

Open to interpretation?: productive frameworks for understanding audience engagement with OER

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Abstract

At the core of evolutionary trajectories in the digital networked media and OER landscape, the notions of 'educational and learners' communities' and open 'participatory pedagogy' become more complex. Combining notions of 'mediation' from activity theory and communications studies to analyze a large body of literature and qualitative data offering insights on stakeholders motivations, perceptions, practices or uses, the paper considers the meaning of Open Educational Resources (OERs) as participatory learning media in a global context. It then draws on perceptions and uses of OER and open media by faculty, and structures dimensions of cultural and socio-technical mediation by this particular segment and focusing on two types of users: the teacher as active interpreter and salient user and the teacher as digital publisher. We argue that the socio-technical and pedagogical affordances and OERs, hinder many tensions pertaining: a) the definition of openness; b) quality; and c) moral authority regarding both context and adaptability

Keywords

Mediated learning, open media, OER mediation, quality, use of OER, audience, prod-use

Introduction

With just over a decade marking the introduction of OER, their definition as public and modifiable domain goods is increasingly being complemented by other forms of open media and learning spaces; this is also accompanied by a change in educational policy, particularly, in the elearning domain, seeking to promote the adoption of more open practices in teaching or the fostering of participatory pedagogies. Nonetheless, the co-evolution of landscape and discourse produce new opportunities as well as new tensions regarding the nature of openness or development regimes, and the diversity of open media, operating in a global context. Likewise the constellations of educational and learners' 'communities' and dimensions of 'self- and life-long learning' become more complex, notwithstanding the blurring of boundaries between public and private spaces for learning and study, the teacher and the learner, the producer and the interactive media user.

Understanding notions of open and participatory pedagogy means not only unpacking the diversity of genres in OER, and their mutual dependence with social arrangements in the OER/access movement; it also means understanding the different interpretations and appropriation contexts by users' and prod-users (Bruns, 2008) as well as the inter-locking of open granular or free learning media within formal education and informal learning.

To do so, as part of OLNET learning design strand, we conducted studies that would involve not only surveying the existing research literature and anecdotal accounts, but also, using a grounded theory approach to interviewing stakeholders from diverse projects and communities, advocates and implementation bodies as well as learners, organizing awareness workshops and conducting focus groups with faculty or

collecting ethnographic accounts from public learning spaces. In this paper we focus on addressing questions as: What is the public understanding of OER and how it relates to open access and/or user content that can be re/used as learning media in a pedagogical context? How issues around branding or public awareness relate to notions of quality and legitimacy? How would we categorize the motivations/barriers to contribution (or engagement) of the different stakeholders within the OER landscape?

Drawing on Drotner (2008) among others, we argue for a theoretical framework that considers the *double analytics of mediation* in OER, a framework that combines cultural-historical and socio-cultural approaches in education studies (Engeström, 1987; 2001) with the concept of mediatization from media and communication studies. Contemporary applications from the former approaches emphasize the interpersonal, social and institutional aspects of meaning-making through digital and networked means, including, instrumental and organizational learning and professional development. The latter seeks to address both material artifacts and immaterial *processes* of meaning making (see Thompson, 1995; Carey, 1989; Silverstone, 2005; Drotner, 2008: 69-72) through media texts or institutionalized media.

We offer further explanation to this framework in the next section. Although a brief outline on the categories of users/use offered, space limitations do not allow further elaboration; In the last section we draw on perceptions and uses of OER and open media by teachers and faculty, and structure dimensions of cultural and socio-technical mediation by this particular segment and focusing on two types of users: the teacher as active interpreter and salient user and the teacher as digital publisher. We reveal that the socio-technical and pedagogical affordances and OERs, hinder many tensions pertaining: a) the definition of openness; b) perceptions of quality attached to both origin and publication; and c) moral rights and attribution, context and adaptability.

Mediation of learning about, from, through and within: Mediation and Mediatization of Resources

Inspired by the Vygotskian notion of mediation – a term used to articulate how links are made between subjects and objects, between inner situations and external practices – and the categorization of mediating tools as *material* and *behavioural*, a series of theoretical developments ranging from Engeström's (1987, 1999, 2001) systems oriented activity theory (and its several generations thereof) to socio-cultural theories emphasizing the role of different forms of immaterial tools for the development of literacy. Säljö's work on computer assisted learning, for example, has been instrumental for putting forward the link between today's complex tools and media environments for situated cognition (see Bliss, Säljö and Light, 1999), and the link between conceptual and discursive knowledge (Säljö, 1999). Central in these approaches is the role of communication in learning processes.

Describing the third generation of activity theory, Engeström (1999) sees joint activity or practice as the unit of analysis for activity theory, not individual activity. He emphasizes the *process* of social transformation and includes the structure of the *social world* in analysis, taking into account the *conflictual* nature of social practice.

Cole and Engeström view the ‘reflective appropriation of advanced models and tools’ as ‘ways out of internal contradictions’ that produce new activity systems (1993: 40).

While the third generation of AT introduced the notions of dialogue, multiple perspectives, historicity and networks of interacting activity systems, Engeström (2001) expanded the framework further to account for *contradiction* as the driving force of change in activity, and *expansive* cycles of learning as possible forms of transformation. In the relatively long cycles of expansive learning therefore, motivational and qualitative transformations, and the questioning or deviation from established norms sometimes escalate into a deliberate collective change effort. According to Engeström (2001: 137) ‘a full cycle of expansive transformation may be understood as a collaborative journey through zone of proximal development [ZPD] of the activity.’ This is empirically explored in terms of continuous professional development not only, or necessarily, attached to vertical processes, (i.e. aiming towards higher levels of competence), but also taking into account cycles of improvement – and expansive learning - achieved by residing, talking to, or working with and alongside individuals with similar skills or objectives (see Alevizou, Galley and Conole, 2012).

While the origin of the OER movement is located on the emphasis of *entitlement* (of access to, and adaptation of, free pedagogical material), the new wave of policy and advocacy initiatives focus on *transparency* enabled by the adoption of open educational practices; openness relating to the mediation of pedagogical knowledge, often relates to the pursuance of pragmatic possibilities or perceived benefits surrounding *effectiveness and quality*: “key tenet of open education is that education can be improved by making educational assets visible and accessible and by harnessing the collective wisdom of a community of practice and reflection” (Iiyosh and Kumar, 2008: 10, see also Geser, 2007 see also definition of *Open Educational Practices* ICDE, nd).

Combining a multi-angled approach to the third generation of activity theory outlined above with notions of creativity, McAndrew (2011) offers a brief account surrounding the experiences of use of OER from the three perspectives of the organisation, the educator and the learner, bringing forward alternative motivations, tensions and benefits, and actual experiences in the public interpretation or social production of OER. The value of this approach is that it takes into account multiple sources of data for analysis when reviewing situations, while paying sufficient attention to key *contextual factors* and balancing the identification of negative indicators, such as contradictions and tensions, with the way in which objectives can be achieved.

In principle, this multi-layered view outlined below can be repeated a number of times to represent difference perspectives, to capture both ways of learning and methods of working. Communication and social production with regards to learners’, educators’ or indeed to interactive media users’ expansive learning process are dimensions within the schema.

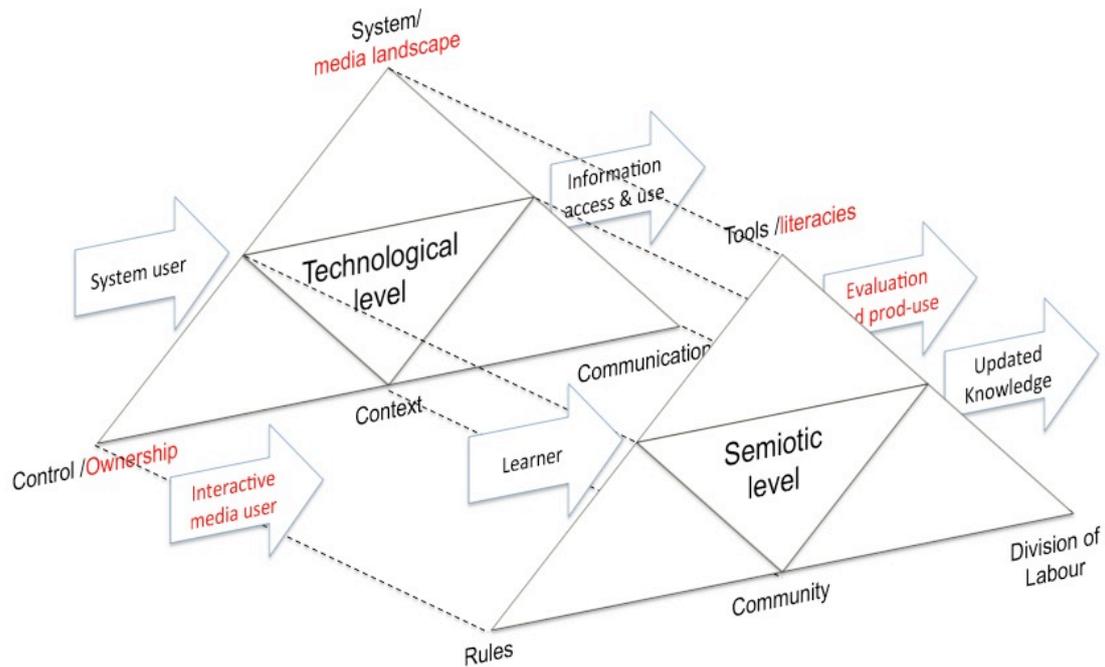


Figure 1: Activity Triangles viewing a situation from alternative perspectives (adapted from McAndrew, 2011 and expanded)

As such, looking either at *historicity*, or indeed the ways in which OER operate within the wider landscape – open media within networks of interacting systems (e.g. Google, through individual navigation or social search), also needs to be addressed. Within this context what characterizes or distinguishes the use of OER from other media uses? Essentially, operating within a wider landscape of Open Media retrievable also through public search engines (e.g. Google) or public archives (e.g. Wikipedia) and hybrid platforms and formats (e.g. iTunesU, YouTubeEdu) means that OER operate within wider landscapes of media-tization, adhering also, to notions of topicality and cultural relevance. Likewise, the diversity of genres that can be defined as open resources or media also requires different orders of coherence: a modular open encyclopaedia entry or a Learning Object can progress at different stages and have different voices (Benkler, 2005). Yet textbooks and study or learning environments may require more coordination in their social production and depend on educators’ or institutions’ measures (in terms of quality and culture) or on the ambitions of the system in which they operate or boundaries that they transcend (e.g. see community-led initiatives like P2PU, OpenStudy).

OER can be empirically explored through theories of mediatization (see Carey, 1989, Silverstone, 1999). They produced using media interfaces and are material tools that facilitate the storage, modification articulation and exchange of multimodal signs – operating in both commercial and public domains, and in different spheres of interpretation, private and public evaluation requiring complex literacies and social or peer arrangements for the, often, influx production. Likewise, while digital networked media have made horizontal processes and categories of text, production, audience obsolete, blurring boundaries of prod-use (Bruns, 2008) or ‘promsumption’ (production and consumption) both liberate and complicate circuits of engagement

among volunteer students and casual surfers, autodidacts or social learners (McAndrew et al, 2008), advocates or reflective teachers, open access/education activists and policy makers and situations of learning (formal and informal contexts). OER may indeed demonstrate how mediated educational and learning cultures are negotiated within *processes* of everyday life. They are *cultural* resources requiring labour (both material and immaterial, based on institutional or commons peer production models), *semiotic* codes of representation and signification (including perceived provenance), and affordances for openness and public citation or modification and reuse. Adopting a dual approach enables us too to specify the ways in which different technological tools enable the *social* shaping of meaning and emphasize particular interpretations (or reuses) over others, depending on they ways in which they are embedded within larger socio-cultural frameworks of legitimation and power (cf. Drotner, 2008: 72).

Looking at the circuits and trajectory of engagement in open educational practices and through resources is beyond the scope of this paper. Here we deploy some of the notions that bring about further challenges/tensions about the wider integration of free and collaborative technologies and how it relates with broader challenges on professional (expansive) learning (faculty).

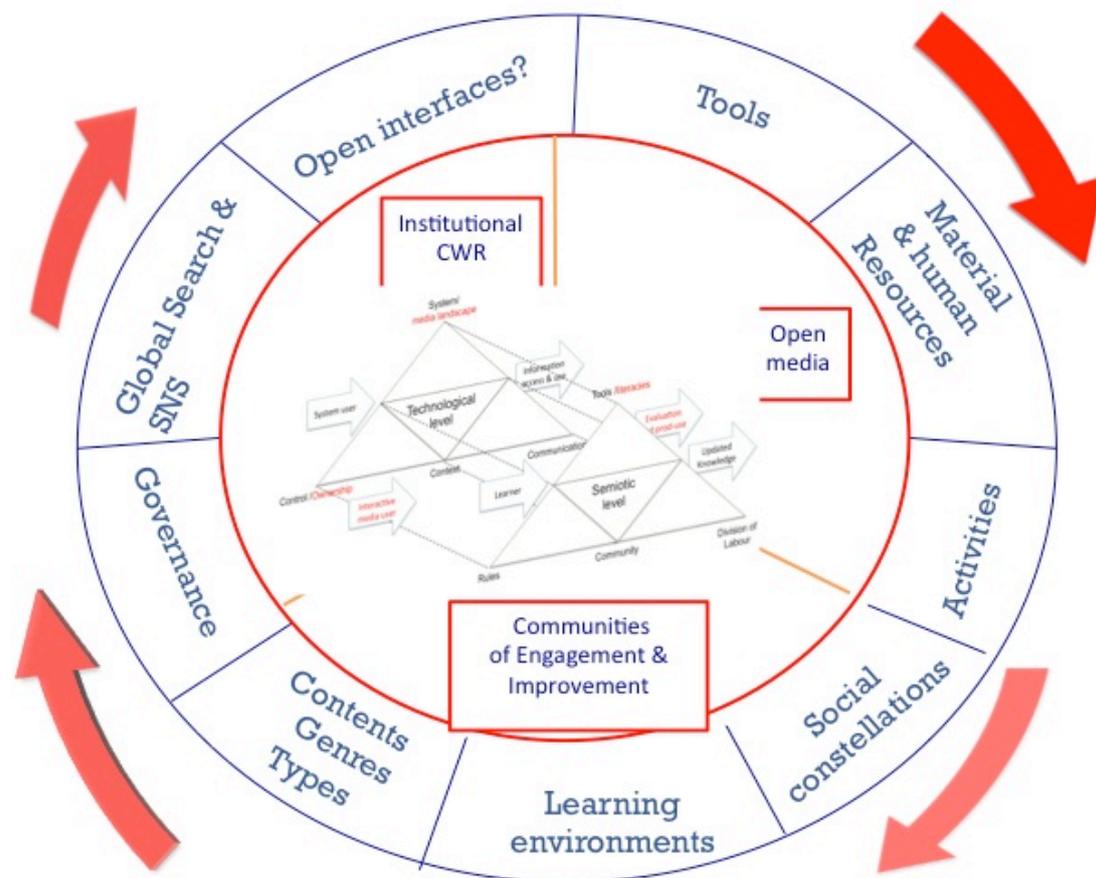


Figure 2: Multiple views and trajectories of mediation

As McAndrew concludes: “*Openness* along with enough resources of value and examples of practice may offer a route to learning at the edge of chaos that fits with

other changes in society and reduces the dependence on ingrained institutions and approaches” (McAndrew, 2011: 7).

The teacher as surfer and private prod-user?

Those advocating the integration of social media within teaching and learning articulate a vision in which educators are co-innovators in understanding the key possibilities in the relationship between technology and pedagogy, leading towards a co-evolved professional knowledge base that stems from reflective practices that are mediated and shared; a practice that feeds into the development of curricular designs that can actualise educational visions (see Zhang, 2009: 278). Integration of technologically mediated, course management systems and the popularization of virtual learning environments, it is argued, not only improves the ‘translation’ of research in pedagogical contexts, but also more effectively activates existing knowledge as the foundation for new knowledge by continuous and mediated reflection and revision - scaffolding learning experiences for teachers (Collis and De Boer, 2005; Merrill, 2002). Search and filtering, to map which *objects* are good for a particular and situated educational context, is a routine process within academic teaching, constantly negotiated through discussions with colleagues, peers and students. Publication of courseware in the open (rather than in a walled garden) brings about other tensions about identity and quality or public reflection on pedagogical effectiveness.

A significant body of research is now available on how educators and learners are accessing and using OER materials (Harley et al., 2006; Hylan, 2006, Petrides et al., 2008; McAndrew et al., 2009, Conole and Alevizou, 2010; Masterman and Wild, 2011). Key findings in accord with our own empirical insights include:

- the desire to integrate new materials into their courses through the VLE to address students’ needs
- to improve their teaching methods and knowledge or benchmark quality of materials
- enhance personal knowledge and expertise
- to network with colleagues who had similar research-led (and) teaching interests

Yet the access to what is considered as an Open Resources, and indeed the definition of resources - focusing on affiliation, granularity and possibility for mediated modification or attribution - vary. As academic faculty and educational professional participants in four workshops and focus groups regarding the integration of social media in learning design revealed, embedding free materials and learning objects in courses is part of the current educational practice; to a large extent, this is through a continuous process of aggregation and filtering of content that is deemed fit for a particular context, modeling amplification and ‘curation’:

I am often searching for videos that that are good metaphors for what I am trying to explain in the class or for case studies that are part of sequence in a relevant course. I refer to them, but I don't modify them...But I always look for a discourse, presentation and clarity in the approach that matches my style for ideas...

[Social Sciences Faculty, Participant in Participants in OER awareness workshop, UK]

We search in specialized or inhouse media repositories, but we also look on YouTube and Flickr; Not sure if objects freely available are also free for modification and republication...Ekkk! The reputation of the provider or the producer or the production values and quality of the resource are important...

I am looking for in-house produced equipment configuration instructions. They are done by others, who have done the process for real. Trusted, credible, but may need changing. But they are good enough to use for engineering practical training.

[Media and Broadcasting Training professionals in the UK: Participants in OER awareness workshop]

Several sources of evidence suggest that Google, is often the preferred engine for searching materials, as returning more results than a given portal (OERTN, 2009), especially among those educators that are relatively unfamiliar with the scale and breadth of OER repositories. Our own research also has revealed that Wikipedia is perceived as positive resource with regards to direction towards academic or popular references and reference context for any particular topic and a good source for exercising information literacy skills – though tensions surrounding plagiarism are widespread. The quotes above confirm some evidence that for many teachers purpose-designed *learning* materials, are not necessarily, or always, the first place to go when they want to supplement their classroom materials – a case that is also true, on occasion, for designers of free courses or learning spaces in platforms like Wikiversity or P2PU. On the other hand, all faculty in residential universities reported that the process of modification and sharing, happens either among peers within a specific faculty or discipline, or through the walled-garden approach of the learning management system or through virtual learning environments and through physical corridors, peer networks and online subject specific scholarship. But the researching and reusing of ‘resources’ or ‘media objects’ is also part of an internalized process of negotiation and reflection in the development of teaching, similar to the adaptation and citation of references in scholarly writing, but not necessarily mediated as such, with issues around credit and moral rights or property, coming side by side by anxieties of influence and plagiarism, knowledge of IPR regimes or participatory expertise associated with interaction in commons based peer production:

P2: I mean I, in my field in economics, I mean the easy thing to do, to take something from, say a table from somewhere.

P3: Yes.

P2: Then you build your own table based on it, and put a source line in. You're alright there. Its when you take a static image of it, and dump that Jpeg or whatever into...

P11: I find there are real issues in that. Because what effectively you're doing, is replicating knowledge, and for example, you're trying to teach students to evaluate..., and there is a logical precise statement of the result you've got, there is a logical procedure for deriving that. Ok there might be some variations, but essentially you're replicating...

P3: Yep.

P11: what someone else has done. And often this is done without acknowledgement to either the person or even the source. Because you understand what this is: its recreate- reproduce-able knowledge. Its just some internal reasoning that allows you to arrive at this completion. Its just logic, and yet something like that in education, politics, would be seen as plagiarism. And then when you have open educational resources. And that you access similar lectures and seminar notes. Actually for the most parts, I've sat down and I've recreated that knowledge from what I've been taught, because its possible to do that in mathematics. And yet, I can't honestly say its my.... I'm the owner of it.

P2: It only becomes you as an owner when you're talking about how you might learn from it. You know, the approach to teaching, or something like that. Which is yours, but the actual stuff its, as you say its just logic, isn't it...?

The issue of quality, in the private and public evaluation of a resource is in fact key and well evidenced in the wider review of the literature (see below); Here again we need to distinguish among the types of resources in terms of modularity and high order coherence (e.g. an encyclopaedia entry versus a lecture). Trustworthiness is often associated with a resource's origin (whether attached to an institutional repository's provenance or a creator that is key in a particular field), but high production values, originality and creativity are also highly regarded for media objects such as videos, images, etc. While breadth, and coherence, production values or qualities and field-specific evaluations are more in line with personal or public rating of materials.

Topicality and field/level specific relevance are important factors relating also to peers' pedagogic or scholarly recommendations for teaching specific subjects/modules. When more training or awareness raising regarding the abundance of teaching and learning resource sites is given to faculty, our workshops and interviews with educational professionals and learning technologists have revealed, that faculty often indicate increased interest, especially in sites that offer context, metadata and teacher-to-teacher interaction around the resources (see also OERTN, 2009), with emphasis to specific disciplines, fields and educational levels. Building communities and social networks around content found in specific subject-specific educational repositories and on the web, therefore, is key, and regardless persistent calls, few systems that provide effective collaboration spaces around the content in order to support better sharing of resources, that have not yet gained provenance in the mainstream.

As research in the field has indicated, educators' concerns over relevance and quality hinder use and reuse. The relevance of content incorporates several layers, e.g. examples from developed countries may not be relevant for students originating from other cultures, the pedagogy used may not be appropriate, or the level of the content may not be appropriate (Unwin, 2005; Selinger 2004). Quality can mean different things (including the legacy of the host institution in distance learning (e.g. Open University) or global provenance (e.g. MIT OCW)); however, common quality issues include accuracy of the information and knowledge distributed in the content. Quality is also a matter of trusting the information provided (D'Antoni 2006, Hylén 2006), but also cultural relevance. Hattaka (2009) reveals how not only factors related to content issues, but also language affect the actual reuse of OERs. Furthermore educational rules and restrictions in different countries, access, technical resources, intellectual property, awareness, computer literacy, teaching capacity, and teaching

cultures play a role in limiting the adoption of open content. In line with our findings above, teachers often “see the content development process as self-development” (Hattaka, 2009: 7, 13) and are reluctant to merely copy materials provided by others.

This is also evident from our insights into faculty’s attitudes who are willing to open scholarship, but skeptical about open teaching approaches. Moreover, finding, assessing and modifying materials on the Internet is considered time consuming and excessively complex. Time constraints and issues around digital literacy are also impediments (see also Wilson and McAndrew, 2009). An additional issue deals with the lack of trust towards open content not provided by recognized institutions. This implies a limit to the idea of Web 2.0 communities as accredited producers of educational open content.

Barriers also include the tensions around field or epistemic contextualisation. Some educators mentioned that they would be delighted to share their own resources, but were also sceptical of context-independent resources. This suggests that if resources need to be 'granular' so they can be found easily, they also need an open interface to enable feedback and/or dialogue about 'reuse' in other contexts:

P: I... I mean, we call it scaffolding in ELT, I don't know what you know, people call it. You know how you take a piece of content and build up and interact or class, you know, an interactive class around it, and it's the quality of the interactivity, and the way that the quality of the scaffolding, that support it, and the content is just one part of that. And yes it could come from the lecturer himself, and should probably most often because of pride, dignity and all that. But urm, you know it can also come from an external source.

P2: But again, I think that's quite discipline specific, because the content in terms of Bio Sciences, is, certainly, you know, say at first year level is fairly fixed. And it actually it's the way you teach it that's different, so, you know, we're going to teach the same content, and lots of different universities, basic bio-chemistry is basic bio-chemistry whichever way you look at it. And so, its not the content that we need to share, its how do we make it a bit more interesting, how do we present it in such a way that people engage with it. Whereas maybe with English Language its, you've got the engagement, and you need the content to slip in, you know, the text or whatever it is, so, that's what I mean about requirements are quite different, depending on your discipline.

[Science faculty in OER practice workshop/focus group]

Teacher as publisher of pedagogical content...: attitudinal and pedagogical factors

Motivations for contribution in OER platforms or Open Courseware repositories follow similar patterns to open publishing. Petrides et al. (2008) offer useful insights regarding ‘author’ use and reuse in OER. They focused on the Connexions platform and performed a rigorous statistical analysis of log files of activity over a five-year period, along with follow up interviews with a selection of participants within the platform. While the qualitative data provided insights into use and reuse practices, the qualitative data added depth to the findings by delving into the ‘why’ and the ‘how’ that goes behind use and reuse practices, collaborative authorship, as well as

challenges and discontinuation of use and reuse. Among the factors influencing contribution and continuous use cited in the findings were, and these are in line with our findings (see also Alevizou et al, 2012; Conole and Alevizou, 2010, Taraborelli et al, 2011):

- prior familiarity with publishing online content
- a sense of improvement of teaching practices
- Need to offer updated and timely content
- and support in professional development, which helped feed a continuum in publishing, augmenting and re-using content

Incentives for persistent users include ideology, technical know-how and a recognition that this type of engagement helps their professional development; Networking with subject-specific instructors and teaching scholars across geographical boundaries is also a motivational factor. However, intermittent and eventual non-users (some of whom were also educators) are dis-incentivized by lack of technical skills, relevance of content, and reluctance to the idea of group authorship (see below for more about collaborative co-authorship and community structures).

Certainly, educators' prior knowledge and familiarity with Web 2.0 or technical skills, as well as wider OER advocacy agendas or general familiarity with openness and crowdsourced education, are also high in the motivational threshold.

The sharing of one's own materials and the reuse of others' OERs is less expansive (see Harley et al.; 2006; Petrides et al's (2008); Hatakka, 2009). Unless general attitudes to open sharing among those who understand open access is high, willingness or intention to make own's course materials available in an OER form is far less prominent. Evident in the literature and in our own research is that issues of ownership, confidence, relevance and quality are prominent inhibitors, alongside issues relating to legal constraints and technical literacy, lack of professional incentives and a culture (or expertise) in sharing and remixing openly. The last two aspects are closely associated with awareness raising strategies, policy and institutional support. As several interviewees note:

The one thing is the use of the technology, new technology and wikis. An the other is opening to the world, right. So that, that barrier has been well discussed I think. It's an emotional thing I think, cos play it out rationally, its advantageous to teachers largely, and researchers. But emotionally it's scary, they are unprepared, their resources aren't good enough, they think there might be commercial gains [Wikieducator Interviewee].

There is high quality threshold and self-censorship that is imposed by teachers themselves; and that's considered as barrier for creating additional courses for the OER platform...Additional awards should motivate people [OpenER Interviewee].

We need to make sure that OERs are not stand alone projects within institutions...When people invest time and resources, they need to see a tangible benefit: this could relate to students feeling that they are better educated; in a better way, in a different way. But it also depends on the institution having created a policy environment that is supporting faculty having dedicated their time and energy [OER Africa Interviewee].

Despite these barriers there is evidence that over time, positive attitudes regarding motivation exist and a recognition of – among those that participate in relevant initiatives – positive influence in research, teaching and learning practices.

Most importantly, evidence suggests that teachers who indeed publish in an OER platform form enjoy the benefits of localised and global exposure with respect to scholarly and scientific communities, engage better with their students (prospective, current and alumni) and improve their teaching practices and experimentation.

Connexions and Wikieducator have also been used as platforms for educators to experiment with and publish widely in a variety of fields for all levels of education including vocational education and teacher training; The sites serves as an apprenticeship platform for educators by allowing them to observe how others in their respective fields communicate with each other and also to publish their own contributions, or improve others' content, which can be relatively small – echoing 'legitimate peripheral participation' (Lave and Wenger, 1991) that is characteristic of open source communities:

I think, generally, we fit nicely into those models where you have now the opportunity to re-use, in fact teachers are going, 'oh..., you mean I don't have to take this book as it is, I can re-arrange the chapters'... That's the first one, and then the second one is 'oh you mean I can put my own work in there, oh...'. And so those, those are evolutions that take place. Then they'll try more, and some will be adopters, some won't be...[Connexions Interviewee].

This allows educators to 'learn to be' open, co-creators; in this instance by peripherally participating in 'improving' and adding their own perspectives and experiences from using resources in respective contexts – similarly to adaptations of scholarly literature in research papers. Such experimentation can result in a cycle of more experimentation and engagement with peers and hence contribute to a gradual transformation of departmental, and eventually, institutional cultures.

Variations in higher education institutions regarding 'OER-readiness' exist, with universities with expertise in, and pre-existing structures to, support distance learning having a competitive advantage over residential institutions, both in terms of infrastructure and institutional support. But having and maintaining a strong vision, along with advocacy and inclusive strategies for supporting teachers and students, is also deemed paramount, in both distance and residential universities. Increased engagement with content for prospective and home students is cited as a common incentive at both institutional and faculty levels. This increases the opportunities for pre-practicum and personalized learning. In addition, making student contributions (such as seminar notes, lab reports and personal reflections through blogging) also available in a open-courseware form, is seen by educators as an important factor for improving teaching and learning and for creating more open and participatory cultures.

Conclusion

The paper presented an approach to researching the double analytics of mediation in OER and offered a brief account of perceptions and engagement among different categories of educators as active audiences and prod-users, highlighting some aspects

surrounding the pedagogy of content creation and the notions of publication. It is argued that the multiple articulations of '**mediated learning**' and **(global) 'learning media'**, framing the **socio-technical and pedagogical affordances** and OERs, hinder both opportunities and impediments and many tensions surrounding both interpretation and publication focusing: a) the definition of openness pertaining established and emerging 'brands' b) the nature of participation and self-representation in niche repositories or disciplinary communities, and c) the inscribed and actual purpose as well as quality of open resources.

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