios. A key aspiration behind the articulation of open educational practice is that better understanding will lead to improvements in the quality of educational experiences.

There are a number of reasons why shifting the focus of attention from OER to OEP might be beneficial:

1. Whereas OER work to date has focused on content and resources' availability and accessibility, OEP represents the practice of creating the educational environment in which OER are created or used.
2. OER focuses largely on the questions of how resources can be made available, in contrast, OEP asks the question of how OER can be used in the educational context. In a sense, OEP means to put OER to the test by creating educational activities, feedback and interaction around a piece of open learning material. This should be carried out in a manner that allows the quality of learning experiences to be raised.
3. Open educational practices are practices where the open refers to opening and widening the paradigm of resources and content-based education. The vision behind is to achieve a situation in which resources are no longer the sole focus, but in which practices within a domain (e.g. Engineering, Medicine, etc.) are the focus of education. Not knowledge only but responsibility is the objective of such an educational vision.

Focusing on “practice”, rather than the actual resources, helps ensure that an holistic approach is taken; including the stakeholders involved (such as the designers, the learners and the teachers) and most importantly the context within which the OER is created or used).

Arguably a focus on OEP could act as a catalyst for adopting more ‘open’ educational practices. Traditional roles and boundaries can be reconsidered. Considering “practice” means it is possible to adopt a more reflective approach and provides opportunities for exploring how learners and teachers can be actively engaged in the whole OER cycle. There is then a potential for both learners’ and teachers to be peers in validation of the learning processes through critical dialogue. Teachers, potentially, no longer need to adopt the tradition role as providers of knowledge, provision of content via OER means that their role can shift to one that is focussed more on facilitation, than delivery. They can help students to validate their learning experiences, rather than simply transfer knowledge to them. Validation in itself becomes a more and more reflective practice thus moving away from oral or written tests which are asking for reproduction of a predefined set of knowledge assets. Some examples to differentiate open educational resources from open educational practices are given below.

- A database or repository of open educational resources is not open educational practice. The sole usage of open educational resources in a traditional closed and top-down, instructive and final-exam focussed learning environment is not open educational practice. Visioning beyond the OER to associated OEP has a number of potentially improving the learner experience: i) the resources created may be deliberately designed to be more learner-centred, ii) learners may actually be involved into the creation of content, iii) teachers might shift away from a content-based teaching approach to one that is more student orientated, iv) the learning process might be seen as an important and productive part of the overall educational experience, so that the focus is not just on the outcomes or products of learning, but als the process, and v) learning outcomes are seen as artefacts which are worth sharing and debating, improving and reusing. Therefore, Open educational practices are educational scenarios in which learning is practices as social practice in reflective interactions between the stakeholders.
- Open Educational practices have a lifecycle; from creation through use and management and a number of stakeholders are involved with and influence this lifecycle. This includes:
  - national policy makers who are promoting the use of open educational resources,
  - rectors or vice chancellors of higher education institutions, who initiatie institution-wide open education initiatives. As part of this teachers will then be asked to create, find, adapt and share OER via an institution-wide OER repository.
  - teachers who encourage learners to produce, share and validate content
  - learners who use open available content to create knowledge landscapes on study topics which better fit their needs than the available text book “one size fits all” style

Therefore the following is put forward as a general definition: ‘Open Educational Practices (OEP) are the use of open educational resources with the aim to improve quality of

educational processes and innovate educational environments.’ Ehlers (2010) illustrates further dimension for open educational practices

- OEP are defined as practices which support the (re)use and production of high quality OER through institutional policies, promote innovative pedagogical models, and respect and empower learners as co-producers on their lifelong learning path. OEP address the whole governance community, policy makers, managers, administrators of organisations, educational professionals and learners
- There is little consideration of how OER are supporting educational practices, and promote quality and innovation in teaching and learning
- Open Educational Practices are defined as the use of open educational resources in such a way that the quality of educational experience is raised. Whereas OER are focusing on content and resources, OEP represents the practice in which an educational method is employed to create an educational environment in which OER are used or created as learning resources

OEP means the use of OER and the opportunity to benefit from experiences and expertise of others. It is inherently based on collaboration between content creators and users because it involves the re-use of resources which have been created by other persons (often peers). Collaboration is further explicit when OER are modified and then republished as OER, so that the original creator can take advantage of the amended – often validated – resource.

Adopting an OEP-based approach also provides opportunities for incorporation of social learning in the learning environment. Therefore learners can create, use or modify OER. These can then be shared with other learners or teachers. Web 2.0 tools are particularly useful in this respect, providing a variety of ways in which OER can be distributed (for example via social bookmarking sites, Wikis, or different types of repositories or collection of resources). The social interaction possible via Web 2.0 tools, also changes the focus from the transfer of knowledge to social practices which involve reflection and peer-reflection of one’s own experiences, creating content together and validation through peer-interaction between learners, and between learners and teachers or experts.

A core element of the concept of OEP is that it does not separate the resource from its usage, but takes into account the interplay between stakeholders, organisational elements and resources.

Open is also understood as referring to the nature of the learning environment. Where closed learning environment would be restricted and focussed on external setting of objectives, in open environments, the locus of control is with the learner, teachers are advisors and teachers and peer/learners are important validators of learning and performance processes.

One mechanism for capturing OPE would be to gather a collection of stories around how OER have been developed and used. These OEP stories available could then be used by both learners and teachers as a means of transferring good practice and iteratively improving

practice overall.

Another benefit of articulating and using the concept of OEP, it that it can provide a mechanism for bridging between formal and informal learning experiences. For example, by articulating the OEP around OER developed in a formal context, means it is then possible to transfer this to an informal context. A new set of associated practices around the OER in this informal context can then be generated. OEP therefore has the potential to lead towards a vision of a dynamic, global 'open source curriculum' of learning materials for degree relevant education. Such a shift would fundamentally change the nature of the way educational organisations operate today, i.e. whereas educational institutions today act as the gatekeepers of content and knowledge transfer, in the future (in this scenario) they would shift to acting more as professional validation agencies.

OEP involves the whole educational governance community, consisting of policy makers, management, administration, educational professionals, and learners. When elaborating concepts for quality it is necessary to define how the role of each stakeholder in an environment of open educational practices is affected and changed. Under the conditions of OEP everybody can be seen as a learner. Learners, however, change their roles and become producers, and are also active as teachers. Learners are also peers who enter into peer-review and mutual assessment validation processes.

### **3. Quality through Open Educational Practices**

In the following section we illustrate that there is an inherent connection between opening educational practices and quality of education. In recent debates about the quality of OER and e-learning content in general, a structural problem becomes apparent. In many approaches, educational resources are evaluated and judged separately from their intended use, e.g. through certification or criteria-based approaches. In these cases, learners and teachers are excluded from quality judgments because quality is seen as a characteristic of the content/ resource and not the educational experience – learners and teachers are separated from the educational context of practice. The fact that quality is not a fixed or stable characteristic of an educational resource is overlooked. In reality the quality of the resource only has any real mean when considered in context, i.e. in the situation where a resource is employed in a specific context through a specific learner, or teacher. Quality in such an understanding is constituted as a relation between a specific resource or a concrete offer and the way it is used, perceived and valued through interaction in an educational context. Education in this sense is the result of interaction between learners, teachers, resources, and other elements of an educational scenario in a specific context. Quality is thus a very specific phenomenon, depending on many influencing factors which – if not taken into account – lead to a restricted view. Quality can only be assigned to a specific and defined context.

The practice of evaluating quality up front or assigning a certain level of quality to a resource disconnected from its educational practice is counterproductive. Further it is not possible to define overarching quality criteria for educational quality which guarantee high quality

without regarding the context of a learning environment. However, despite this, the current practice of evaluating and assuring quality is often dominated by instrumental and objectivist quality concepts (Ehlers 2008). Quality is not an objective characteristic of a learning resource, or a service but is constituted as a specific characteristic of a context which – in turn - is formed through the personal, organisational, social and structural interaction of the stakeholders involved.

The dilemma is thus that educational quality on the one hand is a characteristic of educational practice, and not (only) an educational resource, whereas on the other hand it is often desirable and important to know the quality of a particular OER in advance, so that the user can make an informed decision as to its relevance. However, OEP does not simply focus on any educational use of OER, but carries the intention that there should be an element of innovative practice through the use of OER in which educational scenarios go beyond reproducing “traditional” educational scenarios. Instead, they take advantage of OER so that also the educational practices become more open. Current open educational resources initiatives largely focus on building access to educational resource. However, evaluation of the use of OER indicates that they are not been used as extensively as was originally envisage (McAndrew et al., 2009). It is also true that the international community of educational practitioners more and more realises that the pure access to digital educational resources is not causing the expected take off of educational availability for all or have the expected impact on renewing educational agenda, setting and environments, neither building better quality educational. The missing link is the practice dimension. The sole availability of resources has never been sufficient motivation, and has not been sufficient opportunity to change educational practices within organisation, policies or individual behaviour.

Open educational practices are going beyond the state of availability of resources. Open educational practices are practices in which a portfolio of educational, pedagogical processes is configured in such a way that available open educational resources are used to move from an instructional paradigm of education in which the learner is seen as the receiver of information and knowledge, and resources are used to inform the learner about things s/he does not know to a paradigm where the knowledge is freely available and teachers and learner are striving to learn how to navigate in a professional domain, ask the right question and assess the suitability of materials for the respective array of problems. Learners are then not only receivers but also creators of knowledge and resources which they collect from the available resources on the net or other media and which they assemble into personal knowledge spaces, modify the into their own knowledge portfolios and share them with other learners.

Validation of knowledge is key in such scenarios and not easy to achieve, because the sole paradigm of right and wrong is no longer only the fixed curriculum but the problem which has to be solved which the learners together with facilitators defined at the outset of their professionalisation process. Validation is a process of peer-review, reflection and bench-learning in which learners and facilitators together reflect in the suitability and usefulness of the acquired knowledge, skills and attitudes. Validation comes more from peers and external actors in form of reviews and peer-reflections than from a ‘fixed check against a standard portfolio.

To avoid misunderstandings it is important to stress that open educational practices do not neglect the importance of the availability of good resources but that they aim at higher levels of the ladder of reproduction/ understanding – connecting information – application of knowledge – competence action – responsible behaviour. Open educational practices thus include ‘quality’ inherently because they target educational practices, and not single resources or knowledge nuggets and their quality – in the sense of learning objects. They are targeting innovation because the call for a change of pedagogical interactions toward social practices.

#### 4. Analysing Open Educational Practices

The scientific interest in analysing open educational practices as a phenomenon has dramatically risen in recent years. Although the process of open education is not a new one, the concept of open educational resources which has been boosted in recent times has led to new relevance. More and more it becomes obvious that open educational resources unleash their effectiveness for providing new educational opportunities only when educational practices are opened accordingly.

The OPAL initiative started out by conducting a large scale analysis of case studies to understand which dimensions constitute open educational practices and which actors and stakeholders are forming the open educational practice governance community. The initial set of case studies were collected by the following people: Teresa Connelly (TC), Gráinne Conole (GC), Andreia I. De Santos (AS), Paul Muddin (PM) and Ulf-Daniel Ehlers (UE).

- Holland: OpenER (GC), Wikiwijs (GC)
- Ireland: NDLR (GC)
- UK: OpenLearn, OU UK (AS), Exeter University (AS), Nottingham University (AS), Oxford University (AS), University of Westminster (AS), University College London (AS), SC Economics (Bristol) (AS), SC ADM (Brighton) (AS), SC UKCLE (Warwick) (AS), SC MEDEU (Newcastle) (AS), Cambridge University (AS), SCORM (AS)
- Germany: Akleon (UE), KELDAmet (UE), CampusContent (UE), Podcampus (UE), Zentrale für Unterrichtsmedien (UE), Dual Mode Technische Universität Darmstadt (UE), MatheVital (UE), Skriptenforum (UE)
- Austria: EducaNext (UE), eLibrary Projekt (UE), Switzerland, GITTA (UE)
- Brazil: OER Brazil (AS),
- North America: CCCOER/CCOT (GC), BC campus (PM), MIT OpenCourseware

The following section intends to outline the specific characteristics of Open educational practices with a view to answer the questions

- which stakeholders are to be addressed in such a survey and
- which dimensions are important to survey in their behaviour, acceptance and perceived quality of OEP and through OEP

#### 4.1 Who are the stakeholders of OEP?

In order to understand the concept of open educational practice we need to know who is involved, who influences and who is addressed when educational practices are undergoing an opening process. We are calling those stakeholders the open educational practice governance community. These are those actors who are involved into open educational practices from all perspectives, be it the policy making component in the field of education in which national, regional or local (communal) policies are shaped and implemented to stimulate the use of open educational practices, production and distribution of learning materials, the management or administration of educational organisations, teaching or providing learning environments, or learning in learning environments in which open educational resources are used to improve quality and access of learning.

	Higher education (Related)	Adult learning (related)
Policy maker level	European, national, regional, local (communal)	European, national, regional, local (communal)
Management/ Administration level (- -> organisational policy)	Rectors/ VCs of HE Institutions, Heads of administration, leaders of technical departments, institutional policy makers, IP experts	Directors of adult learning centers or initiatives, leaders of administrative units within adult learning centers, leaders of technical departments within Adult Learning Centers, institutional policy makers, IP experts
Educational professionals (teachers, professors, curriculum designers, etc.)	teachers, professors, curriculum designers, learning material designers, assessors and validators of learning, teacher trainers, pedagogical advisors and consultants, support staff related to educational processes, Technical editors converting materials into online format, , quality assurance professionals, etc.	Teachers, facilitators (also learners can become teachers in adult learning), material, and curriculum designers, validators/ assessors, teacher trainers, pedagogical support staff, advisors, Technical editors converting materials into online format, quality assurance professionals, etc.
Learners	Students	Adults

All of the above stakeholder categories can either be involved as individuals, or can be part of communities (online or face-to-face) or members of institutions leading initiatives in the field of OEP. Policy makers implement policy around OER – through key white papers (NSF cyberlearning report), via inclusion in strategy document (HEFCE eLearning strategy), through funding calls (Hewlett, HEA/JISC in the UK) or through acting as a front to promote OER initiatives (eg. Dutch education minister and Wikiwijs).

#### 4.2 What influences the evolution of open educational practices

The dissemination, implementation and evolution of open educational practices is influenced by actions, rules and regulations on all levels of stakeholder involvement. The following table gives an overview which dimensions influence the actions of stakeholders. These dimensions come out of the analysis of the international case study analysis and can be used as dimensions and categories for the analysis of open educational practices on the different target group levels.

Stakeholders	Practice Level	Influence Dimensions
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Stakeholders...	...perform actions in their practice fields...	...which show impacts in the following dimensions.
Policy Makers	Policy-Environments (National, Regional, Local conditions)	<ul style="list-style-type: none"> <li>• Strategies</li> <li>• Policies</li> <li>• Barriers and success factors</li> </ul>
Management, Administration: Educational organisation(s)	Organisational Environment (also: consortia, partnerships)	<ul style="list-style-type: none"> <li>• Policies</li> <li>• Partnership Models</li> <li>• Innovations</li> <li>• Adopting open practices</li> <li>• Quality Assurance processes</li> </ul>
Educational Professionals	Educational Environment (consist of: technological + social environment)	(Models)
Learners	Teaching/ Learning processes  (Teaching/ Learning activities & Outcomes)	<ul style="list-style-type: none"> <li>• Technology environment</li> <li>• HR/ Skill development &amp; support</li> <li>• Barriers and success factors</li> <li>• Business Models, sustainability strategies</li> <li>• Strategies</li> <li>• Adopting open practices</li> <li>• Technology environment</li> <li>• Quality Assurance processes</li> </ul>
		(Models)
		<ul style="list-style-type: none"> <li>• Innovations</li> <li>• HR/ Skill development &amp; support</li> <li>• Barriers and success factors</li> <li>• Strategies</li> <li>• Pedagogical processes</li> <li>• Adopting open practices</li> <li>• Innovations</li> <li>• Quality Assurance and validation processes</li> </ul>
		(Models)
		<ul style="list-style-type: none"> <li>• Technology and Tools</li> <li>• Skills</li> <li>• Barriers and success factors</li> </ul>

## 5. Summary and Conclusions

The analysis suggests a difference between open educational resources and open educational practices. A definition is suggested and influence factors for the establishment and evolution of open educational practices are extracted.

The analysis suggests that OEP go beyond building access to OER. It suggests further that OEP can be analysed, described and documented as educational practices. Quality and innovation are inherent characteristics of open educational practices, as education changes to be a social practice, reflective and participative, where learner generate content and validate them in peer-interaction and teachers are facilitating rather than directing learning processes.

In order to show the different stages on the continuum of opening in educational organisations we suggest a three-stage mode:

First stage: Islands of OER

Open educational resources are created, used and modified by some actors within an

educational organisation. The potential of openness is understood as a characteristic of making resource freely available.

#### Second stage: OER Strategy

The use of open educational resources becomes more and more relevant on an organisational level. Organisations initiatives to promote use of OER, policies, repositories emerge. The potential of openness is viewed in intra organisational sharing in order to boost effectiveness of learning resource use.

#### Third stage: Open Educational Practices

Within organisations OER are more and more used within educational scenarios, learner generated content is produced and organisation wide shared. Methods of quality review like peer-validation and peer-reflection and strategies of peer-review are employed to validate content. Educational scenarios are designed to initiating learning in social practice between the stakeholders. Learning artefacts, reports, knowledge landscapes are produced within learning processes, shared as learning materials with others, suggested to be reviewed and improved by others, within organisations and between organisations. Learning is becoming an open process in which institutional boundaries, boundaries through pre-defined curricula and biographical learning sequences are extended.

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