

OPENNESS IN TEACHING AND LEARNING: AN EXPLORATION OF PRINCIPLES AND PRACTICES AT THE UNIVERSITY OF OXFORD

*(Previously *The Use and Reuse Of Oxford's Online Resources by Teachers Within the Collegiate University: An Examination of Practice*)*

RESEARCH REPORT

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EXECUTIVE SUMMARY

Openness in Teaching and Learning: An Exploration of Principles and Practices at the University of Oxford conducted an in-depth qualitative investigation into what OER can offer to the practice of teaching and learning in the University of Oxford, given its position as a one of the world's leading research-intensive universities. The project was a collaboration between the Academic IT group in IT Services and the Department of Education and was supported by a grant from the John Fell OUP Research Fund.

The investigation carried out differed substantially from the original proposal to examine the use and re-use of Oxford's online resources by teachers within the collegiate University. This change of focus was brought about primarily because evidence gathered previously suggested that Oxford academics were not engaging with OER in their teaching and that OER activity was confined almost solely to the University's outreach mission.

The revised aim was to illuminate the factors that might be conducive to greater uptake of OER in teaching and learning in the University. To this end, the research addressed three main research questions:

1. To what extent do Oxford academic staff recognise, in their research and teaching, values and practices that are associated with openness?
2. To what extent is their current teaching practice shaped by their discipline, open practices in research and Oxford's organisational structure and culture?
3. From the perspective of different stakeholders in the University, what constitutes optimal engagement with open educational practice at Oxford?

Data were gathered from individual interviews conducted between September and November 2013 with 14 members of the University's teaching staff, an academic developer, a librarian and a learning technologist. The interview schedule was based on a conceptual framework of open educational practices synthesised from an extensive literature review.

The project team has identified those aspects of open educational practice that resonate with Oxford's longstanding pedagogic model of individual and small-group teaching informed by research. This has led us to make the following recommendations which we believe will enable the University to equip its students as 'citizens of tomorrow ... curious, driven, responsible, and capable of academic thinking' (Mapstone, Buitendijk & Wiberg, 2014: p. 3) in an open world while remaining 'true to the core academic values and standards that have shaped [its] long history' (Hamilton, 2013).

Embedding open practices within Oxford's academic culture and organisational structure

1. Publish within the University a position or clear guidelines on open educational practices and their implementation that are true to Oxford's core academic values and standards. Specifically, emphasise that the principles of academic autonomy and subsidiarity in decision-making continue to be upheld, and that options and freedom of choice exist at both the individual and departmental/divisional levels.
2. Consult a wide range of stakeholder groups in formulating such a position: academics, students, librarians, IT support staff, media production teams, copyright experts and communications teams.

Copyright and the legitimate use of third-party materials in teaching and learning

3. Among academic staff, promote an understanding of what constitutes 'legitimate' use of third-party resources. Provide guidelines on 'good practice': eg using such resources responsibly, particularly where these will be made available to students online.
4. Among students, include training in the legitimate use of third-party resources into study skills programmes both for undergraduates and postgraduates.

Supporting the development of OER for use inside and/or outside the University

5. Encourage academics to release their resources with an open (Creative Commons) licence, continuing to offer CC BY-NC-SA as the default, but respecting authors' preferences for more restrictive ('all rights reserved') licences. By the same token, and recognising that open access requires academics to publish journal articles under a CC BY licence, allow academics who are more confident 'digital scholars' to release materials with less restrictive licences than the default.
6. Implement a quality assurance mechanism to ensure the pedagogic quality of resources made available (production quality may also be considered, but is a secondary criterion).
7. Establish support teams at the centre and/or within divisions and departments to provide:
 - pedagogic support to academics in designing OER appropriate for learners in other education sectors. For example, where resources are intended for UK schools, help academics to ensure that the resources fit with the National Curriculum;¹
 - legal support in understanding the different licensing options and making decisions appropriate to the preferences of the individual author-creator and to any constituent resources;
 - technical support in developing resources where media services are required or software development is involved.

Promoting the use of OER within a research-informed pedagogy

8. Raise awareness among teaching staff of the ways in which openly licensed resources can be deployed in research-informed teaching, including:
 - 1) research-led (content drawn directly from research):
 - include open access journal articles and openly licensed project reports in reading lists
 - 2) research-oriented (teaching knowledge-construction processes in the subject):
 - allow students to gain insights into the research process through 'work in progress' shared by digital scholars through social media, including blogs;
 - give students opportunities to work with the open source tools used for research in the domain (eg NetLogo for modelling).
 - 3) research-based (inquiry-based and similar learning activities):
 - include OER collections containing digitised texts and digital surrogates of artefacts in lists of resources for students to consult;
 - recommend openly licensed courses (including MOOCs) for students to learn research skills;
 - coach students in open science methodologies.
 - 4) research-tutored (writing and discussing essays etc.):
 - recommend openly licensed courses (including MOOCs) for students to learn about academic writing and related skills;
 - where appropriate, assign students to produce blog posts as alternatives to conventional essays, in order to extend discussion beyond the immediate tutorial.
9. Develop in students an understanding of the merits of searching for OER to supplement their learning or when researching their essays etc.
10. Conduct (and evaluate) a continuous campaign through internal communications channels to raise awareness of the University's varied collection of OER among academics in order to encourage their use in undergraduate and postgraduate (Master's and certificate/diploma programmes) teaching.

¹ An example is the support already provided by IT Services' Education Enhancement Team for academics wishing to deposit resources for use by schools in the TES Connect repository.

11. Establish teams within divisional and departmental libraries to assist teaching staff who wish to use OER for specific purposes by finding and evaluating appropriate OER on their behalf, whether from Oxford or from outside.

Academic development

12. Include awareness of the pedagogic opportunities offered by the use of openly licensed resources in academic development programmes.
13. Emphasise, in any guidance provided, that OER should be used in accordance with the University's objective to prepare students for academic practice in an open world and/or to develop students as 'citizens of tomorrow', not for reasons of efficiency (except where a teacher lacks the time and wherewithal to create a resource themselves).
14. Introduce into the University Teaching Awards a category for the innovative deployment of OER into teaching within each division.
15. Encourage academics to release their teaching materials for use by other academics within the University as a means to sharing and promoting good practice, whether or not these materials are released as OER.

Collaboration

16. Explore the potential for inter-institution collaboration on OER production with other research-intensive universities, both in the UK and abroad.

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1. INTRODUCTION

1.1 BACKGROUND: RATIONALE FOR THE STUDY

This document reports an investigation which set out to enhance understanding of the ways academics at the University of Oxford use OER (open educational resources) in their everyday teaching practice, which was funded in part by the John Fell OUP Research Fund. The project was carried out between January 2013 and February 2014 by a joint team from the Department of Education and the Academic IT group in the central IT Services department. It was originally entitled *The Use and Reuse of Oxford's Online Resources by Teachers within the Collegiate University: An Examination of Practice*.

University lecturers have for many years incorporated resources created by others into their students' learning and, to a lesser extent, have made their own resources available to others. However, the practice remained largely informal and localised within institutions or discipline-centred communities, even after it became the focus of researchers' interests in the early 2000s through work on reusable learning objects (eg Boyle, 2003) and learning design (eg Agostinho, 2009).

With the burgeoning of OER movement, the use of third-party resources has become a much more overt practice. It is viewed as an acceptable way to gain inspiration for designing one's own learning materials and/or to acquire materials where one lacks the wherewithal to create them oneself. However, recognition of the need to investigate how OER are actually used has significantly lagged behind their production. Research into the 'real-life' practices of academics within a complex array of pedagogical, cultural, technical, legal and institutional factors is important in part because, as Harley observes, 'sustainability of open education resource initiatives will be determined ultimately by actual user demand' (2008: p. 198). Prompted in part by the findings of the JISC OER Synthesis and Evaluation project (UKOER Synthesis and Evaluation, 2010), a number of investigations into OER use in the UK higher education sector have now been reported in the research literature (eg Nikoi & Armellini, 2012; Rolfe, 2012; Reed, 2012; Masterman & Wild, 2013a; Armellini & Nie, 2013).

At the same time, the University of Oxford has become a leading provider of online reusable learning and teaching resources in the UK. As at 13th March 2014, it had released 2817 podcasts with Creative Commons licences through iTunes U and the University of Oxford Podcasts website.² This number is swelled by several thousand resources of other types – for example, digitised texts, images, short academic essays, simulations, animations, lesson plans and blog posts – in openly licensed collections that include *The First World War Poetry Digital Archive*, *World War I Centenary: Continuations and Beginnings*, *Politics in Spires* and *FreeSpeechDebate*.³ These can all be accessed through the University's *OpenSpires* portal.⁴ In addition, a number of academics have contributed openly licensed resources appropriate for the National Curriculum to the *TES Connect* repository for schools.⁵

Prior to the current project research had been carried out within the Academic IT group to evaluate the impact of Oxford's online resources beyond the University (Geng & Marshall, 2011), and to study the ways in which OER are incorporated into lecturers' individual practice and into institutional education strategies in higher education (Masterman & Wild, 2011; Wild, 2012). However, apart from a small number of interviews conducted during an evaluation of the *World War I Centenary...* collection (Masterman & Wild, 2012), we had yet to investigate how OER, specifically, fit into teaching and learning in the University.

² <http://podcasts.ox.ac.uk/>.

³ <http://www.oucs.ox.ac.uk/ww1lit/>, <http://ww1centenary.oucs.ox.ac.uk/>, <http://politicsinspires.org/>, and <http://freespeechdebate.com/en/>.

⁴ <http://openspires.it.ox.ac.uk/>.

⁵ <https://www.tes.co.uk/MyPublicProfile.aspx?uc=3493912&event=21>.

1.2 AIMS, CORE CONCEPTS AND RESEARCH QUESTIONS

1.2.1 Aims

The initial aim of the project was to enhance our understanding of the ways academics at the University of Oxford use OER in their everyday teaching practice. We expected that the practical, methodological and conceptual understandings reached would help to inform future organisational support for OER at the University of Oxford. In addition, we intended to build a more critical and theoretical perspective on the use of OER in higher education in general. The project was conceived as an exploratory study and was intended to gather qualitative data from up to 20 interviews with teaching staff and representatives of other relevant stakeholder groups. The interview schedule was to be derived from a thorough review of the relevant literature.

Three factors prompted the research team to reconsider this aim in May 2013. First, our evaluation of the *World War I Centenary...* collection suggested that only a very small number of Oxford academics use OER or have any awareness of the copyright implications of using third-party resources in teaching. This led us to question the value of pursuing this line of research in the current project. Second, the Research Councils UK's mandate on open access publishing (RCUK, 2014) opened up an additional perspective on open practices which we explored as part of the Open Access Oxford initiative (Masterman, 2013) and which we felt could profitably be taken into account in our work. Third, the research literature on OER use increasingly pointed to the need to raise the level of research above the purely practical issues of licensing and technology; for example:

Open education is not just about disseminating resources that can be localized in many ways to improve education in local contexts, but also about an opportunity toward broadening and deepening our collective understanding of teaching and learning (Iiyoshi & Kumar, 2008a: p. 439).

The boundaries of the debate around open education are increasingly expanding in order to encompass the institutional, cultural and pedagogical implications of adopting an open model rather than retaining focus on the resources themselves' (McAndrew & Farrow, 2013a: p. 70).

In May 2013 we took the decision to reorient our work to explore the relationship between *open educational practice* and the academic culture of Oxford (see Appendix A for the full rationale underlying this decision). Our revised aim was to use this broader context in order to illuminate the factors that might be conducive (or otherwise) to greater uptake of OER in teaching and learning in the University. The basic approach – a set of interviews – remained unchanged.

The title of the project was amended to *Openness in Teaching and Learning: An Exploration of Principles and Practices at the University of Oxford*.

1.2.2 Core concepts

Open educational resources

A longstanding, and still frequently quoted, definition of OER is that by Atkins, Brown and Hammond: '...teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use or re-purposing by others' (Atkins, Brown & Hammond, 2007: p. 4). 'Others' can be taken to mean 'educators, students and self-learners' (OECD, 2007: p. 38).

Atkins and colleagues enumerate the materials that can be considered as OER as follows: 'full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge' (Atkins, Brown & Hammond, 2007: p. 4). Andrade and colleagues add to this list open software tools (such as learning

management systems), open materials used for teachers' professional development and repositories of learning objects (Andrade et al., 2011).

Weller classifies the diverse range of OER into two groups: 'big' and 'little'. Broadly speaking, 'big OER' comprise extended stretches of learning (possibly whole courses) which are produced by institutions and which are 'usually of high quality, contain explicit teaching aims, [and] are presented in a uniform style.' In contrast, he characterises 'little OER' as 'low cost' resources that are often produced individually, not just by educators. They 'may not have explicit educational aims, have low production quality and are shared through a range of third party sites and services' (Weller, 2011). To this category can be added digital representations of artefacts that may have been produced in a non-educational context (such as a photograph of a First World War battlefield), but have been made available for educational use under Creative Commons licences.

Regardless of their format, granularity and provenance OER can be considered to have the following essential attributes:

- open access: they are available gratis and should preferably be discoverable directly through a general-purpose search engine (not hidden behind a portal with which the user must register);
- open licence: they have been released with a licence that permits them to be distributed to others, modified, aggregated with other resources to create a new one and repurposed (typically, a Creative Commons⁶ licence: Bissell, 2009);
- open format: they have been designed in such a way that they can be easily modified;
- open software: they have been produced using open source software and/or use freely available third-party software or Web 2.0 technologies to support learning activities and collaboration.

(Schaffert & Gieser, 2008; Hilton et al., 2010; Masterman & Wild, 2011; Beetham et al., 2012)

In practice, the fourth attribute is encountered less frequently than the other three.

Use and reuse

The term 'reuse', as both verb and noun, is frequently encountered in the literature on OER. There is a subtle distinction between 'use' and 'reuse' in this context, with 'reuse' tending to denote that a resource is being used by someone other than the person who created it. In the case of a resource that has an explicit educational aim, 'reuse' indicates its suitability for learners other than the cohort for which it was created (Windle et al., 2010).

'Use' is our preferred term in this report, although 'reuse' will be employed when the activity is being considered as the counterpart of 'sharing', as in the statement 'many academics both share and reuse resources.'

Open educational practice

Ehlers offers the following definition of open educational practice:

...collaborative practice in which resources are shared by making them openly available, and pedagogical practices are employed which rely on social interaction, knowledge creation, peer-learning, and shared learning practices (Ehlers, 2011: p. 6).

When referring collectively to open practices in teaching, learning and research in the project we used the term *open academic practice*, even though the terms *open scholarship* and *digital scholarship* are more commonly encountered in the research literature (eg Veletsianos & Kimmons, 2012a; Weller, 2011). This is because we were concerned that in Oxford 'open scholarship' might be conceptualised largely or wholly in terms of open activities in research.

⁶ <http://creativecommons.org>.

1.2.3 Research questions

We took as our starting-point the propositions that

1. 'the world's knowledge is a public good and that technology in general and the Worldwide Web in particular provide an extraordinary opportunity for everyone to share, use, and re-use knowledge' (Atkins, Brown & Hammond, 2007: p. 9), and
2. 'open sharing of knowledge is at the heart of the academic process' (Lerman, Miyagawa & Margulies, 2008: p. 214)

With both of these in mind, we formulated the following questions:

1. To what extent do Oxford academic staff recognise, in their research and teaching, values and practices that are associated with openness?

Specifically, how do these practices and values relate to their perspective on:

- a. sharing their resources (whether or not as OER);
- b. reusing third-party resources generally in their teaching/students' learning;
- c. the roles of the teacher and the student, and the relationship between them; and
- d. developing their practice as teachers (open educational knowledge)?

2. To what extent is their current teaching practice shaped by:

- a. their discipline;
- b. open practices in their research; and
- c. Oxford's organisational structure and culture?

3. From the perspective of different stakeholders in the University, what constitutes optimal engagement with open educational practice at Oxford?

3.1 What open practices should be encouraged and how might they best be supported, in relation to:

- a. releasing openly licensed resources that can be used inside and/or outside the University;
- b. encouraging academic staff to use openly licensed resources in their teaching where appropriate;
- c. developing students as self-directed learners through engaging with openly licensed resources; and
- d. encouraging academic staff to open up their teaching?

3.2 To what extent would the implementation of such practices be shaped by Oxford's organisational structure and culture?

1.3 ACKNOWLEDGEMENTS

We express our gratitude to the 17 members of staff who gave their time to be interviewed for the project. In addition, we acknowledge the contribution made in earlier stages of the project by Steven Albury and Jennifer Allen.

2. LITERATURE SURVEY

2.1 BACKGROUND

The project conducted two literature surveys. In the first, we surveyed the literature specifically relating to the use of OER and concluded that the project should be re-oriented towards a broader investigation of open educational practice, as described in section 1.2.1 above. The approach adopted in the initial survey, a summary of its findings, and the recommendations arising from them are provided in Appendix A of this report.

The aim of the redefined project was to go beyond a focus on pragmatic issues associated with the resources themselves – including technology and licensing – and explore the implications of OER for teaching and learning. Furthermore, as Peter and Farrell point out, there is also a need ‘to move beyond descriptive and/or operational definitions to add a philosophical dimension’ (Peter & Farrell, 2013: p. 177): that is, to identify some of the principles that underpin open practices in education and explore them with interviewees.

The purpose of the second literature survey was to construct, from the literature, a conceptual framework of open educational practice that could form the basis of an interview schedule. This report of the survey findings begins by exploring the basic principles that underlie notions of openness, and then moves on to overviews of openness in teaching and learning. A brief outline of open practices in research (‘digital scholarship’) is followed by a summary of institutional approaches to the promotion of OER. The survey closes by identifying some issues and causes for critique in OER research.

MOOCs have been explicitly excluded from this survey for two reasons: 1) the remit of the study was to investigate OER within the University only, and 2) at the time the research was carried out, the focus of MOOCs was on learning in an informal context (ie there were no examples of students taking MOOCs within their core studies or for supplementary learning).

2.2 FUNDAMENTAL PRINCIPLES OF OPENNESS

A strong statement of the basic motivation for openness can be found in Atkins, Brown and Hammond’s influential report for the Hewlett Foundation:

At the heart of the movement toward Open Educational Resources is the simple and powerful idea that the world’s knowledge is a public good and that technology in general and the Worldwide Web in particular provide an extraordinary opportunity for everyone to share, use, and re-use knowledge. OER are the parts of that knowledge that comprise the fundamental components of education – content and tools for teaching, learning and research (Atkins, Brown & Hammond, 2007: p. 9).

For Lerman, Miyagawa and Margulies, this idea should have a specific resonance for the academic community: ‘Open sharing of knowledge is at the heart of the academic process. For many faculty, it is an intrinsic value, convincingly demonstrated in their teaching and research’ (Lerman, Miyagawa & Margulies, 2008: p. 214).

A belief in knowledge as a public good entails a commitment on the part of academics to open scholarship: ‘to create knowledge and share it as widely as possible for the benefit of all’ (Scanlon, 2013: p. 3). Veletsianos and Kimmons note the ethical dimension to this stance: ‘openness and sharing in scholarship are seen as fundamentally ethical behaviors that stand as moral requirements for any who value ideals of democracy, equality, human rights, and justice’ (Veletsianos & Kimmons, 2012a: p. 172). However, they question whether these values are integral to open practices or merely the values that happen to have been espoused by the pioneers of openness:

...there is no clear necessity for the scholar to value democratization, human rights, equality, and so on, and we should consider the possibility that scholars engage in open scholarly practices for a variety of reasons that may not be entirely noble' (Veletsianos & Kimmons, 2012a: p. 176).

They point out that education has additional, broader, motives.

However, openness is not merely a matter of values or beliefs; van der Vaart and colleagues consider it to be an approach or *modus operandi*: a pragmatic response to 'the increasing complexity and scale of the world's questions for research, of the way research is conducted, and the impact this has on (the demands on) higher education' (van der Vaart et al., n.d., p. 10). These challenges 'ask for cross-disciplinary approaches as well as conditions that nourish serendipity—unforeseen collaborations and re-combinations of available research outputs and data into new discoveries' (ibid.: p. 7).

In two co-authored articles (Peter & Deimann, 2013; Peter & Farrell, 2013), Peter takes a 'long view' of the sharing of knowledge, tracing it back several centuries to the early life of universities such as Oxford and to the emergence of coffee houses. However, as the quotation at the beginning of this section points out, technology now offers an extraordinary opportunity for this sharing to become global. Web 2.0 technologies in particular are seen to support open practices: new, informal, means of communication and dissemination; alternative peer review models; the blurring of boundaries between data and outputs; and a growing recognition of new forms of research output (Scanlon, 2013; Lane & McAndrew, 2010; Veletsianos 2013). In terms of learning, open sharing of knowledge has facilitated the blurring of boundaries between disciplines, roles (research and teaching, teacher and learner, professional researcher and non-professional expert); the learned community and the lay community; institutions; institutions and the world beyond (taking education out of the classroom and scholarship out of the library); formal and informal learning; and geographical borders (Iiyoshi & Kumar, 2008a; Lane, 2011 among others). In sum, 'a Web that is connected, democratic and user centered appears to align well with a socio-constructive ethos of learning, participation and knowledge creation' (Veletsianos 2013: p. 640).

These technological advances are seen not merely to improve or expand current scholarly behaviours, but to transform them (Veletsianos & Kimmons (2012b). However, this relationship is symbiotic: Veletsianos and Kimmons (2012a) consider 'open scholarship' as a set of emergent practices that are co-evolving alongside developments in technology (ie they shape each other).

In relation specifically to OER, two other underlying principles emerge: freedom and empowerment. As Lane (2011) observes, 'The philosophy of OER is that you want people to take it away and do things with it. In principle this gives learners and teachers even more freedoms as they can decide when to access it, whether they want to alter it.' This freedom is realised through a) the availability of the resources on the Web gratis and '24/7' (Casserly, 2008) and b) the licences which permit users to modify and republish a resource while its original version remains accessible and reusable by others (Lane, 2011). Doing the same things with proprietary (all rights reserved) resources is considered merely a 'pale imitation' (Casserly, 2008: p. 263).

Empowerment comes with the freedom to change the materials according to one's needs: 'The capacity and right to reuse materials is an important step in providing users all over the world the opportunity to actively participate in the open education resources teaching and learning processes' (Casserly 2008 p. 262–3).

The notion that openness can remove barriers and enable participation by those who traditionally have not had access has given rise to critiques, including the power relations that are perceived to underlie OER initiatives despite an appearance of freedom and collaboration: 'most OER initiatives so far ... still pursue it in a position of dominance: it is the provider offering the content to the user; it is the most knowledgeable institution offering guidelines to the novice ones' (dos Santos, 2008: p. 5). Where the geographical borders being crossed are between the 'developed' world as provider of OER and the 'developing' world as the consumer, there is a risk of educational imperialism or neo-

colonialism (Richter & McPherson, 2012). McMartin expresses this view point strongly: ‘Much of the educational materials available on the Web replicate the epistemological hegemony of higher education and the relationship between “developed” and “developing” nations, where knowledge (content) from the “developed” is privileged over the “developing”’ (McMartin, 2008: p. 142).

Another criticism levelled against the movement towards openness is the degree to which users really are free to use individual resources. For example, they may not have the necessary open content literacy, or the IT skills, or access to IT, or the funds to access the internet, the language skills (if a particular resource is in a foreign language) or, even, the self-direction and autonomy that learning in an open world seems to entail (see, for example, Knox, 2013). This situation can hold true even in relation to research:

it is often assumed that open systems may foster an environment of equality and democratization (eg, everyone can have free access to articles published under an open access license), but in reality, some scholars may be able to benefit more than others as a result of their ‘knowledge, wealth, power, and ability’ (c.f. Chander & Sunder, 2004) (Veletsianos, 2013: p. 642).

2.3 OPEN EDUCATIONAL PRACTICE

In Ehler’s characterisation, cited in section 1.2.2, open educational practice comprises two broad activities: 1) sharing and reusing openly licensed learning resources, and 2) adopting specific approaches to teaching and learning.

2.3.1 Sharing and reusing OER

In keeping with the aim to raise the sights of the project above the practicalities of sharing, we confined our survey to papers addressing the issue of motivation: why academics choose to make resources openly available to others.

Summarising papers by others, Hylén (2009) lists a number of reasons for sharing digital content. These include altruism; a desire to stimulate innovation; ‘a wish to share with others for creative, educational, scientific or research purposes’; ‘the pleasure of being involved in peer production’; and enhancement of one’s reputation (Hylén, 2009: p. 139).

Van Acker and colleagues (2013) have subsequently applied social exchange theory in an empirical study of motivation. Having surveyed over 1,500 teachers across three educational sectors, they report data suggesting that altruistic factors predominate in teachers’ intention to share, as opposed to extrinsic factors (ie reward or reputation enhancement). They propose knowledge self-efficacy as the main predictor for sharing: ‘When teachers believe that their OER has an added value for others, they will be more inclined to share’ (Van Acker et al., 2013 p. 188). In other words, it is more important for teachers to feel that others will appreciate their OER than for their reputation to be enhanced.

Confidence is a related attribute which Beetham and colleagues suggest as a prerequisite for making one’s materials available as OER; in addition to expertise in the legal, technical and pedagogical aspects, ‘releasing educational content under open licence demands some confidence’ (Beetham et al., 2012: p. 12).

Turning to the reuse of OER among university teachers, it is clear that the availability of OER alone is not enough to motivate its reuse: ‘the simple existence of free and open material is necessary but not sufficient for wide scale adoption and use’ (Matkin & Cooperman, 2009: p. 12). Ehlers adds: ‘There is too little consideration of whether access alone will support educational practices and promote quality and innovation in teaching and learning’ (Ehlers, 2011: p. 2).

It is challenging to research teachers’ motivation to reuse OER, since it is ‘under the control of the individual and is difficult to measure’ (Pegler, 2012: p. 7). However, the studies by Masterman and

Wild (2011; 2012) and Pegler (2012) indicate that reasons for reuse are largely pragmatic and include an improvement to the quality of students' learning; saving time (although in the first instance finding and evaluating a suitable resource could be more time-consuming than creating one's own); the rarity of certain resources; and efficiency.

The status of reuse as an open practice is not immediately apparent since, on the surface, the emphasis in much of the writing on digital/open scholarship in relation to teaching lies in sharing rather than reuse (eg Lane, 2011; Weller, 2011; Lerman, Miyagawa & Margulies, 2008). Moreover, as implied by Hylén (2009), the altruism of others in making their resources openly available is less applicable (if at all) to an individual teacher's motivation to reuse OER. It also seems to be the case that the single attribute that distinguishes OER from other resources on the Web (also referred to as 'stuff-on-the-Web' by Philips, 2012, and 'grey OERs' by Brent, Gibbs & Gruszczynska, 2012) – namely, the open licence – is not in itself a motivator to engage spontaneously with OER. Lecturers interviewed by Masterman and Wild (2012) appeared to have a low awareness of, or regard for, the copyright conditions governing the third-party resources that they appropriated; instead, they operated on a common-sense notion of fair use or, even more simply: 'I need that: I'll use that':

...you think: 'I'd never as an academic – when writing something – incorporate something from someone else's book without acknowledging them, so how do I think I can just take things off the internet?' And yet you do because it's... the internet (university teacher quoted by Masterman & Wild, 2012: p. 6).

In fact, pragmatic and pedagogic factors aside, there would appear to be more motivation not to reuse OER than to reuse them. The reasons for this are suggested by Iiyoshi and Kumar: 'Higher education ... places a high premium on originality, whereas adapting or improving another's educational materials is rarely understood to be a creative, valuable contribution.' (Iiyoshi & Kumar 2008: p. 432). Umar and colleagues ascribe responsibility to an individualist (Western) culture whose features 'include a fostering of independence and individual achievement, and promotion of self-expression, individual thinking and personal choice' (Umar, Kodhandaraman & Kanwar, 2013: p. 199-200). In contrast, a 'collectivist' culture 'fosters interdependence and group success':

The OER movement is a people's movement, founded on principles that challenge the organisational values and pedagogical practices of most educational institutions in the developing world that still represent closed educational systems. The principles of openness, sharing and collaboration that characterise the OER movement are different, if not opposed, to the traditional 'banking' concept of education in which ownership, individualism and competition predominate. (ibid.: p. 200-201).

Masterman and Wild (2011) found empirical backing for the role of the collective in the reuse of OER, as did Rolfe (2012). Even so, individualism has a part to play: teachers will reuse others' materials, but not at the expense of their own 'teaching voice', as one of the participants in Masterman and Wild's study articulates:

I think academics always suffer from this problem of using somebody else's materials. We haven't made it and used our thought processes to make it. And the way somebody delivers something is not the way you would naturally deliver it ... you spend a couple of hours re-jigging it to sound like you; using the concepts but put it in your style (university teacher quoted by Masterman & Wild, 2011: p. 44).

Thus, there appears to be an asymmetry in the sharing and reuse of open educational resources despite the professed goal of mutuality in their exchange and development (Willems & Bossu, 2012).

2.3.2 Characteristics of open pedagogic models

As noted in the introduction to this report, 'open' initiatives in education create an opportunity for 'broadening and deepening our collective understanding of teaching and learning.' (Iiyoshi & Kumar, 2008a: p. 439) or, in the words of Ossiannilsson and Creelman 'to develop practice and culture in the

use of OER and gain from the benefits of OER from the learner's, teacher's and management's perspectives' (Ossiannilsson & Creelman, 2011: p.373).

However, a number of proponents of open education argue that, for the potential of OER to be truly realised, there needs to be a radical change in pedagogy (eg Ossiannilsson & Creelman, 2011; Geser, 2012). Indeed, Geser argues that:

if the dominant model is teacher-centred education – a teacher mediates authoritative textbook or course content and learners digest and reproduce it – the Open Educational Resources will not make for a difference in education. In such a model teachers may download Web-accessible open teaching material to prepare classes, and students may use some content to prepare material for lessons, but this will remain a one-way channel of content provision, in which physical textbook or course content is replaced by digital material (Geser, 2012: p. 41).

Ehlers is equally blunt: 'The pure usage of these open educational resources in a traditional closed and top-down, instructive, exam-focused learning environment is not open educational practice' (Ehlers, 2011: p. 5). He presents an alternative environment, in which:

...OER are used to create resources which are more learner-centred than the ones that existed before; ... learners are involved into the creation of content which is taken seriously by the teachers/facilitators; ... teachers are moving away from content centred teaching to 'human resource' based teaching; ... learning processes are seen as productive processes and learning outcomes are seen as artefacts which are worth sharing and debating, improving and reusing...' (ibid.).

The ability of learners to discover more information directly has the potential to alter the balance of power around access to knowledge (Cassery, 2008). The result is a shift in the teacher's role from source of knowledge to that of mentor or learning advisor (Ossiannilsson & Creelman, 2011), facilitating 'open educational practices' on the part of learners (Schaffert & Geser, 2008: p. 4). For his/her part, the learner should become 'an arbiter of his or her educational needs and desires' (Cape Town Declaration, 2007). This change in relationship is to be acted out within a constructivist model of learning where there is more dialogic engagement between teachers and learners: 'knowledge is co-created and facilitated through mutual interaction and reflection' (Ehlers, 2011: p. 4; also Conole, 2010), and priority is given to learning communities instead of teacher-centred education (Geser 2012).

The types of learning activity envisaged in this model should focus on the 'development of knowledge and skills required for tackling and solving problems instead of subject-centred knowledge transfer' (Geser, 2012: p. 38) with the goal of preparing students – and teachers too – for participation in a knowledge economy (Schaffert & Geser, 2008). Generally, this will demand an active, constructive engagement with content, tools and services in the learning process' (Geser, 2012: p. 38). According to Schaffert and Geser, these tools should support collaborative, self-managed learning that allow students to draw from a range of sources of information. In contrast to the large, centrally managed systems that characterise many higher education institutions, Schaffert and Geser advocate 'novel, low-barrier' tools and services that are easy to implement and manage, such as wikis, blogs and e-portfolios.

Given the claims made in the opening of this section, an important question is the extent to which new pedagogic theories are needed to underpin learning and teaching in an open world. Connectivism (Siemens, 2004) has been positioned as a response to a world where knowledge is abundant, learning is no longer an individual activity and the cognitive processes of learning are supported by, or even performed by, digital technologies. On the other hand, a number of longstanding theories are considered either to be more or less directly applicable to learning and teaching with OER (eg Panke & Seufert, 2013; McAndrew & Farrow, 2013a), or merely to require 'recasting or reimagining' for 'a world of abundance' (Weller, 2011), in part through placing an emphasis on the individual learner's connections within a larger network (Weller, 2012).

In their synthesis of outcomes from the Jisc-funded UK OER programme (phase 2), Beetham and colleagues suggest that what might look like a change in teachers' pedagogy may in fact be 'rediscovering the specificity of their disciplinary pedagogy through a new lens (content sharing on the open web), rather than discovering of a new "open" pedagogy' (Beetham et al., 2012: p. 7). Conversely, they also propose that it might be sufficient for teachers merely to 'adopt those aspects of open practice that amplify their existing pedagogic practices most effectively, whether those practices be content-based, process-based, or passing on tacit knowledge' (ibid.: p. 8).

2.3.3 Open educational knowledge

If open educational practice, with its vision of a 'flattened' teacher-student relationship and of networked learning, is to lead to a re-examination by teachers of their fundamental beliefs about their role, then it follows that the new professional knowledge about teaching and learning should equally be open.

The natural way for such knowledge to be shared openly is through OER designed for students. Lane and McAndrew (2010), and van Acker and colleagues (2013) claim that OER enable teachers to view the teaching experiences of others in depth and use them to inform their own practice:

OER can be considered as a new kind of knowledge, which can be used to diversify teaching activities or to gain new insights into other teaching methods for a particular subject. ... By recycling other teachers' ideas, teaching activities may improve and course preparation time could possibly be reduced. Sharing OER should, thus, be considered as knowledge-sharing behaviour and an effective method to help teachers with professional development and to support them in improving their content knowledge and pedagogical skills (van Acker et al. 2013 pp. 177-78).

Indeed, Iiyoshi and Kumar consider OER a necessary tool for pedagogic transformation and, even, the only means by which it can occur: 'If there are no incentives for faculty to use and enrich open educational goods to transform their teaching and student learning, pedagogical practice will always struggle to advance' (Iiyoshi & Kumar, 2008a: p. 432). This is not a one-way activity: through openly sharing feedback on their use of an OER and suggesting improvements to it, teachers can leverage the value of that resource (Geser, 2012).

As a consequence of this open sharing, 'the basic praxis of teaching [is changed] from an essentially individual activity to a shared activity, whether that is the activity of individual teachers or individual institutions' (Lane 2011: p. 5). A teacher is therefore considered to be part of a community even when working alone, as they are using – and learning from – artefacts created by other teachers. However, Schaffert and Geser appear to have in mind a more conscious, deliberate, coming together of teachers who 'should share within a community of practice experiences, lessons learned and suggestions on how to better foster the development of students' as well as their own competences and skills' (Schaffert & Geser, 2008: p. 4).

From this flows the concept of open teaching: an active process that involves 'cocreating, experimenting, reflecting, sharing, and reusing accumulated ideas and knowledge about teaching and learning' (Richardson, 2008: p.279) through, for example, peer observation, peer review and e-portfolios (Iiyoshi & Kumar, 2008a). If released with open licences, these can become open educational knowledge resources for teachers' learning. Laurillard takes the notion of experimentation further, envisaging teachers becoming researchers into their own practice: 'a teaching community that acts like a learning system — one that makes knowledge of *what it takes to learn* explicit, adapts it, tests it, refines practice, reflects, rearticulates, and shares that new knowledge.' (Laurillard, 2008: p. 328).

2.4 OPEN LEARNING

The literature reviewed in Section 2.3.2 suggested that a more learner-centred approach on the part of teachers is a prerequisite to open practices by learners in formal educational settings. The principal characteristics of open learning, as suggested by the literature reviewed by this project, include:

- greater autonomy: students learn to assess their own progress and take responsibility for their learning (Ossiannilsson & Creelman 2012);
- learning through collaborating on 'open knowledge-building projects' (Beetham et al., 2012: p. 2) with other students; and
- 'validating' each other's learning; giving feedback through sharing the 'knowledge assets' (eg essays) that they create and giving each other feedback and reviews on these outputs (cf. Ehlers, 2011; Beetham et al., 2012).

According to Schaffert and Geser (2008), these practices bring with them certain responsibilities. For example, students should demand educational approaches that equip them for employment in a knowledge society (IT skills, digital literacy); they should propose (although it is not stated to whom) open learning practices including new tools and services; and they should respect IPR and use open licensing for their own creations.

However, embedded in these learning 'practices' is a particular conceptualisation of the learner, which is open to critique. Knox in particular questions the OER movement's assumptions about learners' capacity for self-direction and identifies a tendency to 'naturalise an archetypal human condition: a set of idealised qualities to which learners are expected to adhere' (Knox, 2012: p. 2). A similar point is made in relation to learners in general by Kirschner and van Merriënboer (2013). Even Ossiannilsson and Creelman, whose writings are suffused with enthusiasm for open practices, admit that:

...many students view education very traditionally and have quite narrow definitions of what a good teacher should do. Students who are focused on exam results and see education primarily as accreditation and the winning of certificates will find concepts like connectivism and open learning highly disconcerting. Teachers who use OER instead of lecturing risk being seen as 'not real teachers' and may get lower evaluation results than colleagues who teach more traditionally (Ossiannilsson & Creelman, 2011: p. 376).

2.5 OPEN PRACTICES IN RESEARCH

Since sharing is claimed to be 'congruent with the academic tradition' (d'Antoni, 2009: p.6) and to be 'convincingly demonstrated in [academics'] teaching and research' (Lerman, Miyagawa & Margulies, 2008: p. 214), we now turn briefly to the characteristics of open practices in research. These practices are summed up by Weller (2011) under the label of 'digital scholarship', by Scanlon (2013) as 'open scholarship' and by Veletsianos and Kimmons as 'networked participatory scholarship': 'the emergent practice of scholars' use of participatory technologies and online social networks to share, reflect upon, critique, improve, validate, and further their scholarship' (Veletsianos & Kimmons 2012b: p. 768).

A digital scholar displays curiosity about the potential of new digital tools and assembles a 'personal learning environment' comprising a repertoire of tools which they continually update as technology evolves and employ for both professional (i.e. teaching and research) and personal purposes. This blurring of the personal and professional in the use of technology is carried across into the digital scholar's communications and, argues Weller (2011), enables them to be an effective communicator, since revealing personal elements of oneself creates 'hooks through which connections are established.'

Practising open approaches in one's research – open science – involves making available (under an appropriate open licence) methods, data, program code and other artefacts that can enable others to reproduce the results reported (Sophie Kay, personal communication). Formal outputs are published through open access routes out of preference, and open peer review (Anderson, 2013) may also be favoured. Self-publishing also features prominently: the digital scholar produces a range of informal, un-peer reviewed, outputs to report their work in progress and/or results prior to formal publication e.g. blog posts and tweets (Weller, 2011; Scanlon, 2013). In this way, (open) social media supplement rather than displace traditional digital media for disseminating research (Veletsianos, 2013).

2.6 THE INSTITUTIONAL DIMENSION

We have already noted, in section 2.3.1, the claim by Umar, Kodhandaraman and Kanwars (2013) that a 'collectivist culture' is necessary if OER – and, by extension, open educational practices – are to flourish. Indeed, Masterman and Wild conclude that 'impact on individual practice is most likely to be achieved within the dimension of social practice: networks of like-minded individuals who are receptive to ideas and suggestions from each other and ready to share their own resources' (Masterman & Wild, 2011: p. 57), while Aguilar and colleagues write of the need for knowledge mobilisation: 'bringing people and actions together to create value and meaning to satisfy particular needs based on assimilation and application of focused knowledge' (Aguilar et al., 2013: p. 26).

However, pockets of self-organising academics are not enough; there is, according to Ossiannilsson and Creelman, a need for 'a positive climate for innovation in the institution and an explicit acceptance of open education principles at management level' (Ossiannilsson & Creelman, 2011: p. 375). 'Management' does not merely mean management within an institution; it involves management at the national level, with policies to open up government information leading through example (Hoosen & Burcher, 2012). Mackintosh envisages an 'incremental approach to open education' that draws on 'the interplay between government and institutional-led initiatives' (Mackintosh, 2012: p. 263).

A number of motivating factors have been advanced for institution-level engagement with OER. Outward-facing factors include:

- sharing knowledge for the 'public good' (de Langen, 2011) which is seen as a 'social responsibility' of the institution (Ford, 2013); and
- promotional opportunities: enhancing the reputation of the institution and attracting prospective students (Beggan, 2010; de Langen, 2011).

Examples of inward-facing factors are:

- improving the performance of both students and staff (Ford, 2013; Lane, 2010);
- efficiency (cost advantages): improving the quality of teaching through the wider use of third-party resources which are available free of charge (de Langen, 2011; Ford, 2013); and
- overseas expansion: the establishment of satellite campuses in other countries necessitates the sharing of resources produced by the home institution (Beggan, 2010).

Some, including Harley (2008), Browne et al. (2010) and de Langen (2011), have identified a tension within producer institutions between creating OER to benefit teaching and learning on the one hand, and creating them as a marketing activity on the other. Drawing on critical discourse analysis, dos Santos observes: 'The media discourse of OERs draws on the globalization discourse and widening participation discourse to foster the image of the institutions, their mission and their role in the society in creating knowledge and a better world' (dos Santos, 2008: p. 7). He warns that 'OER initiatives can [attach] less importance to a commitment to offering true possibilities for knowledge building, its regionalisation and use/re-use by its potential audience' (ibid.: p. 9). The following

extract from a paper by Highton and colleagues exemplifies the delicate balance between public good and public relations:

It is appropriate for a university with a global brand to be addressing challenges and extending its reach, and Oxford University has recognised that OER activity is in line with its business, mission, and purpose. This alignment is reflected in several case studies included in official institutional marketing publications. The availability of OER contributes to outreach efforts, particularly in a traditional institution which may have been formerly regarded as being relatively closed (Highton, Fresen & Wild, 2012: p. 37).

Regarding the form that an institutional policy on OER might take, Hoosen and Burcher (2012) have identified five models from their review of institution-level approaches in a number of countries:

- in parallel with specific OER projects or initiatives: eg the Open University;
- following on from specific OER projects or activities: eg the University of Bath;
- leadership support: eg Nottingham University;
- deployment of 'champions' (although these more usually promote sharing rather than reuse); and
- guidelines, practices and procedures that stop short of an actual institutional policy.

Beggan (2010) emphasises that the sustainability of OER initiatives depends on more than institutional altruism; they must be linked to a university's strategic drivers. The literature offers a number of suggestions for engendering a positive climate towards open practices in teaching and learning at the institutional level, over and above giving practical support to academics in creating and sharing their own OER, and in locating, evaluating and adapting third-party OER.

To establish the basic condition for openness – ie an appreciation of IPR – Mackintosh (2012) suggests an institutional open intellectual property initiative. Wild (2012) advocates the embedding of OER in teaching and learning strategies and e-learning implementation plans, with curriculum design (or redesign) providing opportunities for stimulating the use of OER. A further option – particularly in research-intensive universities – is to leverage open practices in other academic activities such as open access publishing (Hoosen & Butcher, 2012) or in research-focused subjects such as the sciences and medicine which, as Coughlan and Perryman (2011) suggest, have a culture of disseminating their research outcomes openly for the common good.

2.7 ISSUES IN OER RESEARCH

Some years ago Walker observed that 'the open education movement will need to self-evaluate in order to substantiate the claims it makes and defend its results against professional error and inappropriate interpretation' (Walker, 2008: p.78). However, as he went on to point out, 'Measuring results and postulating what led to them is difficult for any multidimensional, longitudinal behavior, and establishing that a meaningful change in such behavior really did occur requires real evidence that really is hard to obtain.' McAndrew explains why this is particularly difficult for research into OER:

...challenges ... are amplified by bringing together three already difficult aspects: the systems are complex combinations of technology and practices; learning is [a] multi faceted process where it is difficult to isolate factors; and, the openness of systems means that there is no formal link between the researchers and those providing them with data (McAndrew, 2011: p. 2).

This literature survey concludes by identifying some of the issues that have been identified as problematic in relation to the methods adopted in empirical studies of engagement with OER in higher education (OER as the 'independent variable' and the relative weight of quantitative and qualitative data) and to the overall orientation of OER research.

2.7.1 OER as the ‘independent variable’

Recalling the characterisation of OER in section 1.2.2 of this report, the term ‘open educational resources’ embraces an extremely diverse collection of artefacts. Moreover, as Glennie and colleagues point out, ‘Curriculum variances are sufficiently great to make the homogeneity that “OER” implies unhelpful’ (Glennie, Harley, & Butcher, 2012a, p. 287). This means that any discussion of the place of OER within a particular curriculum needs to take into account the nature and purpose of the resources in question.

For the researcher, the heterogeneity of OER in terms of types of artefact (learning objects, images, podcasts, e-books and so forth), granularity and degree of embedded pedagogic intent means that the independent variable may vary from study to study, and therefore the conclusions drawn by researchers may differ. This is important as it opens up the potential, for example, for claims about OER that are simply images with Creative Commons licences but with no embedded pedagogic intent to be applied erroneously to complex stretches of learning with specific intended learning outcomes. The researcher therefore needs to exercise great care when synthesising findings across multiple projects in order to formulate generalisations about OER (Masterman & Wild, 2013b).

A related question is whether the resources and practices being studied really are OER and OEP. An overlap is discernable between studies of reuse in general (part of a tradition that extends back to the interest in learning objects in the early 2000s: eg the volume edited by Littlejohn, 2003) and studies conducted expressly in relation to OER. This overlap is occupied both by exploratory investigations into teachers’ reuse of ‘bounded’ (Cronin, 2014) resources with the intention of ascertaining their readiness to engage in open practices (eg Harley, 2008; Rolfe, 2012) and by studies where the status of the resources themselves is ambiguous. An example of the latter is a paper on RLOs (reusable learning objects) by Greaves, Roller and Bradley (2010), who in their conclusion appear to treat the terms ‘RLO’ and ‘OER’ as interchangeable. When we checked the resources listed in the paper (in 2013), we found that at least some were released under more restrictive copyright terms (ie all rights reserved). This could suggest that the authors may have applied a common-sense (naïve) definition of openness: viz. freely available and free of cost, but without regard to licensing terms.

The choice of the phrase ‘independent variable’ to head this section leads to a third consideration: namely, attribution of cause, or the extent to which any difference discerned in an empirical study of introducing OER into a formal educational setting can be attributed to the resources themselves in isolation from other factors. This issue is not, of course, unique to OER as the quotations from Walker and McAndrew on the previous page indicate. However, it has particular relevance to OER in light of the ‘irrational exuberance’ (d’Antoni, 2009: p. 5) and ‘strong and seemingly unleavened optimism’ (Papachristou & Samoff, 2012, cited in Glennie, Harley & Butcher, 2012b: p. 7) of the OER movement (discussed in section 2.7.3 below). In this respect, laying aside the questionable status of their resources, the conclusion drawn by Greaves and colleagues regarding their study is remarkably honest: ‘It is not possible to disaggregate the impact of the different changes made to the module’ (ie revision to the learning design and the introduction of new resources) (Greaves, Roller & Bradley, 2010: p. 14). Rather, it seems, in their case it was the ready availability of the resources, as much as their pedagogic value for the purpose at hand, that helped to make the difference to students’ performance.

2.7.2 Evidence of impact: quantitative versus qualitative data

If the deployment of OER is to have a transformational impact on teaching and learning, then evidence must be adduced to demonstrate the changes (ie improvements) in learning outcomes. Walker places his faith firmly in quantitative measures and stresses the importance of systematic approaches, adopting rigorous procedures to ‘[test] pedagogic hypotheses against quantifiable outcomes’ (Walker, 2008, p. 79). In contrast, Boyle argues for qualitative approaches that can yield ‘rich, grounded narrative that should be invaluable to others seeking to set up large OER projects in their own institutions’ (Boyle, 2010 p. 1), a position which is shared by Wild (2012) but critiqued by

Meyer, who considers ‘rich anecdotal examples of new uses’ as insufficient evidence of impact (Meyer, 2011: p. 6). The two forms of data, then, serve differing purposes: the first to prove (or otherwise) a research hypothesis, the second to provide inspiration and examples to practitioners.

Mixed methods such as surveys, discussion groups, interviews and Web analytics are favoured by Harley (2008), McMartin (2008), Meyer (2011) and Beaven (2013). However, this leaves unanswered the question of how rich, grounded narratives can be adduced as solid research evidence. The overall challenge to establish what constitutes evidence of impact is currently being tackled by the OER Research Hub project, which aims to synthesise a wide body of research conducted globally in order to support (or refute) 11 specific hypotheses about OER (McAndrew & Farrow 2013b).

2.7.3 Critiques of the overall orientation of OER research

Writing in 2008, Harley stressed the importance of the avoidance of bias towards any one kind of resource (i.e. OER versus bounded resources), but identified a ‘chasm’ between ‘what many technological enthusiasts envision in terms of scale and quality of use on one hand, and what productive and creative academic scholars say they need on the other’ (Harley, 2008, p. 198).

An optimistic view of the transformational potential of OER underpins most of the literature surveyed in this project and is particularly evident in the claims about open educational practice and open learning (reported in sections 2.3.2 and 2.4). Glennie and colleagues suggest that the lack of critical perspective may arise from the very concept of OER, which ‘presents itself as ... a self-evident social “good”’ (Glennie, Harley & Butcher, 2012b: p. 7). This is allied to ‘meliorism’: ‘the belief that the world tends to become better and that humans can aid its betterment’ (ibid.). As a consequence of this belief, there is a risk of focusing too heavily on the desired goals of curriculum improvement and, thereby, overlooking the realities constraining implementation. Knox’s (2013) critique of the OER movement similarly targets the idealistic assumptions of the enthusiasts (particularly their view of learners: see section 2.4 above).

The literature suggests that meliorism can be counteracted in two ways. First, the OER field is seen to be under-theorised (Knox, 2013). This entails going beyond simply applying established analytical frameworks to OER research (such as Activity Theory: Cox, 2013; McAndrew, 2011; and social exchange theory: Van Acker et al., 2013) to making deeper connections with broader philosophical concepts. Knox’s (2013) co-optation of Berlin’s concept of positive and negative liberty is one example (albeit within the context of a critique); Deimann’s (2013) link between open education and the German concept of *Bildung* is another.⁷

Second, there appears to be a need to recognise OER for what they actually are:

In many instances, practitioners seem to talk about OER as if it is a different *type* of educational material, rather than reflecting an understanding of OER as fulfilling the functions of any type of educational material, but with the added benefits of being usable and adaptable without the expense of paying licensing fees or securing permissions explicitly from copyright holders (Glennie, Harley & Butcher, 2008a: p. 287).

In other words, by disconnecting OER from their place in the historical development of reusable, shareable educational materials and, by extension, disconnecting OER from current pedagogic practices and models, the proponents of openness ‘are often committing themselves to traversing a well-worn pathway of learning about educationally effective uses of resources through practice rather than using the shortcut of learning from the researched and documented experiences of other practitioners’ (ibid.), Learning Design being one example of such ‘researched and documented experiences’: Browne et al., 2010; Laurillard, 2008. It is ironic, then, that while reusing (or

⁷ Deimann suggests a fit between OER and the concept of *Bildung*: ‘the free, dialogical and dialectical interplay between the individual and the world in such a way as to allow for the individual’s self-realization – the full unfolding of his or her innate potentials’ (2013: p. 192). To facilitate this, a well-rounded education is emphasised rather than specialised knowledge or abilities. Both OER and *Bildung* affirm education as a common good; OER are a means to achieving *Bildung*, while *Bildung* provides a potential theoretical framework for the place of OER in learning and individual development.

repurposing) OER is frequently seen as a means for teachers to avoid 'reinventing the wheel' (eg Masterman & Wild, 2011; Rolfe, 2012; Reed, 2012; Hoosen & Butcher, 2012), OER research itself appears to be reinventing the wheel by endeavouring to create its own pedagogies rather than identifying serviceable pedagogies in the existing repertoire.

3. INTERVIEW DESIGN AND ANALYSIS

3.1 DESIGN

The interviews to be carried out by the study were designed to be semi-structured, in that they had 'a sequence of themes to be covered, as well as suggested questions [with] an openness to changes of sequence and forms of question in order to follow up the answers given and the stories told by the subjects' (Kvale, 1996: p. 124). The interview schedule for tutors was based on a conceptual framework of open academic practice which we constructed after conducting the literature survey outlined in section 2.

The interview schedule was revised after discussion and piloting with three members of academic staff in the Department of Education. Further minor adjustments were made after the first two interviews. Separate schedules were prepared for interviewees representing specific stakeholder groups.

The interview schedule for tutors is reproduced in Appendix B.

3.2 PARTICIPANTS

3.2.1 Sampling method

The project aimed to conduct interviews with approximately 20 stakeholders in the University with an involvement in the production and use of OER in Oxford: primarily teaching staff in the collegiate University, but also specific stakeholders in central units with an institutional interest in OER.

We used a purposive sampling method to identify potential interviewees as follows:

- **Teaching staff**

These included departmental lecturers and tutorial fellows who at the time of the project were teaching undergraduates and were known to meet one or more of the following criteria:

- creator of OER released through Oxford's collections: Oxford's podcasts on iTunes U, Politics Inspires blog, Great Writers Inspire collection of OER;
- participant in the OER Impact Study, an investigation into OER use conducted by the Academic IT group in 2011;
- aware of the issues associated with open access publishing: identified from participation in the Open Access Oxford project in 2013;
- active in open science;
- participant in the University's MOOC working group.

They were selected as evenly as possible from all four academic divisions.

- **Representatives of other stakeholder groups**

- an educational developer involved in the training of early-career lecturers and the provision of continuing professional development: identified directly;
- a librarian who had been involved in the development of one of Oxford's collections of OER. Librarians are emerging generally as key stakeholders in supporting teaching staff in finding and evaluating online resources: identified directly;
- a learning technologist experienced in the technical aspects of producing online resources and helping teaching staff in this respect: identified directly.

The Academic IT group in the IT Services department is a key stakeholder in open practices in Oxford through its role in developing and hosting the platforms of OER listed in section 1.1 and in providing technical support to individuals and groups in the University who wish to make podcasts of lectures,

events, etc. However, the direct involvement of Academic IT staff in preparing the project proposal and carrying out the project itself precluded interviews with stakeholders from the group.

Because of the difficulty in securing sufficient teaching staff who met the specified criteria (some had either left Oxford or did not reply to our invitation), we extended our search to people who had either won, or been shortlisted for, OUSU teaching awards in 2012 or 2013. This decision was based on the assumption that, if these individuals had won awards for their teaching, they were likely to have thought about teaching and therefore might have something valuable to contribute to the project, even if they had not explicitly thought about 'open' issues. As it turned out, this assumption was justified.

3.2.2 Interviewee profiles

We secured a total of 17 interviewees: 14 members of teaching staff, one educational developer, one librarian and one learning technologist.

For reasons of confidentiality we have not listed interviewees' individual demographic characteristics. However, we are able give the following information regarding the teaching staff:

- 13 teach undergraduates (including mature students) and 1 teaches postgraduates. At least 2 also teach visiting students;
- 6 work in the Humanities division, 3 in MPLS, 2 in Medical Sciences and 3 in Social Sciences;
- at least 9 have either studied or taught in other universities.

Interviews varied in length from 31 minutes to 2 hours 38 minutes, depending on the time available or on how much interviewees had to say. The average length was 82 minutes. Because of time constraints and interviewees' differing roles, the number of interviewees from whom we collected data varied from question to question.

3.3 ETHICAL CONSIDERATIONS

The project received ethical approval from CUREC. An email message containing the invitation to participants stated the purpose of the project and the conditions governing the collection of data from them, and included assurances of confidentiality and anonymity. At the start of their interview, each participant signed a consent form that included a statement that they had read and understood these conditions. Participants had the option to review the data collected from them that was to be used in the report (ie in sections 4–7) and to amend or withdraw all or part of their contribution. This was particularly important where an interviewee was the only occupant of a particular role and was thus potentially identifiable.

In this report, the 14 teaching staff are all referred to as 'tutors', regardless of their actual job titles. They are identified primarily by the division of the University in which they work; references to their actual subjects are made only where necessary.

3.4 DATA ANALYSIS

3.4.1 Transcription

The interviews were audio-recorded and transcribed by the two interviewers, each interviewer transcribing her own interviews.

The transcriptions were treated – keeping in mind the attendant implications for reliability and validity – as 'the solid empirical data in the interview project' (Kvale, 1996: p. 163). Since the primary

purpose of the transcriptions was to capture what was said (rather than how it was said),⁸ and since the analysis would be strongly guided by the interview questions, we made *unfocused indexical* transcripts (Gibson & Brown, 2009): unfocused in that they created ‘a record of “what happened” within a given recording of speech’ (ibid.: p. 113), and indexical in that the data were organised in relation to the interview questions. The transcripts were written as summaries in reported speech, with verbatim quotations where appropriate. We also followed up websites and bibliographical references made by interviewees and included the relevant links and bibliographical data as footnotes to the transcripts.

3.4.2 Analysis

The data analysis was conducted in two stages. In stage 1, two researchers (one of whom had not been involved in the interviews) analysed the transcripts. One worked on 10 interviews, the other worked on seven. We extracted the passages from the transcripts, coded them according to each interview question (or sub-question) and collated them in a Word document. Where the sense of an individual passage was difficult to interpret, we checked the audio recording. Each passage was identified by interviewee code and the line number in the transcript on which it began. This would enable us to trace each item of data in the report back to its source if required to do so.

In stage 2, the collated data was reorganised by research question, with the two reviewers taking responsibility for different questions and synthesising the items of data into the narrative interpretations which can be found in sections 4–7 of this report. Our interest lay in the different perspectives that interviewees offered on the topics of discussion rather than in the number of respondents who expressed a similar view. The resulting narratives were circulated to interviewees for approval. The implications of the findings were discussed by the project team before being incorporated into the report as sections 8 and 9.

⁸ We only indicated how something was said if an additional cue would have a bearing on how the text was read and, therefore, on the meaning that was given to it.

4. FINDINGS (1): FUNDAMENTAL PRINCIPLES OF OPENNESS

To open the interviews we presented interviewees with two statements encapsulating two basic principles of openness derived from the research literature and asked to what extent they agreed with each statement. The statements were the same (with one adaptation) as the two propositions underpinning our three research questions; eliciting interviewees' perspectives on them provided a context for the questions which we asked them in the main part of the interview.

4.1 KNOWLEDGE AS A PUBLIC GOOD

The full text of the statement given to interviewees is an abridged version of the quotation from Atkins, Brown and Hammond (2007) cited in section 1.2.3 and reads 'The world's knowledge is a public good and all people should have free access to it.'

The overwhelming majority of the interviewees agreed with this statement, even if it is currently more of an ideal than a reality. One humanities tutor stated that 'an easy access to decent, well-researched work, robustly defended opinions and arguments is vital to democratic life'; another regarded the statement as 'axiomatic' and an obvious product of a society that conducts education as a publicly paid for, state-driven service. A tutor in the natural sciences brought the argument down to a human level, giving an example of a member of the public struggling to obtain information about research into a rare medical condition which is held in 'locked-away journals'.

A number of interviewees pointed out that there have to be limits to free access: for example, where people could abuse scientific knowledge and put it to harmful use:

If we just reverse-engineered some virus then no, that shouldn't just be like published or put in an open file because people do things with it, but ... knowledge that isn't of that exceptional kind of military or terrorism like possible threat and things should be as openly available as possible (tutor in the natural sciences).

Therefore, as another interviewee in the natural sciences concluded, a moral case can sometimes be made that 'the public good is sometimes served by not disseminating knowledge.'

Other interviewees perceived the need for certain limitations on free access to knowledge. A tutor in the social sciences suggested that a place should remain for individual intellectual property so that people continue to feel incentivised to do research. It was also felt that a university might need to delay public access to research findings in order to ensure that the knowledge really is for the public good, the outputs are robust and usable by the community, or to reap the financial benefits that might otherwise go to commercial organisations seeking to exploit that knowledge.

Two interviewees appeared to suggest that the extent to which knowledge can be treated as a public good may be dependent on the economic and political climate prevailing at any one time. One of them felt that the notion of knowledge as a public good could be inimical to commercial enterprises wishing to acquire it for their own commercial ends and had also discerned a move on the part of governments worldwide to 'rebrand' universities as institutions dedicated to private advancement rather than to public good.

4.2 OPEN SHARING IN THE ACADEMIC PROCESS

The full text of the statement given to interviewees is the quotation from Lerman, Miyagawa and Margulies (2008) cited in section 1.2.3 and reads 'Open sharing of knowledge is at the heart of the academic process.'

Almost all respondents agreed with this statement. Some interviewees thought that it affirms the legitimacy of the existence and functions of a university. One of them added that opportunities for

education should be open to all, but was concerned that the statement might imply that sharing knowledge (in the form of OER) is all there is to education. This concern is reflected in a later comment which he made about learners studying on MOOCs in the belief that they were obtaining a real university education. However, a tutor in the natural sciences took the view that ‘humanity needs all its talent.’ He has his sights set on those ‘rare talents’ across the world who have ‘a real spark of genius to them’ and who, given access to open educational resources, could make important contributions to his field. For him, it is a matter of enabling ‘everyone, but especially talented people, to be able to reach the limits of what they can do.’

Although most interviewees spoke in terms of sharing their research outputs, one tutor in the natural sciences suggested that there might be benefits in sharing one’s work in progress: for example, ‘if a group has a go at a thing and ... they share ideas and the things that have stumped them and so on.’ He also thought that it would be ‘fun’ to try out a model where ‘we’re all just constantly updating on a daily basis what we achieve and the whole thing’s there for everyone to see.’ However, he acknowledged that such a model would be incompatible with the current academic process.

Overall, the interview data indicate that the competitive nature of academic practice forms a major impediment to open sharing. A number of interviewees referred to the fact that one’s career and prospect is tied to publishing new ideas, which can mean restricting general access to those ideas until one has gained the requisite credit for them, and/or concentrating on publications for a scholarly audience rather than for the general public. However, for a humanities tutor, the nature of knowledge in a domain can also influence what can be shared, and with whom. That is, a person may need to have a certain level of relevant domain-specific knowledge and skills already in order to benefit.

In relation to teaching, a humanities tutor felt the idea that ‘open sharing is at the heart of the academic process’ comes close to her personal philosophy. She thinks of learning and teaching as a conversation (‘sharing’) which is initiated when an undergraduate first arrives at Oxford and ‘should be something that they think can go on for the rest of their lives.’ However, interviewees’ overall readiness to share the outputs of their research can be contrasted with a comparative reticence over sharing their teaching materials, reasons for which are suggested in sections 5.1.3 and 6.3.2.

5. FINDINGS (2): ASPECTS OF OPEN EDUCATIONAL PRACTICE

Having elicited interviewees' perspectives on the fundamental assumptions about openness, the interviews moved on to explore research question 1. We asked interviewees about some of the claims that have been made in relation to four aspects of open educational practice identified in the literature:

- sharing (making available) resources that one has created;
- reusing resources that have been created by others;
- adopting open models of teaching and learning ('open pedagogic models');
- sharing professional knowledge about teaching and learning.

The discussion of open pedagogic models also included the pedagogic implications of MOOCs and the value of students creating OER as part of their learning.

5.1 SHARING RESOURCES

5.1.1 Examples of sharing

A number of interviewees had made resources freely available online as OER. For two humanities tutors the starting point was making podcasts of their own lecture series for undergraduates. Their initial purpose was to enable students to listen to lectures if they were unable to attend in person or if a particular topic was covered by the lecture and the tutorial at different times in the term. One of the two had uploaded the lectures to the Oxford Podcasts website as it was the easiest way for students to access them. The other had felt encouraged to make his lectures openly available on seeing that podcasts from his faculty were already on iTunes U. Since the lectures were an introduction to a particular aspect of his discipline, he felt that they could benefit any interested party.

Another interviewee reported that his department has made its first-year lecture materials available online, some of them with an open licence (at individual discretion). Although the main purpose is for their own students, he is aware that the materials also have value to prospective students in giving them a sense of what they expect at Oxford.

Three interviewees had created new resources (podcasts, short essays and blog posts) specifically for collections of OER. These collections had been assembled in externally funded projects involving collaborations between their departments and the IT Services department. Two further interviewees had taken the initiative to create OER themselves. One had filmed his own podcasts following his participation in a science education exhibition. The other was contemplating creating OER as part of an online course to accompany a textbook which he had recently authored. Although the course itself would not be open, he planned to make some materials openly available as 'tasters': for example, podcasts raising interesting questions and dilemmas on globally relevant issues.

Although audio-recording one's undergraduate lectures is a quick and straightforward way to produce OER, it can have implications for how one designs and delivers the lectures. One of the humanities tutors commented that a live lecture is not necessarily structured in a way that make it easy for others to edit. Also, since she uses handouts extensively, frequent references to a handout in a lecture can cause difficulties for people without it. As a consequence, she admitted: 'I'm a bit more careful... I'm a bit less off-the-cuff.' Speaking hypothetically (he had not yet released any podcast lectures), another humanities tutor felt that he might need to adjust his wording to ensure he could be clearly understood in a recording, and also that he would have to rely less on non-verbal gestures. However, his primary responsibility is to his students in Oxford; it would not be appropriate to alter the content of a lecture in order to make it more accessible to an outside audience as well.

5.1.2 Motivation to share resources

Discussions with interviewees about sharing their teaching materials as OER focused on the question of motivation: what made them personally willing to make their materials openly available over and above the two beliefs/assumptions discussed in section 4. We were interested in how far the interview data reinforced the findings of Van Acker et al. (2013): namely, that altruism is the primary motivation and that knowledge self-efficacy – the belief that one’s materials have added value for others – is the main predictor (see section 2.3.1).

Both of these factors were strongly evident in responses not only from interviewees who had released OER, but also from interviewees who were invited to consider this issue from a hypothetical standpoint. One of the humanities tutors expressed her position succinctly: ‘this is information: it’s not privileged, nor should it be.’ She argued that if she has put time into developing a resource that elucidates an area of literature, then it should not be confined to students at Oxford. Two tutors in the social sciences saw their OER – particularly in the form of blog posts – as a way to stimulate debate in the wider community on subjects of topical interest.

Knowledge self-efficacy is discernible in two humanities tutors whose disciplines are highly interpretative. Releasing OER is therefore a way of adding to the range of perspectives for learners to think about. As one of them put it:

...this is one set of lectures on the [topic] that introduces people to it from one particular perspective ... and it may be that it introduces some people in a way that they couldn’t have got otherwise and that they get on with particularly well. ... Either way, they’re thinking about the issues in a way they wouldn’t have been doing before, and the more people I can get to do that, generally the better.

The other, who had not yet released any OER, mused ‘it would be nice to think that other people thought [my lectures] were of some value and got some use out of them.’

Even though interviewees felt they were motivated primarily by altruism, some acknowledged the gratification in reaching a large worldwide audience. Others referred to the ‘feel good’ experience of receiving feedback from people in distant countries who had downloaded their podcasts, whether these are students in formal education or adults engaged in self-directed informal learning. As an interviewee from the medical sciences commented, an altruistic act ‘[is] a great thing to do, but it also gives you the warm fuzzies’.

Enhancing one’s professional reputation *per se* was a minor consideration in making one’s teaching materials openly available. As one person commented, the reputation of a research-active teacher lies primarily in their academic publications. However, early-career teachers who do not yet have a tenured position may find themselves viewing opportunities for outreach through releasing OER in terms of their professional prospects: ‘Will this be a line on the CV or won’t it?’ (humanities tutor).

An altogether different motivation for making one’s teaching available as OER was put forward by an interviewee from the natural sciences: namely, to help to increase the standard of face-to-face teaching:

...you can either go to your lecturer’s lectures, or if you’ve found something you like better that covers the same syllabus, one or more sources online, you can just not go to that guy’s lectures and look there instead ... it’s just basically allowing excellence in teaching through ... opening up all these resources.

5.1.3 Barriers to sharing resources

Interviewees also discussed reasons for not sharing one’s teaching materials. Some of these related to their personal disposition: for example, the feeling that one’s teaching is personal to oneself in a way that research is not, or anxiety about being judged by people who know as much (or more) about the subject. A tutor in the medical sciences suggested that some teaching staff may wish to

hold their materials closer to their chests because they want to use them for a few years before giving others access to them.

A concern for one humanities tutor was having his materials used without receiving due credit for them, but he admitted that the protection of a Creative Commons licence would ‘make ... all the difference.’

At least two interviewees pointed to the lack of recognition for good teaching (as opposed to research), one of them suggesting that this provides little incentive to ‘spruce up’ one’s teaching materials in order to make them available to others.

The nature of the Oxford tutorial system was identified by interviewees as a further barrier to sharing and is discussed in section 6.3.2.

5.2 USING RESOURCES

5.2.1 Examples of use

The interviews yielded evidence of the extensive use of online resources created by third parties. These resources were obtained in a variety of ways: by ‘Googling around’; by searching specific collections including museum and art gallery sites, websites of government agencies and subject-specific repositories and databases such as the *Chemistry WebBook*⁹ and *Fordham Medieval Sourcebook*¹⁰; or the websites of other institutions and academics. Examples of resources integrated into one’s core teaching include 1960s’ video recordings (on YouTube) to show students how some classic psychology experiments were conducted; videos of clinical patients talking about their experiences to put the science-oriented aspect of medical students’ studies into its human context; and an ornithological film clip to reinforce students’ understanding of a concept in history that hinges on an analogy with an osprey fishing. Supplementary resources that interviewees recommend to students include recorded lectures from other universities, TED talks, blogs, digitised books and online journals.

Third-party resources do not have to be used directly with or by students; they can also serve as sources of inspiration and even as memory-joggers for the tutor. For example, one interviewee reported that he sometimes obtains ideas for outreach talks in other people’s podcasts and PowerPoint presentations and that the Web can be useful for reminding himself about the precise details of particular mathematical proofs.

Reusing digital resources may not be appropriate in every subject. Our interview data suggest that they may have a lesser role to play in slow-moving fields such as pure mathematics, where one is often talking about things that are over a century old, and in fields that depend on argumentation and the relative strengths of competing propositions, such as some branches of philosophy. A tutor in history gave as a reason for making little or no use of other people’s teaching materials the absence of ‘a fixed body of necessary knowledge’ in history. From his perspective the teacher’s role is ‘about guiding a student through your own interpretation of a discipline in order to help them learn their own techniques,’ which does not lend itself to the appropriation of third-party teaching resources.

Other perceived limitations on the value of digital resources relate to the Oxford context: namely, the tutorial system, where the focus is on students’ own work (see also section 6.3.2), and the generally higher academic level of teaching at Oxford.

Teaching materials may also be reused when one person takes over responsibility for a particular course or lecture from another. In some cases, the materials are handed over automatically, in

⁹ <http://webbook.nist.gov/chemistry/>

¹⁰ <http://www.fordham.edu/halsall/sbook.asp>

others it is up to the person taking over to contact his or her predecessor. Reading lists (bibliographies) are considered particularly valuable, as on many courses they constitute the core structure and their structure maps out the topics of the tutorials. However, appropriating a reading list created by someone else may not work entirely to one's good, since 'the intellectual process of creating a reading list must be fundamentally important to the academic in preparing their course materials', as an interviewee from the social sciences commented. In similar vein, a mathematician observed that 'you become a good lecturer by getting your hands dirty and thinking about what follows from what' and that writing one's own lectures is central to a teacher's job.

5.2.2 Considerations of copyright

Interviewees reported a variety of attitudes and behaviours regarding the legitimate use of third-party resources. In summary, although some people said that they regularly check for copyright and attribute the resources that they use in their lectures, it seems that an awareness of the importance of IPR and the terms of the copyright attached to individual resources does not necessarily translate into actual observance of the conditions. This appears to be the case even when academics have undergone the experience of clearing images for use in their own published works.

Factors that are seen to militate against searching for resources that have open licences or are in the public domain, or against obtaining permission to use copyright materials, include time ('life is too short', one person remarked), the difficulty in tracking down copyright holders and the lower esteem in which teaching is held (in comparison with research), which makes the effort seem less worthwhile.

There may also be a lack of clarity regarding attribution and/or copyright in some areas of use: for example, where a resource serves an inspirational purpose only, where an idea or technique is borrowed at second hand from a source which does not attribute the original author, or where the resource contains a standard (commonly accepted) procedure such as a mathematical proof.

5.2.3 Using OER

From the preceding section there appears to be scant evidence that academics are motivated to seek out open educational resources to use in their teaching. Reasons given include the time taken to find them and variability in the volume, quality and suitability of what is currently available: 'if there's more out there it might be the case that people could choose more easily without it ranking with their own individual ways of doing these things' (tutor in mathematics). However, we did not detect a strong sense that reusing third-party resources means one is not doing one's job properly. On the contrary, as one interviewee pointed out, 'why replicate something that's already been done very, very well and is available as a third-party resource?' (tutor in the medical sciences). A tutor in the humanities felt that her role entails collating and distilling resources produced by others, and bringing some of her own perspective in, 'so it's just part of [a] resource chain, if you like'.

The data also indicate a fairly low awareness among academics of the existence of Oxford's OER collections. Of the interviewees who had not contributed to these collections, only two people appeared to recommend them to their students. One person commented that podcasts are not his preferred way to ingest material; two people did not know about the collections at all.

More fundamentally, there was a lack of clarity regarding what actually constitutes an open educational resource. When asked what they understood by the term, interviewees seemed generally aware that OER are freely available, without charge, to anyone in the world. However, only one person explicitly mentioned the Creative Commons (or similar) licence that protects the author while permitting others to adapt/repurpose a resource and is the fundamental characteristic of an OER that distinguishes it from other freely available and free-of-charge online resources.

A number of interviewees assumed that OER have an authoritative provenance (for example, that they are produced by professional academics) and can therefore be trusted: 'there's just going to be so much stuff on the Web that people are definitely going to want to be able to have authoritative

sources for information ... trusted sources of information' (humanities tutor). Related to this is the assumption that OER have 'some minimum standards of quality' (tutor in the social sciences). In contrast, in the experience of another interviewee OER are generally of lower quality than resources obtained from subscription-only websites.

5.3. THE ROLES OF THE TEACHER AND THE STUDENT, AND THE RELATIONSHIP BETWEEN THEM

We presented 10 of the interviewees who are tutors to undergraduates¹¹ with four statements intended to encapsulate the characteristics of the 'innovative' pedagogical models that are claimed by some to be a logical extension of creating and using OER. We invited them to comment on how each statement relates to a) their own view of the teacher-student relationship and the nature of learning and b) on how it relates to undergraduate teaching and learning at Oxford.

5.3.1 The teacher becomes an adviser and the student takes responsibility for their learning

The first statement presented to interviewees for comment took the form of two paired propositions encapsulating the basic positions of teacher and student. The full text reads:

The teacher's role changes from source of knowledge to learning adviser.

The student takes responsibility for their own learning, including what they learn.

The ten interviewees with whom we discussed the teacher/student roles identified them as broadly characteristic of the Oxford tutorial model; for example:

The whole underlying philosophy of Oxford is that we advise the students in a tutorial about what they are to go out and learn during the week (social sciences tutor).

The tutorial is about guiding them through the knowledge that they have spent the preceding week attempting to tease apart for themselves (humanities tutor).

However, these roles are not new. Rather, the contribution of technological innovation in general and open access to resources in particular has been to increase the quantity and range of resources available for students to access and study independently. Moreover, where a shift has taken place in teachers' and students' roles, a tutor in the medical sciences suggested that it might be a consequence not so much of openness but of lecturers being stretched: they cannot be experts in everything.

One humanities tutor contrasted his approach as an 'adviser in the craft of learning' to that of the schoolteacher, seeing himself as

... a researcher who ... has a life committed to the production of new knowledge and new ways of thinking ... the teaching is driven by research and ... they're coming to participate in that; they're not coming to learn from a schoolteacher.

For another tutor in the humanities, this advisory role includes helping students to frame the right questions when faced with large volumes of information, questions that can 'take the learner somewhere else, and then ... learn that other questions are possible.'

Despite an emphasis on the tutor as adviser, interviewees were quick to add that there are occasions when they have to act as a source of knowledge, not only when giving lectures but also in tutorials. As a humanities tutor remarked, part of the educative process entails simply absorbing facts, so that

¹¹ Other interviewees also tutor undergraduates; however, the statements were omitted from their interview schedules because we wanted to use the time available to explore other areas of our investigation in which they were particularly well placed to contribute.

all the students have a basic understanding of the facts of a topic before they proceed to a critical discussion of it. He spoke of 'taking them to the threshold of their own wisdom' and at the end of the tutorial giving them recommendations for following up the discussion with some reading. The same tutor also commented that, even though students take responsibility for their own learning in the Oxford model, they have got to be guided so that they can genuinely take responsibility and learn to select what is worth reading rather than what superficially seems more attractive or relevant to their immediate interests.

In discussing a different aspect of OER, a humanities tutor raised a point which is relevant to this consideration of the teacher's role, in that she feels OER that are podcasts of lectures actually serve to increase the hierarchical relationship between lecturer and students. She described such podcasts as 'lecturer-centred': although learners can choose what they listen to there is no reciprocity, and this runs counter to her conception of teaching. Furthermore, she suggested that the tutorial system actually serves to make lecture formats more conservative (ie more a matter of knowledge transmission) in Oxford than they are in other universities. This is because lecturers do not try to use the lecture to mimic discussion, as that takes place in the tutorial.

5.3.2 Knowledge is co-constructed through mutual interaction and reflection

The full text of the statement given to interviewees reads: 'Knowledge is co-constructed through mutual interaction and reflection between teacher and students.'

As with the first pair of statements, the concept of a partnership between tutor and student and of learning as a conversation 'in which learners move towards establishing expertise' (humanities tutor) was also considered a cornerstone of the tutorial model at Oxford. As a tutor in the social sciences put it, Oxford is a community of scholars and undergraduates are members of that same community. Speaking more pragmatically, a humanities tutor noted that 'You have less authority if you're sitting ... in a couple of armchairs drinking tea than ... if you're standing at the front of 200 people in a lecture theatre dispensing wisdom.' However, the sense of equality is not necessarily shared by the student, at least initially, and in any case the tutor has to retain an element of authority.

Interviewees pointed out that, even outside the Oxford context, the dialogic element in learning is by no means an innovation of the open era. Indeed, a humanities tutor traced its origins back through the centuries to Cicero, commenting that it is integral to the nature of inquiry in arts subjects in general and in history (his discipline) in particular.

Exploring the first part of the statement in more depth, some interviewees found the idea of constructing knowledge problematic, including a tutor in mathematics who observed that his branch of the discipline is 'low on knowledge' in the sense of facts that students need to know. He suggested that what counts more in terms of learning is for students to build an understanding of the exceedingly complex relations between those facts so that they can work their way through a mathematical problem in 'an *ab initio* way'. A tutor in the natural sciences also found it more comfortable to think in terms of constructing understanding and he commented that the construction of (new) knowledge is the role of the researcher rather than the undergraduate. A humanities tutor felt that his aim is actually to dismantle certain ways of thinking (or 'frameworks of knowledge'), so that the student leaves the tutorial with a different perspective on the essay which they brought to it.

In terms of the knowledge that each party brings to a tutorial, interviewees commented that the balance may not always be in the tutor's favour. In any particular week the student may well have read more than the tutor on the particular topic of study. Indeed, a tutor in the medical sciences reported feeling liberated by the realisation that she does not have to know everything, that students can know the material too and that they can help each other come to the right answers. The learning that takes place in a tutorial can therefore be two-way. For example, a tutor in the social sciences appreciates the 'unusual ways' in which students look at things, while in philosophy the relatively narrow distance between the topics addressed at 'the cutting edge' and those that

undergraduates study can open up opportunities for a tutor to discuss their current research with students.

Nevertheless, the tutor retains the advantage of deeper knowledge and longer experience in practising the subject. For example, a humanities tutor can suggest alternative lines of enquiry or help the student identify the right questions to ask and frame them in a productive way, while long years of training will almost always enable a mathematics tutor to solve a novel problem that has stumped a student. Openness may have given a broader knowledge base to the student, but this is still within 'the comfort zone of the senior partner' (mathematics tutor).

5.3.3 The development of problem-solving knowledge and skills has priority over knowledge transfer

The full text of the statement given to interviewees reads: 'The development of knowledge and skills required for tackling and solving problems has priority over subject-centred knowledge transfer.'

Several interviewees encountered an initial hurdle in the phrase 'tackling and solving problems', as they did not recognise it in relation to their discipline. The phrase was intended to be interpreted in its widest sense and therefore embraced 'ill-structured' problems in the humanities such as historical inquiries and exercises in literary criticism, as well as clinical exercises for medical students, proof generation in mathematics and the exercises conventionally referred to as 'problems' in the sciences. Once the terminological confusion had been resolved, most of the interviewees were in broad agreement with the statement. However, as two people pointed out, subject-centred knowledge transfer needs to have a temporal priority because until students know certain things they are not in a position to discuss them.

Two humanities tutors questioned whether it is possible to divide up learning in this way. As one of them said, 'The two run together. The more skills you have, the greater access you have to different kinds of knowledge; the more knowledge you have, the greater access you have to different kinds of skills.'

With some interviewees, the discussion of this statement led on to a consideration of 'graduate attributes'¹² and employability. Although interviewees differed in their attitudes towards these concepts, they considered that the analytical skills which students develop in their studies do have relevance to the workplace, whether it be a mathematician's ability to ask the right 'what-if' questions or recognise 'dodgy logic' and 'sweeping generalisation[s]', or a literature student's ability to approach and critique a text.

5.3.4 Students learn as a community

The full text of the statement given to interviewees reads: 'Students learn primarily from each other, as a community.'

For one humanities tutor, learning as a community is an 'obvious corollary' of students taking responsibility for their learning (section 5.3.1): 'It's about building an intellectual culture, and it's necessary to do that in order to keep them immersed in the subject.' He and his fellow college tutors make particular efforts to encourage the students reading their subject to build a group identity among themselves although, as a tutor from the social sciences observed, the extent to which students actually do so varies from cohort to cohort. The same tutor also reported that students' examination performance improves when they get along together as friends or colleagues.

A mathematics tutor also reported that he encourages his students to learn from each other; this is one area in which he has identified change as a consequence of openness: that is, there are more resources available for students to discuss.

¹² 'the skills, knowledge and abilities of university graduates, beyond disciplinary content knowledge, which are applicable to a range of contexts': Barrie (2004), cited at <http://www.employability.ed.ac.uk/GraduateAttributes.htm>.

Learning together means that students can gain from multiple perspectives, particularly where students study two subjects and can bring ideas and ways of thinking formed in one subject to bear in their discussions in the other. Helping each other also has benefits, both for the student being helped and for the helper, since ‘the way you learn something best is by trying to teach somebody else’ (natural sciences tutor). However, an interviewee from the medical sciences noted that there is always the risk that students may learn bad practices from each other.

Several interviewees questioned the adverb ‘primarily’ in the statement under discussion, which they felt implies that more than half of students’ learning takes place in this way. One interviewee from the humanities suggested rather that ‘they learn significantly from each other as a community’. Another suggested that students learn from each other as a community ‘under responsible guidance’ from their tutors. Otherwise put, students learn primarily from their tutors, and this facilitates them in learning efficiently as a community.

On the negative side, the competitive culture in the University is seen as a barrier to students’ learning from each other. A humanities tutor reported that although her students are happy to discuss things orally, they were less comfortable when she asked them to produce a collaborative piece of work. Similarly, a medical sciences tutor had observed reluctance among her students to share resources or essays with each other.

5.3.5 Open pedagogies and MOOCs

Interviewees’ responses to the statements discussed in sections 5.3.1–5.3.4 were given primarily in the context of face-to-face learning in a formal educational setting where the student has exceptionally close support from a ‘senior partner.’ Given the burgeoning interest in MOOCs during 2013, we broadened our discussion of open pedagogic models to include this online environment in which openness in teaching and learning can, at least in principle, be played out to its fullest extent.

Interviewees acknowledged the potential of MOOCs to provide opportunities for learning to people who might not otherwise have access to it. However, they expressed concerns about the conceptualisation of education that they felt underpins MOOCs, which some feared has more to do with acquiring declarative knowledge about the domain than with developing the ability to think and to reason within that domain. In the view of one humanities tutor, education is about an understanding of how to approach, utilise, critique, debate knowledge and therefore build knowledge, while another commented more specifically: ‘You can’t develop as a philosopher simply by studying on a MOOC. You may know more about who said what, but you won’t have learnt thereby to think philosophically.’

Broadly speaking, interviewees’ principal pedagogic reservations about MOOCs relate to support for learners’ conceptual growth where numbers are such that the teacher is no longer able to identify and address individual students’ misunderstandings. One humanities tutor observed that ‘the number of people who can get somewhere very, very significant by pure autodidacticism is small.’ Another humanities tutor doubted the kind of education that results from going to another autodidact for guidance: ‘let’s pool our knowledge’ can equate to ‘let’s pool our ignorance.’ A social sciences tutor foresaw risks in individual students attempting to impose their views on others in disciplines where multiple methods, interpretations and answers are possible. He felt that the function of the teacher in this instance is to teach students ‘humility’ in terms of the claims that they make.

A number of interviewees felt that studying on a MOOC entails a substantial element of independence and self-direction on the part of learners. One of them, a humanities tutor, elaborated his views in depth, expressing doubts about ‘spontaneously producing self-directedness through OER’. For him, an important element of education is to develop ‘robust, critical, autonomous citizens’; this is only achievable through complex human interactions with a teacher in a face-to-face environment. While OER (and MOOCs) may be able to transfer knowledge and skills, they cannot transfer confidence:

It is ultimately about making people feel secure in their own autonomy as thinkers and writers and critics, not about just transferring skills and knowledge. And that's a very subtle art ... it's not something you can just deliver.

5.4 LEARNING THROUGH CREATING OER

In order to avoid collecting data that were largely speculative (and thus of limited value) our discussions with interviewees on 'open learning' by students were restricted to a single question: what kinds of learning outcome would be served if students were to create an open educational resource as the output from a regular learning activity. Only two interviewees made a direct connection between student-produced OER and open practices as a whole. One commented that the teacher's job is not only to share their own knowledge with the student but to open the student's eyes to other knowledge which he or she might share. The other made the point that, since students are using these resources and learning from them, they should contribute to the cycle themselves.

A number of interviewees viewed the prospect as an opportunity for students to develop their communications skills in general, as well as the analytical skills required in their discipline: 'when you're putting together a PowerPoint presentation, you're putting together an argument: it has to be logical, it has to flow' (humanities tutor). Indeed, where students are already giving talks to schools, making YouTube videos of their experiments, creating Web-based resources, or submitting their essays to competitions organised by learned societies, turning these artefacts into openly licensed resources was seen to be but a short step.

However, concerns were expressed over the pedagogic quality of student-created resources, in terms of both content and design. One interviewee from the medical sciences pointed out the risk of students teaching each other the wrong thing; another reported an experience where medical students had attempted to develop online scenarios for case-based learning, but had found it difficult to design the decision trees and as a result produced something more akin to conventional linear training. A tutor from the social sciences stressed the need for quality control of student-created OER, in order to avoid what a humanities tutor described as 'a gradual flood of, an immersion in, mediocrity' if students were allowed to release OER unchecked.

Other factors considered by interviewees to militate against students' creation of OER were lack of time, the potential for distraction from one's core studies and the risk of plagiarism. On the other hand, one person saw an opportunity for students to learn about plagiarism and the need to be certain about any material that one releases on the Web.

5.5 PROFESSIONAL DEVELOPMENT THROUGH OPEN EDUCATIONAL KNOWLEDGE

Openness is not merely focused on students' learning; in the form of open educational knowledge it also has relevance to teachers' professional knowledge about teaching and learning. We asked interviewees about the extent to which 1) looking at other people's materials can help them to improve their own teaching practice and 2) sharing ideas about teaching can help them to develop their own practice. We also explored with them the potential value of OER for their professional development: in short, 'OER for teachers'.

5.5.1 Developing one's teaching through looking at other people's materials

Interviewees readily admitted the benefits of looking at resources and lecture notes created by other teachers since 'seeing good examples of practice might also influence your own practice, which in turn provides a better experience for everyone', as a tutor in Medical Sciences commented. She makes her own teaching resources available to her colleagues in the University (as well as to her students) through WebLearn, in part to help new academics understand to teach an 'Oxford' tutorial.

Commenting specifically on OER, an interviewee who had been involved in the development of one of Oxford's thematic collections of OER felt that learning how to incorporate OER into one's teaching would provide 'an opportunity for creative re-exploration of knowledge and how you present it'.

Two tutors in mathematics and the natural sciences reported looking at how people in other universities tackle the same topic. One of them added: 'You think "Well, that's an interesting way of doing it: is there some way ... that would be an improvement?"' However, they may not always decide to teach exactly in 'that way', however, because of the specific needs of the course at Oxford. The distinctiveness of the Oxford model of teaching and learning can also restrict the usefulness of looking outside the University for ideas in humanities subjects.

Time can be another factor that inhibits building on the practice of others in order to improve one's own. A tutor in the social sciences reported that he often spots things that might improve his course but lacks the time to implement them in his teaching.

5.5.2 Sharing ideas directly with colleagues

Interviewees enthusiastically endorsed the value of informal conversations with colleagues about teaching and learning. One humanities tutor spoke of himself as 'a great believer' in talking to other people. For an interviewee from the social sciences 'There is definitely a role for the more serendipitous, *ad hoc* thing where you just happen to be standing in the same canteen queue at lunchtime or you're in the same college, or something, and you have a conversation.' Another humanities tutor described the value of informal conversations about teaching as 'massive', largely because they take place with people whom he trusts and who understand the environment in which he works. However, a tutor in the natural sciences gave a contrasting report: he has the impression that academics do not talk much about teaching with each other, but they sometimes come to him for advice in his capacity as director of undergraduate studies.

The topics of conversations about teaching appear to vary widely. Examples cited in the interviews include the principles of tutorial teaching, different ways to structure a seminar, how to foster discussion among students, the use of concept mapping with humanities students and teaching topics outside one's home discipline (for example, introductory courses in statistics for medical students). For a tutor in the natural sciences, introducing a new topic into his teaching can provide an impetus for discussion with fellow academics in his department: for example, where the topic addresses recent research by colleagues and he needs to ensure that he has understood the material properly or seeks ideas for ways to approach the material with his students. However, one humanities tutor felt that he had learnt more about how to 'craft the persona of the teacher that you create' from conversations with colleagues than about how to 'plan lesson X in Y way.'

Interviewees discussed peer observation largely in terms of a hurdle in one's formal professional development: for example, as part of the check-up that takes place two years and five years into one's post. However, the informal observation of someone else's lecture or tutorial as a way to develop one's practice is encouraged both by the University's academic development unit and by academic staff with responsibility for graduate training in their department. Indeed, the principles underpinning the educational development programmes for new teaching staff include peer critique and the sharing of practice. At least two interviewees said they had found the programmes valuable in this respect.

5.5.3 OER for teachers' professional development

Since none of the interviewees had had direct experience of 'OER for teachers', their responses to the interviewers' questions were speculative but nonetheless generally favourable. A tutor in the medical sciences felt that there is scope for OER in graduate training in particular, as the resources can be customised to suit different groups. She suggested that graduates who had experienced the tutorial system as students could be well placed to create such resources as they know what does and does not work. Seasoned academics could benefit from OER too: according to a tutor in the

natural sciences, they 'often get stuck in a rut' and online resources, whether from Oxford or elsewhere, can help them to reflect on their teaching and perhaps present it in a different way: 'I think we're all receptive to good ideas.'

A very small number referred to the potential value of short videos on using specific technologies, such as interactive whiteboards, to enhance one's teaching. It was also suggested that videos showing examples of good teaching could be much more effective than the 'dry' documents containing written guidance that are currently sent out: 'you're talking about teaching, so why not show them teaching? Don't write about teaching: show them teaching, and the video ... beats the written word in many ways' (mathematics tutor).

Video-recorded excerpts of tutorials were widely seen as a potentially valuable learning aid for new academics, particularly those who had not studied at Oxford as undergraduates.¹³ However, in view of the complexities associated with licensing and the idiosyncratic nature of the Oxford tutorial, making such videos openly available was seen as neither practicable in terms of copyright nor relevant pedagogically to teachers in other higher education institutions.

Whether resources for professional development are open or not, it was suggested that they might serve their purpose better if they are embedded in a formal or semi-formal context where they can be discussed. For one interviewee, this context could be a discussion forum, although she acknowledged the challenge in stimulating people to contribute. For another, the optimal context is a 'structured conversation' in an educational development setting along the lines of: 'Here are some examples of practice: let's talk about what you see in this and what you think is working well and isn't working as well'. A third interviewee perceived a potential role for departmental directors of teaching in seeking out examples of good practice and recommending them to staff, perhaps with an accompanying analysis.

¹³ A few such videos already exist as podcasts on iTunes U and on some college websites, but they are intended primarily for outreach purposes, to give prospective students an insight into undergraduate study at Oxford.

6. FINDINGS (3): INFLUENCES SHAPING ACADEMICS' TEACHING PRACTICE

To elicit data relevant to research question 2, the project explored with interviewees three aspects of their professional lives that might influence on their teaching: the nature of their discipline, the emergence of open practices in research, and the organisational structure and culture of the University.

6.1 DISCIPLINARY AREA

Disciplinary differences – in terms of the nature of knowledge and the forms of inquiry – are apparent in two areas of interviewees' current teaching practice in particular. First, they can be seen to affect the extent to which tutors make use of other people's teaching materials, as illustrated by the examples from history and mathematics in section 5.2.1. Second, they underpin the dynamics of 'mutual interaction and reflection' between tutor and student as they 'co-construct' knowledge (or understanding) in a tutorial setting (section 5.3.2).

The boundaries between disciplines may be less impervious when it comes to sharing knowledge about teaching. In this respect, the collegiate structure of the University was seen to be conducive to the cross-fertilisation of ideas. One humanities tutor commented: 'One of the strengths of Oxford is that you can have lunch with a chemist, or somebody who works on medieval Portuguese or something like that, and you can learn a lot from them.' A medical sciences tutor admitted that she had occasionally had useful conversations in her college, but had yet to exploit the potential: 'I think there's a waste of resource there because I have immediate access to a whole lot of disciplines in colleagues in college.' However, another humanities tutor felt that, in his college, the fact that people work in different disciplines has the opposite effect: that is, it militates against the informal sharing of pedagogic knowledge.

Turning to the possible influence of discipline on interviewees' perspectives on openness – the notions of knowledge as a public good and sharing of lying at the heart of academic practice – data reported in sections 4.1 and 4.2 show no substantial differences that could be ascribed to the disciplines in which they work. The same is true of their perspectives on altruism as a factor in motivation to share one's resources (section 5.1.2).

6.2 OPEN PRACTICES IN RESEARCH

In this segment of the interviews we wanted to find out how far the experience of open access publishing, involvement in 'open science' more generally, or engagement with social media as part of one's research might have a 'cross-over' effect on interviewees' teaching.

6.2.1 Open science and open access publishing

The data indicate that this cross-over effect is currently still weak among our interviewees. Only a few of them appeared to perceive a natural or logical link from open access publishing to open practices in teaching. Potential points of cross-over are the inclusion of open access journal articles in students' reading lists and the realisation that one can protect one's teaching materials with a Creative Commons licence in the same way that one protects one's research papers in an open access environment.

When asked whether it takes someone of a particular mindset to make a connection between open practices in research and open practices in teaching, a tutor in natural sciences responded that there is no reason in principle why there should not be a good link, but that he could not put his finger on it. He suggested that one inhibiting factor might be the essentially personal nature of teaching at

Oxford (see also section 6.3.2) and that another might be the more rapid turnover in one's research in comparison with one's teaching: 'When you're doing research, you do the research and publish it: it's a one-off, then you go off and do something else; you move on to the next stage.' In contrast, where one tends to teach the same thing year after year (albeit with slight modifications) there is less cause to share materials regularly. In the experience of a tutor in medical sciences, another possible explanation for the lack of cross-fertilisation from research to teaching is that many of those active in open science have research-only posts with no teaching responsibilities.

6.2.2 Engagement with social media

In light of Oxford academics' increasing use of social media for communicating their research and Veletsianos' observation that 'sharing should be treated as a scholarly and educational practice' (2013: p. 648), we were interested in the extent to which those interviewees who use blogs, Twitter, Facebook and similar social tools to disseminate their research also use them in their teaching.

Once again, the cross-over effect appears weak. Of the five interviewees who reported using one or more of the above technologies for academic purpose, only one, a social scientist, stated that he uses them in teaching: he encourages his students to follow him on Twitter and he follows some of them as well. Two interviewees use Facebook and Twitter for finding out about and/or sharing medical references and papers, but they do not share these with their students. Another interviewee from the social sciences indicated that he is not enthusiastic about using social media in his teaching. Furthermore, his blog posts tend to be 'slightly arcane' and cover issues that are not directly associated with the curriculum. He also did not wish his students to think he engages in self-promotion by recommending them to read his blog.

The one interviewee who said that he does use social media in his teaching suggested that it may also have something to do with the stage of one's career: that is, one may feel more able afford to engage in 'fancy teaching' if one has security of tenure or has established oneself in other ways. He referred in this respect to 'a tension between what in an ideal world would be good globally and what is demanded in your own country by your university.'

6.3 OXFORD'S ORGANISATIONAL STRUCTURE AND CULTURE

Influences on interviewees' current teaching practice that can be ascribed specifically to the Oxford context include its organisational structure, the tutorial system and the principle of subsidiarity in decision-making.

6.3.1 Organisational structure

Oxford's organisational structure – the University and self-governing colleges – can be seen to influence tutors' practice in two main areas: their college and their academic unit (department, faculty or division).

Two interviewees attributed the lack of openness or collaboration among teaching staff to the collegiate system. One of them felt that the system 'fragments and atomises' the academic community by 'driving people into their colleges' and the other felt that it fosters competition between the colleges.

As noted in section 6.1, colleges can be fertile ground for conversations about teaching, but this is not always the case. An interviewee from the University's academic development team reported visiting a number of colleges to seed conversations about teaching on the basis that 'these are people who eat lunch together every day; it would be good for them to be talking to each other about teaching.' However, the extent to which such conversations subsequently took place on an everyday basis varied, and she attributed this to differences among the organisational cultures of the different colleges.

In relation to their academic units, interviewees reported varying degrees of support, oversight and co-ordination from above. A number of them pointed to a lack of cohesiveness, which to an extent seems to be discipline-related. Three tutors thought that the problem is more serious in humanities where, for example, new academics can be left alone to work out how to teach tutorials for themselves. In contrast, science departments appear to have stronger organisational structures, in part because much of the teaching takes place in laboratories. For example, some of them have a policy requiring lecturers to upload their lecture slides and tutorial problems to WebLearn for other tutors to use, rather than leaving this to individual discretion. However, the experience of another interviewee from a science discipline differed. She felt that there was a lack of departmental culture, particularly in relation to sharing ideas about teaching; she ascribed this to organisational changes in which departments had merged with each other.

6.3.2 The tutorial system

The interview data reported in sections 5.2.1 and 5.3.2 suggest that the tutorial system obviates the use of digital resources to some extent, through its dialogic format and focus on helping students to structure, organise and refine their ideas.

An academic developer suggested that this personalised approach to teaching might account in part for the reluctance of Oxford academics to share their teaching, whether inside or beyond the University. She felt that teaching at Oxford has a sense of ‘tailoring and bespoke-ness about it’, unlike in other universities, in that the tutorial system makes academics think more about who their students are in a similar way to teachers in primary and secondary schools:

When you ask [school teachers] about their teaching, they’re not just talking about their teaching of English ... or history; it’s teaching Johnny or Sue. They’re much more focused on the individuals that they’re teaching than what you would get in higher education typically. ... People are much more inclined to say ‘Well, it depends on who I’m teaching, it depends on the student, it depends on where they are.’

She added that because Oxford academics feel that their teaching is personal to them, personal to the relationship with a particular student and personal to a particular context, they might not necessarily think it is relevant to the rest of the world or, even, to colleagues within the same college.

6.3.3 The principle of subsidiarity

Subsidiarity is one of the University’s core principles, according to which ‘decisions should be taken at the lowest level appropriate to the matter in hand.’¹⁴ In relation to current teaching practice, the interview data suggest that this principle might not always operate in a beneficial manner.

For example, two interviewees felt that devolved responsibilities and expectations could leave people unsupported, particularly teaching staff new to Oxford who are unfamiliar with the tutorial format. On the other hand, devolving decisions down to individual academics can cause resistance to initiatives from the centre and even from higher levels in one’s own part of the University.

¹⁴ University of Oxford Strategic Plan 2008–9 to 2012–13: <http://www.admin.ox.ac.uk/media/global/wwwadminoxacuk/localsites/planningandresourceallocation/documents/planningcycle/strategicplan.pdf>.

7. ENGAGEMENT WITH OPEN EDUCATIONAL PRACTICE AT AN INSTITUTIONAL LEVEL

The final section of the interviews addressed open educational practices in the context of the institution as a whole, in order to elicit data relevant to research question 3. Our questioning went beyond the University's strategic plan for 2013–2018, which refers only to making resources globally available, by asking interviewees about the possible role of the institution in supporting the use of OER, aspects of open pedagogic models and the open sharing of educational knowledge. Interviewees also raised issues that could affect attempts to implement institutional guidelines on open practices; we report these too.

7.1 SHOULD OXFORD ADOPT AN INSTITUTIONAL POSITION ON OPEN EDUCATIONAL PRACTICE?

Opinions as to whether Oxford should adopt an institutional position on open practices in teaching and learning varied among interviewees for reasons that include the feasibility of implementing any set of principles and guidelines formulated on the basis of such a position statement (discussed in section 7.3 below).

Being 'open' as an institution is seen to be in keeping with the core philosophy of knowledge as a public good (discussed in section 4.1), with Oxford's global responsibility as a world-leading university that holds an extensive archive of resources and with its status as a charitable institution. More specifically, giving global access to the University's resources can help to counteract its elitist image and generate wider goodwill towards it: 'it says "Oxford isn't this closed place that only privileged people get access to; ... it's really getting out there to improve world knowledge"' (medical sciences tutor). However, a humanities tutor felt that if Oxford is to take a position on openness, it should be underpinned by 'a robust sense of the value of what [the University] already does and a realistic sense of what openness doesn't allow you to do': ie, that making knowledge globally available in the form of resources does not equate to providing an education. Another humanities tutor counselled against focusing on global reach at the expense of one's own back yard and argued that universities generally need to be integrated much more into local culture: 'At present, local people don't feel like they own the university in their city.'

From a pragmatic perspective, an interviewee involved in educational development described the notion of having some guidelines for good practice as 'sensible'. She discerned two issues in particular: using other people's materials responsibly and making one's own materials available. For example, where people have a strong sense of ownership over their material she felt it might be useful to promote the idea that 'maybe you could share this more widely; maybe some people in Africa could benefit from [it].'

Regarding any consultation process on an institutional position, the suggestion was made that a number of stakeholder bodies should be involved, including students and researchers as well as teaching staff.

7.2 SUPPORTING SPECIFIC OPEN PRACTICES

To focus our discussions about institutional support for open practices in teaching and learning, we presented interviewees with suggestions for four possible components of a set of institutional principles or guidelines derived from the open practices previously discussed (and reported here in section 5) and asked them how appropriate they considered each component to be.

7.2.1 Stimulate greater production of open educational resources that can be used inside as well as outside the University

None of the interviewees who gave their opinion on institutional support disagreed with this proposed component. Indeed, one person said that lectures in the humanities are already perceived internally in this way and there is no reason why those lectures could not be made available as podcasts.

A tutor in the natural sciences was unsure how the organisation would actually ‘stimulate’ staff to produce OER: for example, the academics in his department are largely research-driven and do not want to spend a great deal of extra time producing new teaching material. Time and support for creating resources were perceived by a number of interviewees to be necessary conditions, one person adding that many academics would probably be happy to participate in creating OER but would not want to take the initiative themselves. The question of incentives – in the form of remuneration, teaching awards, or promotion – was raised by two interviewees. In a related comment, a humanities tutor suggested that an open education initiative is likely to succeed only if it serves some other objective as well at the personal level: for example, ‘if it gives somebody something that they can put on their CV, ... a little bit more job security.’ At least two interviewees considered it essential for academics to remain free to choose whether or not to release OER themselves – and, indeed, whether to use OER created by others.

Attracting potential students to Oxford was seen as an additional institutional motivation for making resources globally available. However, while agreeing that ‘releasing a little piece of knowledge in order to attract fee-paying knowledge-seekers makes perfect economic sense’, a tutor in the social sciences questioned the wisdom in economic terms of giving away entire series of lectures or, indeed, whole courses in the form of MOOCs. Others expressed a similar view regarding MOOCs.

The question whether Oxford should engage in specific open activities in order to maintain its reputation and to keep up with competitor institutions came to the fore when interviewees talked about MOOCs,¹⁵ but it also applies to OER generally. A tutor in medical sciences felt that Oxford should not engage in open activities merely for reputational purposes; rather, an enhanced reputation would be the result. Others felt that Oxford needed to engage with OER order to maintain its profile among competitors; for example:

If that is what it takes to be a world-class university, and Oxford is that, and wants to preserve that identity, then that’s what you’d have to do (humanities tutor).

If everybody else is doing it ... Oxford can’t be left not doing these things because then it opens itself to charges of elitism (social sciences tutor).

In contrast, another humanities tutor did not agree with what he described as an “‘all these lemmings can’t be wrong” logic’. A medical sciences tutor suggested that, although Oxford might have no need to jump on the MOOC ‘bandwagon’, the earlier one gets involved in an innovation, the earlier one is able to shape it: ‘Oxford’s a kind of heavyweight; it could probably have quite a big influence and direct things in the way it wants.’

7.2.2 Encourage academic staff to use openly licensed resources in their teaching

The full text of the proposed component as presented to interviewees reads: ‘Encourage academic staff actively to use OER, either to ensure that they use third-party resources legitimately, or for efficiency (ie where they lack the time and means to produce their own materials).’

Judging both from interviewees’ responses in this part of the interview and from data reported in sections 5.2.2 and 5.2.3, this element hinges upon awareness and understanding of what constitutes

¹⁵ The interviews took place before the decision was made to build a platform for Oxford-produced OER (‘Open Oxford’) rather than to offer MOOCs.

'legitimate' use of third-party resources: ie, paying heed to the copyright conditions attached to them. A humanities tutor suggested that there is a fundamental need to educate academics about what OER actually are; a tutor in the natural sciences reported that he finds it 'really difficult' to encourage academics to make sure everything they use is 'legitimate'.

The concept of 'efficiency' as a driver to use OER troubled a mathematics tutor, who expressed concern about what he called the 'parasitic' aspect. He argued that if a teacher could simply choose from a menu of 'good' OER, they would not develop the deeper knowledge of the material that comes from creating one's own resources. In a more extreme case, he could imagine a tutor reusing lecture notes from elsewhere in order to release more time for their research, and he felt that this would degrade the value of teaching.

7.2.3 Develop students as self-directed learners through learning with, and producing, OER

The full text of the proposed component as presented to interviewees reads: 'Develop students as self-directed learners, equipped for survival in a "knowledge economy" through learning with OER and, where appropriate, producing OER.'

The proposition that OER in a formal learning context could be mobilised to scaffold students' development as self-directed learners aroused interest among interviewees. One tutor observed that although the best students need to be self-directed, this aspect of learning is not always in the mindset with which they approach university and it is difficult to give them guidance on how to become self-directed learners. Another tutor agreed with the overall thrust of the proposition but took issue with the phrase 'equipped for survival in a knowledge economy'. As an alternative he suggested 'equipped for survival in a fast-changing world', implying as it does the need for graduates to be adaptive and analytical.

Three interviewees made a direct connection with the existing model of teaching and learning at Oxford: 'learning to be a good learner is learning how to do research, and learning how to do research is looking to see what's out there and finding the best and using it' (tutor in natural sciences). Using OER could therefore be seen simply as an extension of using digital resources generally.

When invited to reflect on what difference OER specifically could make to the process of developing self-directedness, two interviewees pinpointed students' search skills. A social sciences tutor felt that they benefit from some structure in their searches, and that OER make it possible to guide them more directly to relevant resources, rather than hope that the relevant items are returned at the top of a list of search results. A tutor in the medical sciences felt that OER make it easier for the students themselves to find the required information, rather than merely being given it by the tutor; furthermore, there is usually more available to them online than the tutor can give them in a particular tutorial.

A humanities tutor suggested that engaging with OER could have a profound effect on students' conceptualisation of the nature of knowledge and their role in its advancement:

These open resources have been produced by someone else, and they are being shared with the students, so therefore knowledge becomes something shared, not something owned ... if they could contribute as well, and respond to that, then that says that their role as learner is a powerful role.

7.2.4 Help academics develop their teaching through using and/or producing OER

The full text of the proposed component as presented to interviewees reads: 'Help academics develop their teaching through using and/or producing OER about good or innovative pedagogic practice.'

Interviewees' perspectives on the potential value of 'OER for teachers' are reported in general terms in section 5.5.3. Looking at the broader institutional picture, a medical sciences tutor referred to 'redundancy and duplication of effort' in teaching across the departments even though they face similar issues. She felt that Oxford is not open enough for her to go to another department to find out, for example, how they develop graduate students' presentation skills. Therefore, in her view 'University-wide transparent OER would be brilliant.' Another interviewee characterised the problem in slightly different terms, saying that sharing good practice can be difficult when some people are part of networks and others are not. Having resources openly available would allow everyone access to someone with experience of the tutorial system and the knowledge of what does and does not work in tutorial teaching.

An additional challenge was perceived to lie in making academics aware of such resources. At least one interviewee saw this as the remit of the academic development team, but added that finding the time to attend professional development courses is difficult.

7.3 ISSUES IN THE IMPLEMENTATION OF OPEN EDUCATIONAL PRACTICES AT AN INSTITUTIONAL LEVEL

Issues raised in relation to implementing open practices from the top down fell into three categories: the University's culture and structure, quality and the need for academics to be supported in such activities.

7.3.1 Institutional culture and structure

The feasibility of a set of principles or guidelines filtering down and being put into practice 'at the coal face' was characterised by one interviewee as 'tricky', for reasons to do with Oxford's culture and organisational structure.

The influence of subsidiarity – the University's devolved model of decision-making – on interviewees' current teaching practice is addressed in section 6.3.3 of this report. The influence is also apparent in their views on the feasibility of implementing institutionally-defined guidelines on open practices in teaching and learning. Academic staff were characterised as resisting leadership by their department or division: 'they want to be able to do their own thing,' said one interviewee. A social sciences tutor commented that it would be difficult for the centre to formulate a set of principles or guidelines that would meet the interests of all groups. Even if it was successful, she could not envisage a viable means of implementation other than through contractual amendments, which 'would be deeply unpopular and rather antagonistic to the notion of open[ness].' However, as another interviewee pointed out, if initiatives such as releasing OER are left to individuals, there is a risk that a particular disciplinary area might only be populated with one person's materials.

Oxford's organisational structure was also seen to militate against implementing an institutional initiative on open educational practices. Indeed, one interviewee commented 'It's a community, not an organisation.' Another indicated that open practices were more likely to gain purchase in departments than in colleges. A third person seemed to share this view, but favoured the current 'laissez-faire' approach, with departments releasing what they feel to be worthy of sharing.

7.3.2 Quality

The interview data revealed a widespread concern with both the pedagogic quality and the production quality of OER produced by Oxford. The need to guard against false assumptions both inside and outside the University that 'it's from Oxford; therefore it's good' was underlined in an account of one department's discovery of errors in a resource that it had made freely available on its web page. The desire was expressed for a mechanism to ensure the quality of OER produced by Oxford and that Oxford should only what really is excellent; otherwise the University's reputation could be put at risk. An alternative, suggested by another interviewee, was a two-tier approach: 1)

flagship OER which have been through a quality assurance process and 2) OER which are good enough to share but might not be of an outstanding quality. He added that the difference between the two categories should be made clear on the website and that newcomers' attention should be drawn in the first insight to the flagship resources.

7.3.3 Resourcing

Resources to support the creation, sharing and reuse of OER were another issue which interviewees raised. They were also explored in our interviews with the representatives of stakeholder groups.

Much of the initial activity to create and release OER in Oxford was spearheaded by the IT Services department. When asked where the driving force should lie now, a number of interviewees favoured the additional involvement of – if not direction by – representatives from the University's Education committee, as well as strategic decision-makers who can look at the bigger picture. In the view of one interviewee, the vision of the subject-matter experts should lie at the heart, with IT experts and educational experts contributing their expertise. Another interviewee suggested that educational experts might be particularly needed where resources are being developed for learners in other educational sectors, in order to help academics target their materials an audience of, for example, 16-year-olds. The same interviewee also counselled caution in seeking to make academics the principal driving force behind OER, pointing out that they are not 'an infinite resource' and such a role would need to be built into contracts and expectations – but not, of course, made mandatory (see section 7.2.1).

Practical suggestions for how the University should support the production of OER included a central body of individuals, including software developers, whose full-time job would be to produce OER by working with a few academics at a time, and a dedicated team responsible for intellectual property rights issues. The desirability of a central team to fulfil these roles, as opposed to teams in individual academic units, appeared in part to be a response to the difficulties of finding information in a devolved system.

In terms of alerting academics to copyright issues and helping them find OER for use in their teaching, the librarian whom we interviewed saw these as an extension of their activities and did not envisage a substantial increase in workload: 'we are constantly adapting and rethinking how we apply our library skills I think, and this will be another area where those are equally applicable.' Drawing on her recent involvement in Oxford's implementation of the RCUK's mandate on open access publishing and in discussions around an institutional approach to research data management, she emphasised benefits that can be accrued when stakeholders from different disciplines – as well as central support units such as Research Services, IT Services and Legal Services – come together. She concluded: 'Openness means that, we, as parts of the institution, need to be more collaborative and open with each other as well.'

8. DISCUSSION

8.1 IMPLICATIONS OF THE FINDINGS FOR INDIVIDUAL PRACTICE

Research questions 1 a–d; 2 a, b.

8.1.1 Fundamental principles of openness and the cross-over from research to teaching

The concepts of knowledge as a public good and of openness at the heart of academic practice, with which we opened the interviews with our participants, were uncontested, subject to the limits imposed by the moral implications of sharing knowledge that can be put to harm and, less attractively, by academic competitiveness. However, these concepts were addressed overwhelmingly in relation to research rather than to teaching. Moreover, the beneficiaries of the opened-up knowledge appear to be perceived as passive consumers; there was little sense among interviewees of Lane's (2011) 'philosophy' of '[wanting] people to take it away and do things with it'.

The disjunction between open practices in research and teaching is also apparent in our data in the lack of cross-over from open practices in research. Admittedly, this may be explained in part by one participant's observation that many practitioners of open science do not teach and, perhaps, because of the relative newness of open access publishing to most academics at the time of the study. In any case, publishing in open access journals is now a mandatory practice, rather than a voluntary manifestation of individual beliefs and values.

Open practices both within and across the fields of teaching and research thus remain disparate, and the digital scholars (Weller, 2011) who can confidently join them up still appear relatively rare. At a more fundamental level, the disjunction could be seen as a consequence of the compartmentalisation, and unequal statuses, of teaching and research in research-intensive universities (RIUs), despite the Humboldtian ideal (Geschwind & Broström, 2015) and Oxford's pride in its model of 'close personal academic supervision of an individual student by a highly qualified academic' (Hamilton, 2013).

8.1.2 Sharing and reusing OER

Those of our interviewees who had shared their OER displayed the altruism and, to a lesser extent, the self-efficacy identified in the literature (Van Acker et al. 2013). However, almost all of those who had released OER – primarily as podcasts through Oxford's iTunes U and podcasting portal – had done so only once and did not seem to have the intention of releasing more. The notion of 'perpetual release' is perhaps an unrealistic one; moreover, releasing new versions of one's lectures annually with minor variations raises two questions: which is to be considered the definitive version, and how can one control the continuing use of superseded versions.

The interview data reinforce the asymmetry between sharing and reuse noted by Willems and Bossu (2012). From the perspective of academics, sharing and reuse do not appear to be mirror behaviours, as they have different motivations. The motivation to share is, as we have seen, generally an altruistic one and is normally (but not necessarily) based on a belief that knowledge is a public good and should be made available as broadly as possible. A certain degree of knowledge self-efficacy and pedagogic confidence are also entailed.

In contrast, the motivation to reuse a resource created by others is primarily pragmatic: the need to support a specific episode of learning by a particular group of students. The resources sought might be found within the institution's own collections, but they might not, especially if the tutor or lecturer concerned is the only person teaching their particular subject. Furthermore, the resources may or may not be openly licensed, depending on a) the reusing lecture's awareness of the legitimate use of third-party materials and b) the availability of pedagogically appropriate items.

The reuse of educational resources created by others may also be considered out of keeping with certain interpretations of research-informed teaching where the focus is on teacher-student dialogue. Even so, the widespread use of third-party resources reported by our interviewees and their receptivity to the idea of using OER suggest that there can be a place for OER within an research-informed pedagogy, and this will be explored in section 8.2.2 below.

8.1.3 Open models of teaching and learning

The overlaps between, on the one hand, Oxford's longstanding pedagogic model of individual and small-group teaching and its view of the student as an adult participant in their own learning and, on the other hand, the ideals of open pedagogic practice, should not be taken as a sign that the University does not 'need' OER. Rather, the overlaps call into question the claim that engagement with OER entails radically new pedagogies and, therefore, how far engagement with OER constitutes either a necessary or a sufficient condition for achieving the four pedagogic objectives singled out in the conceptual framework underpinning the interviews. Our findings probably come closest to Beetham and colleagues' (2012) observation about teachers consciously 'pick[ing] and choos[ing]' elements of openness to suit their existing pedagogy, but only in relation to using openly licensed resources, and even then only in very isolated instances. That said, taking a closer look at the ways in which research-informed teaching is practised in Oxford in the light of open models of teaching and learning makes it easier to identify specific roles for OER, as we will see in section 8.2.2 below.

8.1.4 Open educational knowledge

The idea of open educational knowledge brings a new dimension to a longstanding notion: building on the practice of others in order to develop one's own (Laurillard, 2012), whether this practice has been reified in the form of an OER with a clear pedagogic design, or is the subject of pedagogic discourse among teaching staff. Our research suggested that the potential for externally sourced OER to mediate personal professional development can be limited, less through an elitist resistance to resources 'not invented here' (Littlejohn, Falconer & McGill, 2008) than for pragmatic reasons attributable to its predominant pedagogy – in Oxford's case, the tutorial model of individual and small-group teaching at undergraduate level.

In such a climate, the spotlight is thrown on the need for openness on a smaller scale, through the sharing of pedagogic knowledge between teaching staff within the institution. This requires the members of the institution to become 'more collaborative and open with each other' (to quote from our data). This problem is by no means unique to Oxford; however, its collegiate structure should in principle provide Oxford academics with particularly rich opportunities for sharing pedagogic knowledge, particularly across disciplines. These opportunities have yet to be exploited.

8.1.5 The influence of discipline on teaching

We gathered insufficient data to draw firm conclusions regarding the influence of discipline on their teaching, even though some interviewees made considerable claims about the specificity of their disciplines (eg maths, philosophy and history). It seems that some disciplines lend themselves to resource-based learning more than others, and that in a few disciplines the only useful resources may be lectures. However, this has to be balanced in part against an individual interviewee's conceptualisation of teaching and learning, and against their receptiveness to alternative ways of doing things, even in tutorials.

8.2 IMPLICATIONS OF THE FINDINGS FOR OXFORD AS A RESEARCH-INTENSIVE UNIVERSITY

Research questions 2 c, 3.1., 3.2.

8.2.1 Characteristics of research-intensive universities

To explore the institution-level implications of our data for the University of Oxford, we have chosen the lens of its position as a research-intensive university (RIU). This is in the expectation of broadening the relevance of our findings to like institutions.

Chirikov (2013) lists three key features of research-intensive universities:

- 1) a ‘high concentration of talent’ among academic staff and students;
- 2) ‘abundant resources’ which are prerequisites to innovative research and the consequent generation of new knowledge; and
- 3) governance structures that allow considerable academic autonomy, which fosters (*inter alia*) a ‘culture of excellence’.

In terms of the education that they offer, these universities are characterised by:

- teaching that is research-informed (also referred to as research-led or research-based: Spronken-Smith, Miroso & Darrou, 2014; Brew, 2003; Zamorski, 2002);
- pedagogies that aim to inspire students to be ‘curious, driven, responsible and capable of academic thinking’ in their capacity as ‘citizens and leaders of tomorrow’ (Mapstone, Buitendijk & Wiberg, 2014: p. 3); and
- a role as ‘ambassadors for educational outreach and innovation’ (*ibid.*).

For present purposes, we will concentrate on how open practices at such universities might be influenced or determined by research-informed pedagogies, an educational outreach mission, and governance and institutional culture.

8.2.2 Research-informed pedagogies

According to Brew (2003), RIUs consider research-led teaching by active researchers as part of their competitive advantage. However, Boughey reminds us that this is not necessarily a guarantee that students will receive high quality tuition: ‘An active researcher might be ‘good’ at research yet might not even be interested in teaching with detrimental effects on practice’ (Boughey, 2012: p. 630).

The practice of research-informed teaching has been characterised in a number of ways. Spronken-Smith and colleagues (2014) list four approaches to curriculum design intended to involve undergraduates in research:¹⁶

- 1) research-led: the curriculum is structured around content drawn directly from research, often the lecturer’s own;
- 2) research-oriented: the curriculum emphasises teaching the processes of knowledge construction in the subject: eg how to think like a historian, chemist etc.;
- 3) research-based: students carry out inquiry-based learning or other activities involving research. This might also involve learning research skills and methods (Zamorski 2002);
- 4) research-tutored: learning is focused on students writing and discussing papers or essays, as in the Oxford tutorial model.

¹⁶ Zamorski (2002) identifies a fifth interpretation which is not linked directly to undergraduate involvement: namely, that of academics as researchers into their own practice (see also Laurillard, 2008, and section 2.3 of this report).

(Spronken-Smith, Miroso & Darrou, 2014, based on Healey & Jenkins, 2009, and Healey, 2005.)

These pedagogies prompt a re-evaluation of the teacher-student relationship, 'repositioning how we perceive the functions of research and teaching within institutions to think more of inclusive communities of academics and students as co-constructors and investigators of knowledge' (Lucas, 2007: p. 21).

So far, relatively little attention appears to have been paid to the place of OER in research-informed pedagogies, other than suggestions for introducing, into undergraduate and taught postgraduate courses, MOOCs run by their universities or by other RIUs in collaborative ventures (Mapstone, Buitendijk & Wiberg, 2014). Extrapolating from the four interpretations listed above, and from the data gathered in this project on academics' readiness to engage with third-party resources, it is nevertheless possible to envisage potential roles for OER in research-informed teaching that would not compromise its integrity. Indeed, they could be instrumental in bringing that teaching more into line with the emergent open practices in research. Moreover, their use could help students to understand that knowledge is 'something shared, not something owned' (to quote an interviewee), and to grasp 'the complex and provisional relationships between research and knowledge' (Zamorski, 2002: p. 422).

The potential roles for OER might include:

- 1) research-led:
 - students read open access journal articles and openly licensed project reports.
- 2) research-oriented:
 - students gain insights into the research process through 'work in progress' shared by digital scholars through social media, including blogs;
 - students are given opportunities to work with the open source tools used for research in the domain (eg NetLogo for modelling).
- 3) research-based:
 - students have access to OER collections containing digitised texts and digital surrogates of artefacts;
 - students are recommended to take openly licensed courses (including MOOCs) for learning research skills;
 - students receive coaching in open science methodologies.
- 4) research-tutored:
 - students are recommended to take openly licensed courses (including MOOCs) on academic writing and related skills;
 - students produce blog posts as alternatives to conventional essays, thereby extending the possibilities for discussion beyond the tutorial in terms of time and place.

8.2.3 Educational outreach

RIUs take their outreach mission very seriously, in part from a sense that their academic work should result in closer connections with the world outside (Brew, 2003) but also to counteract an elitist image (Highton, Fresen & Wild, 2012).

Mapstone, Buitendijk & Wiberg (2014) note that releasing OER and MOOCs enables RIUs to spread online learning to a wider global audience. This is reflected in Oxford's Strategic Plan for 2013–18 (University of Oxford, nd), which specifically refers to '[developing] our globally available teaching resources and collections for our own community, for our distance-taught students across the world, and for learners everywhere.' The use of the term 'globally available .. resources' in place of 'open ... resources' (which one might expect), is significant. On the one hand, it could be seen to reflect the 'commonsense' notion of openness mentioned in section 2.7.1 above, which denotes resources that are freely discoverable on the open Web and available to users free of charge, although not

necessarily free for reuse and adaptation. On the other hand, while this more cautious approach might be inimical to openness ‘purists’, it can be seen as enabling. That is, it may give confidence to academics who – as our data have suggested – may espouse the view of knowledge as a common good but be reluctant (initially at least) to make their material available for others to modify, and for whom even the University’s default open licence, CC BY-NC-SA, may be a step too far..

Despite this noble mission for outreach, RIUs are not immune to the problems that hamper academics’ release of their materials as OER: viz, lack of time and lack of reward. Indeed, one could make the case that the obstacles to individual initiatives of this kind are greater in RIUs, on account of the tensions between research and teaching that invariably result in the privileging of the former over the latter (Geschwind & Broström, 2015; McKenna & Boughey, 2014; Cretchley et al., 2014). Viewed in this light, the release as OER of podcasts from research seminars can be seen both as a quick and easy way to further the institutional priority for global outreach and to fulfil one interpretation of research-informed teaching, even though many of the podcast-OERs released in this way are in fact talks given at esoteric research seminars and are therefore of little pedagogic value even to undergraduates at Oxford, let alone informal learners in far-flung corners of the world.

From outside an RIU, the heavy emphasis on releasing OER as part of the institution’s outreach mission, in contrast with the lack of strategic attention to integrating OER into undergraduate teaching, gives the impression of an imbalance between production and use of OER. If there is a divide between producer and consumer institutions, then RIUs would appear to conceive of themselves primarily as producer institutions. This can potentially lay them open to the criticism levelled by Dos Santos (2008), among others, of seeking more to foster their image than to open up knowledge, and to the charge, by Richter and McPherson (2012), of ‘educational imperialism’ *vis-à-vis* consumer institutions, notably those in the developing world. Overtly advocating the (re)use of OER in their undergraduate teaching could not only obviate such criticisms, but could also better equip the students in RIUs as ‘citizens of tomorrow ... curious, driven, responsible, and capable of academic thinking’ (Mapstone, Buitendijk & Wiberg, 2014: p. 3) in an open world.

8.2.4 The influence of institutional culture and governance

To implement pedagogic innovation and promote global outreach on a whole-institution level, as opposed to grass-roots initiatives by individuals and groups, depends on a recognition of their importance at a strategic level and, therefore, on the existence of appropriate enabling structures. In this respect, releasing OER as a part of an institutional belief in the importance of outreach would appear to be less problematic than deploying open resources and open approaches to pedagogy, which can impinge on the academic autonomy enshrined in an institution’s governance structures (Chirikov, 2013).

Autonomy in governance at Oxford is enshrined in the principle of subsidiarity: ‘deciding what to research is a matter for individuals and, where relevant, research groups. It becomes a matter for departments and faculties, divisions and the University as a whole only when support is required, most obviously through the allocation of resources’ (University of Oxford, 2005). Implementing the mandate of the Research Councils UK on open access publishing in 2013 is a clear example of where a decision is a matter at the highest level. The issue now is whether, and how, the deployment of OER as a means to enhance the forms and further objectives of research-informed teaching practised at the University should likewise become a matter for decision-making and support at the highest level.

8.3 METHODOLOGICAL ISSUES

This project was an institutional study with the primary aim of informing internal policy. It was located within the broader literature on OER and OEP with a view to making an empirically informed critique of the current themes and claims in the broader arena of OER and OEP research and practice, and to contribute to knowledge by interpreting our findings in relation to three relevant

characteristics of RIUs: pedagogy, outreach mission and governance. This has enabled us both to understand our findings and to explore the areas of opportunity and risk for RIUs' attitudes to openness in both formal and informal education.

Our interviewees were a small, and therefore almost certainly unrepresentative, sample of Oxford academics. However, we argue that the lack of numbers has been offset by the range of experiences and perspectives contributed. In any case, the findings should be treated less as generalisable data than as a source of 'working hypotheses' (Lincoln & Gubba, 1979/2000, p. 38), or simply as providing opportunities to 'expand and enrich the repertoire of social constructions available to practitioners and others; [to] help, in other words, in the forming of questions rather than in the finding of answers' (Donmoyer, 1990/2000, pp. 51-2). In this way, the project lays the ground for potential larger-scale explorations, both in Oxford and other RIUs.

The conceptual framework of open educational practice which underpinned our interview schedule was not extrapolated from a holistic repertoire of practices currently observable in the field; rather it was constructed from disparate sources: speculative 'thought-pieces' as well as findings from empirical research, some of which may be methodologically contentious. This gave us an opportunity to challenge the claims of the open movement from the evidence of existing practice. More specifically, through identifying commonalities between the 'state of the art' and the 'stage of the actual' (Selwyn, 2011), we were able to question the extent to which OER really do constitute a necessary, or sufficient, catalyst for radical pedagogic change.

9. CONCLUSION AND RECOMMENDATIONS

Openness in Teaching and Learning: An Exploration of Principles and Practices at the University of Oxford conducted an in-depth qualitative investigation into what OER can offer to the practice of teaching and learning in the University of Oxford, given its position as a one of the world's leading research-intensive universities. The investigation carried out differed substantially from the original proposal. This was primarily because evidence gathered previously suggested that Oxford academics were not engaging with OER in their teaching and that OER activity was confined almost solely to the University's outreach mission.

The present study has indicated ways which the gap between production and use of OER within the University might be narrowed. We have identified those aspects of open educational practice that resonate with Oxford's longstanding pedagogic model of individual and small-group teaching informed by research. This has put us in a strong position to make specific recommendations that will enable the University to equip its students as 'citizens of tomorrow ... curious, driven, responsible, and capable of academic thinking' (Mapstone, Buitendijk & Wiberg, 2014: p. 3) in an open world, while remaining 'true to the core academic values and standards that have shaped [its] long history' (Hamilton, 2013). In other words, we believe that OER can, and should, blend into the educational mission of the University.

Embedding open practices within Oxford's academic culture and organisational structure

1. Publish within the University a position or clear guidelines on open educational practices and their implementation that are true to Oxford's core academic values and standards. Specifically, emphasise that the principles of academic autonomy and subsidiarity in decision-making continue to be upheld, and that options and freedom of choice exist at both the individual and departmental/divisional levels.
2. Consult a wide range of stakeholder groups in formulating such a position: academics, students, librarians, IT support staff, media production teams, copyright experts and communications teams.

Copyright and the legitimate use of third-party materials in teaching and learning

3. Among academic staff, promote an understanding of what constitutes 'legitimate' use of third-party resources. Provide guidelines on 'good practice': eg using such resources responsibly, particularly where these will be made available to students online.
4. Among students, include training in the legitimate use of third-party resources into study skills programmes both for undergraduates and postgraduates.

Supporting the development of OER for use inside and/or outside the University

5. Encourage academics to release their resources with an open (Creative Commons) licence, continuing to offer CC BY-NC-SA as the default, but respecting authors' preferences for more restrictive ('all rights reserved') licences. By the same token, and recognising that open access requires academics to publish journal articles under a CC BY licence, allow academics who are more confident 'digital scholars' to release materials with less restrictive licences than the default.
6. Implement a quality assurance mechanism to ensure the pedagogic quality of resources made available (production quality may also be considered, but is a secondary criterion).

7. Establish support teams at the centre and/or within divisions and departments to provide:
 - pedagogic support to academics in designing OER appropriate for learners in other education sectors. For example, where resources are intended for UK schools, help academics to ensure that the resources fit with the National Curriculum;¹⁷
 - legal support in understanding the different licensing options and making decisions appropriate to the preferences of the individual author-creator and to any constituent resources;
 - technical support in developing resources where media services are required or software development is involved.

Promoting the use of OER within a research-informed pedagogy

8. Raise awareness among teaching staff of the ways in which openly licensed resources can be deployed in research-informed teaching, including:
 - 1) research-led (content drawn directly from research):
 - include open access journal articles and openly licensed project reports in reading lists
 - 2) research-oriented (teaching knowledge-construction processes in the subject):
 - allow students to gain insights into the research process through ‘work in progress’ shared by digital scholars through social media, including blogs;
 - give students opportunities to work with the open source tools used for research in the domain (eg NetLogo for modelling).
 - 3) research-based (inquiry-based and similar learning activities):
 - include OER collections containing digitised texts and digital surrogates of artefacts in lists of resources for students to consult;
 - recommend openly licensed courses (including MOOCs) for students to learn research skills;
 - coach students in open science methodologies.
 - 4) research-tutored (writing and discussing essays etc.):
 - recommend openly licensed courses (including MOOCs) for students to learn about academic writing and related skills;
 - where appropriate, assign students to produce blog posts as alternatives to conventional essays, in order to extend discussion beyond the immediate tutorial.
9. Develop in students an understanding of the merits of searching for OER to supplement their learning or when researching their essays etc.
10. Conduct (and evaluate) a continuous campaign through internal communications channels to raise awareness of the University’s varied collection of OER among academics in order to encourage their use in undergraduate and postgraduate (Master’s and certificate/diploma programmes) teaching.
11. Establish teams within divisional and departmental libraries to assist teaching staff who wish to use OER for specific purposes by finding and evaluating appropriate OER on their behalf, whether from Oxford or from outside.

Academic development

12. Include awareness of the pedagogic opportunities offered by the use of openly licensed resources in academic development programmes.

¹⁷ An example is the support already provided by IT Services’ Education Enhancement Team for academics wishing to deposit resources for use by schools in the TES Connect repository.

13. Emphasise, in any guidance provided, that OER should be used in accordance with the University's objective to prepare students for academic practice in an open world and/or to develop students as 'citizens of tomorrow', not for reasons of efficiency (except where a teacher lacks the time and wherewithal to create a resource themselves).
14. Introduce into the University Teaching Awards a category for the innovative deployment of OER into teaching within each division.
15. Encourage academics to release their teaching materials for use by other academics within the University as a means to sharing and promoting good practice, whether or not these materials are released as OER.

Collaboration

16. Explore the potential for inter-institution collaboration on OER production with other research-intensive universities, both in the UK and abroad.

APPENDIX A: SUMMARY OF FINDINGS AND RECOMMENDATIONS FROM THE INITIAL LITERATURE SURVEY

Liz Masterman, on behalf also of Steven Albury and Jessica Chan
Revised version of a document prepared by on 23rd May 2013

Introduction

During the survey period we read 115 journal articles, conference papers, research reports, book chapters, and other miscellaneous documents. An initial 70 references were selected from a collection of OER-related literature already in Liz Masterman's possession, the UNESCO/COL OER Knowledge Cloud,¹⁸ a search of journals on open and distance learning, and conference proceedings including OER10 to OER13. The number of items increased as we followed up references or discovered newly published work.

We concentrated on reports of practical work, 'thought-pieces', and reviews of the field that met these criteria:

- addressing the use of OER by teaching staff;
- published from 2008 onwards (ie to maximise the number of dedicated writings on OER, as opposed to online resources in general);
- describing practice in higher education; and
- emanating from 'developed' nations, primarily the UK, North America, Europe, and Australia.

Works lying wholly or partly outside these criteria were included if they were 'core' texts on OER or if the content appeared to offer useful insights for the project. We collected our notes in a document on Google Drive.

Findings

This summary takes as a starting point the existing knowledge which gained from previous studies conducted by IT Services staff into the use of OER: the OER Impact Study, OER Engagement Study, and the evaluation of the collection *World War I Centenary: Continuations and Beginnings* (henceforth in this appendix *WW1C*) (Masterman & Wild, 2012).

Use of OER by individual academics

ie motivation for engagement with OER, enabling factors/barriers, ways in which used, benefits. Readings largely reinforced our existing knowledge, but additional material was uncovered regarding:

- quality and trust;
- sustainability, including the role of user demand;
- designing OER in order to optimise reuse.

Perspectives of other stakeholders in the institution

A small amount of information was found on the role of librarians in locating and curating OER in behalf of teaching staff.

Institutional motivation and strategies for supporting use of OER

We found less information than expected (or hoped?). The need was expressed for national policies in relation to use and for governments to take a lead by opening up their data (which is already

¹⁸ <https://oerknowledgecloud.org>

happening). The European-funded POERUP project¹⁹ is currently investigating the interplay between government policies and institution-led initiatives in encouraging the uptake of OER.

A number of papers noted the existence of a tension in institutional motivation between the enhancement of learning and self-promotion (branding) of the institution.

Openness as broader academic practice

See below.

Engagement with theory in researching and thinking about OER

There are signs that the field is beginning to go beyond ‘story-telling’ and engage with theories and other conceptual/analytical frameworks. These include Critical Discourse Analysis (dos Santos, 2008), Social Exchange theory (Van Acker et al., 2013) and Activity Theory (Cox, 2013). Moving into the realms of philosophy, Knox (2012) questions the notions of ‘freedom’ that he perceives the OER community to espouse, and Deimann (2013) explores how OER can be a route to achieving *Bildung*.

Methodological issues

Overall, we have been disappointed by the quality of previous research into OER as reported in our reading. A substantial number of papers are simply accounts of practice – which may be associated with funded initiatives to create and release OER – rather than reports of properly designed investigations. Additionally, they tend primarily to collect (qualitative) attitudinal data from a small number of participants only and derive generalisations from these. Other papers focus on production with little mention of use (despite titles and headings that imply at least equal treatment), and/or mix OER and ‘non-OER’ with no discussion of how and why OER might be different from the latter. There is also an absence of longitudinal studies.

Critiques of the OER movement

These include:

- a concentration on practical issues;
- a failure to engage with the question of how OER can improve education (Iiyoshi & Kumar, 2008b);
- the conceptualisation of the learner held in OER circles (Knox, 2012);
- a lack of critical orientation in OER research, coupled with ‘meliorism’: ‘the belief that the world tends to become better and that humans can aid its betterment’. ‘[D]ispatching higher education on a melioristic OER voyage of faith that is uninformed by reflective experience’ is a risky undertaking (Glennie, Harley, & Butcher, 2012b: p. 8);
- the ‘discursive alignment with the marketisation and commodification of education’ and construction of learners as ‘human capital’ (Knox, 2012: pp. 8, 9).

OER and Oxford

From the literature survey we can identify three properties that set OER apart from other (ie non-openly licensed) resources that are available online. We consider them briefly here in relation to undergraduate teaching and learning at Oxford.

1. The use of Creative Commons licences that make it possible to use learning materials created by others and distribute them to students and other third parties legitimately.

From *WW1C* we know already that lack of awareness (or concern) for copyright/IPR when appropriating online resources is a basic issue (even) among Oxford lecturers.

¹⁹ <http://www.poerup.info/index.html>

2. The promotion of learner-centred approach which is marked by, *inter alia*, independent learners engaging in ‘collaborative, self-managed learning practices ... making use of a variety of information sources’ (Schaffer & Gesert, 2008: p. 5) and appreciating the ‘implications of multiple voices of “authority”’ (Glennie, Harley, & Butcher, 2012a: p. 288).

With the possible exception of collaboration in some disciplines, this approach is built into the Oxford model of teaching and learning, in which the student is considered to be ‘an adult participant in the pursuit of his or her own academic development’.²⁰ Other aspects of the learner-centred approach promulgated by OER ‘enthusiasts’, including learning at one’s own pace and exploring the curriculum in a sequence other than that laid down, seem to be equally applicable to non-openly licensed resources.

3. The existence of a stock of good (or acceptable) quality resources that teachers can use where they lack the wherewithal to create materials of their own.

This has already been demonstrated in *WW1C*.

Oxford academics’ general attitudes towards sharing and reusing learning materials have been explored by ‘*WW1C*’ and by a 2005 study for the English Subject Centre (Lucas et al., 2006). Although both of these were small-scale projects conducted in humanities disciplines, we question the value of expending resources on exploring attitudes in other fields, particularly given the low number of interviewees envisaged (ie it would be difficult to draw meaningful conclusions from any differences uncovered).

Finally, in terms of motivation to use OER, and to extend one’s use of OER, two of the triggers identified by Wild (2012) – curriculum design (or redesign) and moving courses online – do not apply to the collegiate University.

Recommendations

It seems that the major benefits of OER to Oxford are largely practical: viz., the legitimacy conferred by Creative Commons licensing and the availability of supplies of potentially useful resources. Some of the enhancements to pedagogy that OER are claimed to bring to other institutions have long been part of Oxford’s teaching, while others are inapplicable. Quite apart from the difficulty of finding users of OER (and of Oxford-produced OER in particular), we therefore question the extent to which conducting empirical work as envisaged in the project proposal would add to our knowledge and understanding of academic practice.

Moreover, the literature increasingly points to the need to raise the level of research above the purely practical level; for example:

Open education is not just about disseminating resources that can be localized in many ways to improve education in local contexts, but also about an opportunity toward broadening and deepening our collective understanding of teaching and learning (Iiyoshi & Kumar, 2008a: p. 439).

Neither exclusively descriptive nor exclusively operational accounts capture the actual and potential impact of OER on learning. We need to move beyond descriptive and/or operational definitions to add a philosophical dimension (Peter & Farrell, 2013: p. 177).

‘Open educational practice’ (OEP) is now a common term within the OER community to describe not only the sharing and reuse of OER but also ‘open learning architectures that could transform learning into 21st century learning environments in which universities, adult learners, and citizens are provided with opportunities to shape their lifelong learning pathways in an autonomous and self-guided way’ (Ehlers, 2011: p. 3). The envisaged transformation ‘focuses on learning by constructing knowledge assets, sharing them with others, and receiving feedback and reviews’ (ibid.: p. 4) and

²⁰ EPSC Policy & Guidance document for Learning & Teaching. See also Section I of the Strategic Plan 2008-2013.

aims to '[change] the traditional educational paradigm of many unknowledgeable students and a few knowledgeable teachers to a paradigm in which knowledge is co-created and facilitated through mutual interaction and reflection' (ibid.: p. 4). Also related to OEP are the concepts of 'open content literacy' (Highton et al., 2012) and 'open educational knowledge' (Richardson, 2008).

Beetham and colleagues (2012) suggest the following questions that might guide research into OEP:

Does a general embrace of open educational practices make individuals and/or institutions more likely to engage with OER? Does OER activity make other kinds of open practice more attractive or achievable? And does a more general engagement in open practice lead to greater benefits than a focus on OERs alone? (Beetham et al., 2012: p. 5)

Taking the second and third of these questions together with the notion of *digital scholarship* (Weller, 2011) in academic research and the introduction of the RCUK's policy on open access publishing (OA) in April 2013, we recommend that the scope of the current project should be broadened (and its level raised) to explore the relationship between *open academic practice* (an umbrella term for OEP and open scholarship) and the academic culture of Oxford. This does not entail dropping OER altogether; rather, we should be able to position the sharing and use of OER by Oxford academics within this bigger picture and perhaps identify where other forms of open practice might stimulate engagement with OER (and *vice versa*). Interviews with academics conducted as part of the Open Access Oxford project (February–April 2013) have revealed some established practices in self-publishing and a positive disposition towards OA in principle (although perhaps not towards the RCUK's policy), as well as pockets of engagement with open science by early-career researchers in the Mathematical, Physical, and Life Sciences division. There seems to be, therefore, a compelling argument for exploring how the various academic activities that bear the label 'open' might relate to, or otherwise inform, each other within Oxford's particular academic culture.

APPENDIX B: INTERVIEW SCHEDULE

ABOUT THE SCHEDULE

This schedule is a simplified version of the one used in the interviews; additional and references have been removed for clarity. The schedule contains general versions of the interview questions for academic staff. Questions for other (named) stakeholders were being devised separately, using the same areas of investigation as a general structure. The interview questions were divided into 5 sections: preamble, general questions, aspects of openness in teaching and learning, an Oxford policy on open teaching and learning, wrap-up.

Within each section we focused on there are particular areas of interest, identified by blue subheadings. Text in regular type which is not indented (like this paragraph) introduces each section or links one question with the next.

- The main questions are indented with bullets (like this one). Interviewers were not required to use exactly the same wording, as long as their version of the question asked the same thing. If an interviewee had already provided an answer to a particular question in response to an earlier question, there was no need to ask that question unless the interviewer wanted to confirm her understanding of what the interviewee said earlier.
 - Sub-questions (follow-up questions) are indicated by an indented bullet (like this one).

We recognised the need for flexibility and on-the-fly adaptations to the ordering of the questions. As a result, this schedule could take on, in part, the function of a checklist for us to make sure that we covered all the issues relevant to the interviewee.

1. PREAMBLE (5 MIN.)

Explanation of the purpose of the research and structure of the interview; assurance of anonymity; permission to record; opportunity to ask questions; signing of the consent form.

2. GENERAL QUESTIONS (8 MIN.)

2.1 Demographic data

- Role (job title)
- Subject area(s)
- Department(s) in which you teach (excluding Cont Ed)
- No. of years teaching in HE:
 - At Oxford
 - Previous university
- Do you have any additional responsibilities in relation to your department, faculty, division, central University, or nationally that would be relevant to this meeting?

2.2 Basic conceptualisation of open academic practice

In our invitation to you, we quoted two assumptions about ‘openness’ in education and research that come from the literature. Here they are again for you to review. (Hand interviewee the card with these statements.)

1. The world’s knowledge is a public good and all people should have free access to it.
2. *Open sharing of knowledge is at the heart of the academic process.*
 - To what extent would you agree with each of these assumptions?

3. ASPECTS OF OPENNESS IN TEACHING AND LEARNING (25 MIN.)

3.1 Producing OER

A. If the interviewee has contributed to Oxford's collections of OER:

- What do you think is the distinguishing characteristic of OER that sets them apart from the other resources that teachers and learners can find on the Web?
- What kind of audience outside the University do you have in mind for your resources: learners and/or other teachers?
- *If the person has created OER specifically for a collection:* Do you use these resources in your own teaching? How / Why not?
- What beliefs and values about teaching and learning come into play for you in sharing your resources?
- Do you see this OER activity as part of your normal work, or was your contribution one-off?
- Do you know of any colleagues who are using your resources in their teaching?
 - Who are they and would they be interested in talking to us?

B. If the interviewee has not contributed to Oxford's collections of OER:

- What does the term open educational resources mean to you?
→ *Ensure that the interviewee is aware of the distinction between OER and general 'stuff on the Web'*

A number of Oxford academics have either made their lectures and talks available as OER in the form of podcasts, or have contributed to collections of OER around specific subjects, such as English literature, history and politics.

- Were you aware of this?
- What would be your thoughts on making your own lectures and talks available as OER?
- And to what kinds of audiences would you be happy to make them available?
 - Members of the public – for general interest?
 - For teachers outside Oxford to use in their courses, perhaps adapting them to suit their particular needs? (NB these teachers could be in schools and/or other universities)
 - Are there any audiences that you would particularly want to reach?
- What underlies your views on sharing your materials?

3.2 Using OER created by others

- Have you used OER in your teaching: that is, resources or teaching materials that specifically have a Creative Commons licence?

If yes:

- What sort of resources have you used, and in what ways (briefly)?
- Did you actively look for OER as opposed to resources in general?
- Have you used any resources from Oxford's collections of OER?

OER also come in bigger units: for example, self-study modules. So, instead of teaching students skills in referencing or academic writing yourself, you could tell them to take an online self-study tutorial that has been released by another university as an OER.

- Are there any circumstances when you could envisage using OER in this way: that is, handing the teaching over to the OER?

If no and the person actually knows what OER are:

- Why not?

All interviewees:

Still on the subject of using other people's materials, I'd like to move away from the specifics of OER and ask a few general questions...

- In your experience, to what extent do Oxford academics use each other's teaching materials in their own teaching – having sought and obtained permission to do so, of course! Things they might share include reading lists, lecture notes, PowerPoint slides, exercises or problems (*in maths and sciences*), and diagrams or images to put on slides.
- *If there is evidence of sharing:* Have you personally asked Oxford colleagues for their materials?
- *If there is no evidence of sharing:* Why do you think Oxford academics tend not to share materials?
- Have you asked lecturers whom you know in other institutions?

People may also look on the Web for materials to use in their teaching.

- Do you look for things on the Web?
- Can you give one or two examples of things that you look for, and why?
- Do you restrict your searching to a number of preferred sites, and/or are you willing to Google the entire Web to see what comes up?
- Being honest – and speaking in complete confidence – do you check for the presence of any copyright conditions that state what you can do with the things you find?
 - Do you think you are typical of your colleagues in this respect?

Research suggests that looking at other people's teaching materials can give you ideas for different things to do with your own students. That is, it can be an opportunity for informal professional development.

- How often has this happened in your experience?
 - How recently?
 - Give me an example...

3.3 Open educational knowledge

Research suggests that lecturers can develop their own practice through sharing their ideas about teaching: for example, through discussion or peer observation.

- In your own professional development, to what extent have you learned about teaching and learning informally from your peers?
- How valuable has that been (or would that be) as a source of professional knowledge?

One way to share this pedagogic knowledge across different universities is through OER specifically designed for teachers' professional development: eg short videos on techniques for making lectures more interactive or how to support students as they work through a difficult problem or new concept.

- Can you think of any aspects of your teaching, whether in tutorials, larger classes or lectures, where such 'OERs for teachers' might be relevant and useful?

3.4 Open pedagogic models in relation to undergraduate teaching

Enthusiasts for open educational practices say that it is not enough to create and use OER within existing models of teaching and learning.

According to them, OER must also be catalysts for changes in the way teachers teach and students learn. This is because

- 1) students can access OER on their own initiative, and
- 2) teachers and/or students can adapt OER and use them to create new resources.

Thus, the enthusiasts claim, the current teacher-centred model of education must give way to new pedagogic models.

I'd like to hear your thoughts on some of the characteristics of these new 'open pedagogic models'. So I'm going to hand you a set of statements please and I'd would be grateful if you would tell me:

- 1) How each one relates to your own view of the teacher-student relationship and the nature of learning, and
- 2) How it relates to undergraduate teaching and learning at Oxford.

(Hand interviewee the card with these statements.)

1. *a) The teacher's role changes from source of knowledge to learning adviser.
b) The student takes responsibility for their own learning, including what they learn.*
2. *Knowledge is co-constructed through mutual interaction and reflection between teacher and students.*
3. *The development of knowledge and skills required for tackling and solving problems has priority over subject-centred knowledge transfer.*
4. *Students learn primarily from each other, as a community.*

If we follow the principles of openness in education to their logical conclusion, students would not only learn with or from OER, but they would also learn by producing OER. So, for example, they might create a YouTube video as the output of a piece of learning, and would release it with a Creative Commons licence – after it had been assessed and approved by the tutor, of course.

- What kinds of learning outcome would be served by students making their outputs openly available in this way?

3.5 Overall, in relation to your teaching practice ...

- Do you think that your discipline has an influence on the extent to which one can adapt 'open' practice in these ways?
- And does the Oxford way of doing things have an influence?

Back at the start, we discussed a couple of the underlying ideals of openness.

- Do you think one can engage in these 'open' practices without buying into those underlying ideals?
- For example, must creating and using OER necessarily lead to changes in educational systems, or can it be an end in itself?

3.6 Cross-fertilisation from open practices in research

Broadening the discussion to open practices in research, I'm interested in the possibility of cross-fertilisation from these to teaching and learning.

If the interviewee blogs, tweets and generally meets our criteria for networked scholarly participation:

- What are the main online networks and social media that you participate in as part of your academic work?
- To what extent does use of these 'open' media in your research spill over into your teaching?

All interviewees:

Openness in research is becoming mandatory, with the Research Councils UK's new policy on Open Access publishing, and with the prospect of having to making one's research data openly available.

- To what extent could mandated open practices in research have a cross-over effect? That is, could they prompt lecturers to think about the ways in which openness might also apply to their teaching?

4. AN OXFORD POLICY ON OPEN EDUCATION (10 MIN.)

Finally, I'd welcome your thoughts on whether Oxford should have an 'open education' policy: ie a statement of principles and broad guidelines

The new strategic plan identifies 'global reach' as a priority and refers to developing globally available teaching resources for learners everywhere.

- Given this priority, what should Oxford's **primary motivation** be in developing such resources?
 - Are enhancing Oxford's reputation and attracting students legitimate motivations?

One aspect of this strategy might be the provision of MOOCs.

- *If not asked earlier:* What do you understand by the term 'MOOC'?
- What is the motivation for a university like Oxford to provide MOOCs?
- Would you be willing to participate in teaching or facilitating a MOOC?
- What are the possible risks of MOOCs to Oxford?

According to some extreme views, MOOCs are a 'disruptive technology' that threatens universities' business model and could ultimately lead to their demise.

- Where do you stand in relation to such views?

Up to now, production of OER has been driven substantially by specific projects and initiatives in IT Services.

- Under an open educational policy, should the driving force behind this production shift from the technologists to the educationalists?
- *If yes*, how might such a policy work?

As we have discussed, openness in teaching and learning is about more than just making OER (and MOOCs) available to the world.

Here are some ideas for what could be in an internal policy on open practices in teaching and learning at Oxford. Please tell me how appropriate you think each one is *Hand the interviewee the sheet with these statements:*

1. *Stimulate greater production of open educational resources that can be used inside as well as outside the University.*
 2. *Encourage academic staff actively to use OER, either to ensure that they use third-party resources legitimately, or for efficiency (ie where they lack the time and means to produce their own materials).*
 3. *Develop students as self-directed learners, equipped for survival in a 'knowledge economy' through learning with OER and, where appropriate, producing OER.*
 4. *Help academics develop their teaching through using and/or producing OERs about good or innovative pedagogic practice.*
- In summary, do you think that Oxford adopt have an 'open educational' policy like this?
 - *If yes*, what else should it contain in addition to these statements?
 - *If no*, why not?

5. WRAP-UP (5 MIN.)

(Thanking the interviewee, offering them the opportunity to approve the transcript.)

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A bibliography of OER and related subjects can be found at:

<http://oerqualityproject.wordpress.com/2014/09/17/bibliography-of-oer-roer-rlo-related-themes/>