

JISC Open Educational Resources Programme: Phase 2

OER IMPACT STUDY:

RESEARCH REPORT

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OER IMPACT STUDY: RESEARCH REPORT

EXECUTIVE SUMMARY

Aims

The OER Impact Study was conducted between November 2010 and June 2011 by a team from the University of Oxford. Its remit was to investigate university lecturers' and students' use of open education resources (OER), and to inform the higher education community of the current impact of OER from the perspective of use rather than production. Specifically, the research team addressed the following questions:

- I. What benefits can OER offer to educators and learners in HE in the UK?
- II. What are the pedagogic, attitudinal, logistical and strategic factors conducive to uptake and sustained practice in the use of OER; conversely, what are the impediments?

Method

In keeping with its exploratory nature, the study adopted a primarily qualitative approach, collecting in-depth data on individual practice from a relatively small number of participants. Data were gathered through interviews, focus groups, an online survey and workshops as shown in Table 1.

Table 1: Method and participants in the OER Impact Study

<i>Method:</i>	<i>Participants (+ numbers):</i>	<i>Purpose:</i>
Interview and focus groups	'Strategists': those responsible for implementing an institutional OER strategy (10)	Identify the drivers that prompt an institution to adopt a strategy for the use of OER in teaching and learning. Collect evidence of models for engagement with, and uptake of, OER by individuals and course teams: for example, workshops.
Interviews and focus group	'OER experts': teaching staff who were already using OER in their courses (9)	Determine teachers' conceptions of OER. Determine the relationship between their values and beliefs about teaching and their disposition towards OER. Capture narratives of OER usage that is already embedded in teachers' practice.
Online survey + workshops	'OER novices': teaching staff who had not yet used OER in their courses (16)	Investigate the reality of searching for, locating and evaluating online resources. Gain insights into the issues faced by teachers engaging with OER for the first time.
Focus groups	Students (17)	Determine the extent to which learners are aware of OER, the importance of provenance and the relationship between their beliefs about learning and the use of OER.

Additionally, quantitative data were collected from 101 searches for online resources undertaken during two workshops, and from a preliminary survey of participants' experience of IT in general and aspects of their practice relating to the reuse and sharing of resources in particular.

Findings I: benefits to educators and learners

Educators

The key benefits of OER to individual educators lie in:

- Enabling resources to be seamlessly integrated into students' learning environments;
- Addressing learners' specific needs through providing opportunities for supplementary learning, skills development and presenting content in different ways to address students' interests and preferences;
- Saving teachers effort, through enabling them to offer their students learning materials and TEL activities where they lack the skills or the means to create these themselves;
- Benchmarking their own practice in terms of content, approach and general quality;
- Enabling them to teach topics that lie outside their current expertise;
- Stimulating networking and collaboration among teachers;
- Improving possibilities for new collaborations in researching fields of common interest.

However, we noted a lack of precision in teachers' conceptualisation of OER, including a lack of awareness of Creative Commons licensing terms.

Learners

Data collected from learners were comparatively scant; however, we recorded the following:

- A low level of awareness of OER, and a need for them to understand IPR issues in general;
- A preference for online over printed materials, and materials that are up to date;
- Appreciation of the 'walled garden' of online resources provided by their teachers, but a continuing need for training in searching for and evaluating online materials (information literacy);
- Reluctance to make their own work publicly available on the Web, especially where it is formally assessed.

Findings II: enabling factors and impediments to uptake and sustained practice

Pedagogic

From lecturers' perspectives, the principal factors are:

- **Relevance of content and fit to the lecturer's current purpose.** These are paramount, but are contingent on any one lecturer's requirements. Although some topics will be in more demand than others, minority interests also need to be accommodated.
- **Provenance.** OER produced by higher education institutions and other academic bodies are perceived to have a stamp of quality.
- **Pedagogic intent.** Teachers appreciate resources that have either been explicitly developed for educational purposes or can readily be co-opted for such a purpose.
- **Granularity.** Lecturers look, in the main, for individual images, short audio or video clips, or readings for incorporation into their teaching plans (learning designs). However, when faced with teaching a substantial topic with which they are unfamiliar

they may turn to OER that support longer stretches of learning (i.e. complete lessons or sequences of lessons).

- **Media.** Rich media resources are perceived as a means to help students visualise and grasp difficult concepts, and to practise skills in their own time. However, audio and visual media should be accompanied by transcriptions to aid selection and evaluation.
- **Topicality, contemporaneity.** Teachers and students value resources that are up to date in relation to current affairs or to current academic research.

Attitudinal

A positive disposition towards the reuse and sharing of learning resources, together with an essentially collaborative outlook, are essential prerequisites for teachers' uptake of OER. The characteristics of such a disposition include:

- A conceptualisation of teaching as, *inter alia*, helping students to become active, independent learners.
- A recognition that combining materials that they have authored themselves with relevant materials from other sources may be both valuable (in terms of enhancing the quality of students' learning) and valid (e.g. acceptable if they may lack the skills and resources to create a particular resource themselves).
- Confidence, both in their command of subject matter and in their teaching skills, to share their own materials.
- Readiness to learn themselves (i.e. develop their professional practice), both from engaging with resources that others have made available, and from obtaining feedback on the resources that they have shared with others.
- A sense of responsibility for encouraging similar attitudes among their colleagues.

That said, teachers lay great emphasis on the authenticity of their 'teaching voice'. While willing to use materials authored by others, they need to retain the freedom and flexibility in appropriating those materials into their students' learning.

There are suggestions that increased tuition fees may have implications for the deployment of OER from students' perspective, in that they might not welcome paying for resources that are freely available. Thus, lecturers need to pay particular attention to structuring students' learning with these resources.

Logistical

The role of logistical factors in inhibiting the large-scale uptake of OER is not to be underestimated. These include:

- **Volume of resources.** A critical mass has yet to be reached to make OER viable across the board. This problem is more severe in some disciplines than others, although we have insufficient data to identify those in the greatest need. Interdisciplinary searches are also problematic.
- **Technical and implementation issues.** The following are all likely to deter would-be users of OER: poorly indexed materials, inadequate search engines, the requirement to register with a site or download an application in order to retrieve or run a resource, and unreliable hardware or software on the hosting site.
- **Discoverability.** This issue stems largely from low volume, poor indexing and the low power of some search engines. It can be mitigated to some extent where teachers are part of a community and can benefit from word-of-mouth recommendations, but could

prove a major stumbling block where teachers are working on their own, without the support of others.

- **Lack of licensing.** This appears to be problematic where a resource appears to be intended for general use, but does not carry a licence (in this respect, see recommendation 13 below).

Strategic

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. Such networks might be fostered by the institution in one of these ways:

- Relying on the *ad hoc* diffusion of 'bottom-up' initiatives;
- Implementing institution-wide strategy to consistency in OER use;
- Identifying individuals and small groups using OER on their own initiative and co-opting them into a more organised strategy for diffusion.

The study also suggests that universities should capitalise on the professional development opportunities that they already offer to teaching staff in order to foster an awareness of OER and an understanding of IPR and copyright.

OER and OEP

The study has aligned itself with related current and recent work to identify the position of OER in relation to the broader area of open educational practices (OEP). In this respect, OER use can be seen as a sign of, or trigger for, the following practices among teaching staff:

- **In relation to learners:**
 - Implementing open pedagogic models.
 - Providing learners with a repertoire of rich and diverse resources that may include reused content.
 - Teaching in open networks.
- **In relation to other teachers:**
 - Sharing and collaborating on content with other teachers.
 - Using or encouraging others to use open content.
- **In relation to the community at large:**
 - Opening up content to students who are not on campus (i.e. distance learners) or to learners who are not formally enrolled on the university's courses.
 - Making knowledge publicly accessible.

In addition, the study has drawn on the Higher Education Academy's Evaluation and Impact Assessment Approach to propose a six-level framework for appraising the impact of OER use on the practice of individual teachers: awareness, reaction, engagement, learning from, applying one's learning and effects on students' learning. However, it notes that time is another variable to consider when assessing impact: specifically, to distinguish between first-order changes, which may be short-lived, and second-order, changes which are lasting and are underpinned by a permanent shift in beliefs. Thus, the present study may need to be repeated within two or three years in order to yield a clearer and more reliable assessment of impact.

Recommendations

The project team makes the following recommendations:

Recommendations to academic staff for enhancing their teaching practice:

1. Approach online resources primarily as a means to enhance your practice, not necessarily as a way to develop a course more quickly.
2. Adopt an open approach to your academic practice, seeking to share resources and ideas both within your disciplinary community and beyond it.

Recommendations to academic staff for supporting learners:

3. Continue to evaluate and collate online resources in order to scaffold students' access to online resources.
4. Provide opportunities for students to share, discuss and critique the online resources that they have discovered themselves.
5. In study skills tuition, pay attention to sources other than 'conventional' text.
6. When teaching students referencing and citation skills, include non-traditional sources such as podcasts and videos.

Recommendations to institutions for improving services to students and staff:

7. When setting out students' expectations and entitlements in relation to their learning experience, provide appropriate justification and assurances regarding the incorporation of resources originating from other institutions.
8. Capitalise on existing professional development activities in order to foster a voluntary culture of sharing and reuse.
9. Consider the reuse of online resources strategically, assessing their potential to save time or offer other efficiencies over a longer term rather than a shorter term. However, take account of the fact that teachers may perceive the benefits differently.

Recommendations for the funding of OER-related activities:

10. Continue to support the production of OER in the context of reuse, and consider targeting that support towards the development of resources in under-represented disciplines and of interdisciplinary resources.
11. Support and promote 'open' approaches in teaching and learning practice.
12. Continue to support the development of technologies to improve the discoverability of OER produced by universities.
13. Lobby for the easing of copyright restrictions where resources are to be used for educational purposes.

Recommendations for further research into OER use:

14. Further research into the reuse, in a global context, of full courses/modules of OER produced in the UK.
15. Further research into the optimal ways to foster teachers' reuse of OER.

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1. INTRODUCTION

1.1 Aims of the OER Impact Study

This document reports on the OER Impact Study, an investigation into university lecturers' and students' use of open education resources (OER¹), which was sponsored by HEFCE within phase 2 of the HEA-JISC Open Educational Resources programme.² The project was carried out by a joint team from the Technology-Assisted Lifelong Learning Unit at Oxford University's Department for Continuing Education and the Learning Technologies Group at Oxford University Computing Services (OUCS) between November 2010 and June 2011 and aimed to inform the higher education community of the current impact of OER from the perspective of use, rather than production. Specifically, it set out to:

- Investigate the use of OER from three perspectives: namely, of the institution, of teaching staff and of learners, looking at the benefits that OER can offer each, and
- Identify the pedagogic, attitudinal, logistical and strategic factors conducive to uptake and sustained use of OER, as well as the associated issues and challenges.

Within the study we adopted the definition of open educational resources cited 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 and Hammond, 2007: p. 4), where 'others' may comprise 'educators, students and self-learners' (OECD, 2007: p. 38). Like Atkins and colleagues, we consider such resources to include '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 and Hammond, 2007: p. 4).

The incorporation of 'intellectual property license' into this definition differentiates it from the definition endorsed by the OECD (2007) which, extracted from the context of an extended discussion within that document of the concepts 'open', 'educational' and 'resource', does not distinguish between resources that have an associated licence governing their use (typically, Creative Commons) and resources that do not, and is therefore open to ambiguity.

1.2 Background to the study

1.2.1 OER: Expanding the focus from production to use

Since 2009 HEFCE has invested significant funds in the production and sharing of OER by universities in the UK. This investment followed the *Good Intentions* report (McGill et al., 2008), which articulated a number of business models and reviewed a range of business cases, and suggested that 'the landscape of policy, technology, and learning and teaching practice' had changed sufficiently and that sharing and repurposing learning materials could become normalised practice. Yet, while the benefits of providing and using OER were generally accepted in principle, the cultural, technical, legal and institutional challenges remained complex and multifaceted – and in the case of OER use, largely under-researched.

The 29 HEFCE-funded pilot projects resulted in a clearer understanding of the benefits of, and challenges to, OER production. Their outcomes demonstrated a maturing in approaches, including the emergence of a number of models and frameworks that take into account the

¹ We use the same abbreviation – OER – to denote open educational resources both in the singular and in the plural.

² <http://www.jisc.ac.uk/oer>; <http://www.jisc.ac.uk/whatwedo/programmes/elearning/oer2/oerimpact.aspx>; <http://oerblog.conted.ox.ac.uk/> (project blog).

breadth of issues inherent in sharing materials within or between institutions (OER Synthesis and Evaluation Project, 2010a). Nevertheless, the focus was still almost wholly on the creation and provision of OER, as is also manifest in the articles in a special issue of *Open Learning* (2009: 24(1)). Not surprisingly, therefore, the report of the JISC OER Synthesis and Evaluation project considered the lack of evidence of demand and use both by teaching staff and by learners as ‘a major gap in understanding’ (OER Synthesis and Evaluation Project, 2010b; 2010c). The major stumbling-block to filling this gap was the difficulty of identifying users, let alone exploring contexts of use with them.

The situation has begun to change, however, and the actual use of OER and their impact on academic practice are now much easier to investigate. Studies that are already increasing our understanding in this area include Nikoi (2010), Beggan (2010) and Browne et al. (2010). Moreover, established providers such as the Open University are now forming partnerships with organisations wishing to use their materials in large volume (Gourley and Lane, 2009). Thus, it is now easier to identify users with whom to undertake substantial empirical investigations into the use of OER by teaching staff and by learners (in support of both their formal and informal learning), through investigating situated practice in institutional contexts as opposed to merely speculating on them. Even so, evidence of the practice of reuse remained scant in 2010 (Windle et al., 2010): hence the motivation for the current study and, more recently, the ORIOLE project at the Open University.³

1.2.2 Reuse in its historical context

The twin concepts of sharing and reuse that underpin OERs are not new: indeed, OER may be viewed as the latest in a number of initiatives to encourage good pedagogic practice, including the reuse of resources in general (McNaught, 2003; Malcolm, 2005); artefacts expressly designed and created as reusable learning objects (RLOs) (e.g. Boyle, 2003; Koper, 2003; Muzio, Heins and Mundell, 2002), and learning design (Agostinho, 2009; Conole, 2009; Dalziel, 2009).

Lane and McAndrew (2010) compare OERs with learning objects, noting both similarities in the challenges to their widescale use (accessibility, discoverability, granularity and reusability), and differences: specifically, in recent years the expansion of Web 2.0 (social) technologies with the concomitant development of informal communities; greater individual innovation by teachers in their use of technologies in the classroom; and increasing ownership of personal technologies by students – as well as, of course, the open licensing. These, they imply, should be conducive to the expected greater success of OER in comparison with RLOs.

In relation to learning design, Lane and McAndrew (2010) suggest that the benefits of OER may lie in making it easier to view the praxis of other teachers (through shared, open learning designs) and to re-purpose (modify) individual resources. This, however, seems a somewhat restricted perspective on the relationship, and indeed Conole (2010) advocates a shift in focus away from the resources themselves towards the practices associated with the creation, use and management of OER: that is, open educational practices (OEP). This practice focus was explored in more depth by the Open Education Quality Initiative (OPAL).⁴ Its initial vision shows strong roots in the learning design approach: ‘The vision of open educational practice includes a move from a resource based learning and outcomes based assessment, to a learning process in which social processes, validation and reflection are at the heart of education, and learners become experts in judging, reflection, innovation within a domain and navigation through domain knowledge’ (OPAL, 2010, p. 46). This definition has been revised slightly to: ‘a 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’ (OPAL, 2011a: p. 4) with ‘the intent to improve quality

³ <http://orioleproject.blogspot.com/>.

⁴ <http://oer-quality.org/>.

and innovate education' (OPAL, 2011b: p. 4). Once again, this is not in itself, a new endeavour (indeed, it also underpins the principle of learning design), but has been given an additional fillip by the OER phenomenon. However, the OPAL guidelines on OEP were published only after our own work was well under way, and so further references to them in relation to this study are deferred to section 7 of this report.

1.3 A qualitative approach to investigating the impact of OER

The consideration of OER use as a form of practice in the previous section leads us to consider the extent to which a study of impact such as this one should adopt a quantitative or qualitative approach. Certainly, much of the literature on evaluating impact concentrates on quantifiable measures such as download figures and Webometrics, with qualitative data adopting a secondary, supplementary role (as in Meyer, 2011); however, when exploring a hitherto under-researched area where the questions to investigate may be only vaguely defined, a qualitative approach is more suitable. This is particularly so when we are investigating expected changes in lecturers' (and learners') practice: looking for evidence of differences in what they do and in how they think about what they do (cf. Biggs, 2003).

1.4 About this report

This report is one of three key outputs from the project and presents, in depth, the methodology adopted and findings from the data collected by the research team. It is intended to be read in particular by practitioners and researchers interested in the use of OER in university teaching and learning in the UK. However, some of the findings may be transferable to other educational sectors, such as Further Education and schools, or to other countries.

The report complements the other two outputs, which are:

- **A mind-map of the landscape of OER use**, which was constructed by Joanna Wild from her review of the existing literature. This has been available online since 21st January 2011⁵ and, in the spirit of openness, is available for editing and extension by interested parties. The mind-map is presented as an alternative to a conventional literature review that would normally appear in a report such as this one. A brief commentary on the findings of the review has been published on the project blog.⁶
- **A companion report, titled *Open Educational Resources: The value of reuse in higher education***, by David White and Marion Manton,⁷ summarising the key findings and recommendations of the project in a format more appropriate for non-academic readers. This report presents the evidence on which that document is based.

⁵ <http://www.mindmeister.com/76726554/oer-use-reuse-landscape>.

⁶ <http://oerblog.conted.ox.ac.uk/?p=32>.

⁷ Available at <http://www.jisc.ac.uk/whatwedo/programmes/elearning/oer2/oerimpact>.

2. METHODOLOGY

2.1 Research questions

The research questions were derived from the aims of the project outlined in the Introduction. The two over-arching research questions were:

- I. What benefits can OER offer to educators and learners in HE in the UK?
- II. What are the pedagogic, attitudinal, logistical and strategic factors conducive to uptake and sustained practice in the use of OER; conversely, what are the impediments?

In order to address such broad issues, we formulated the following eight sub-questions, which then guided the design and implementation of our empirical work:

1. What are the triggers/drivers that prompt an institution to adopt a strategy for the use of OER in teaching and learning?
 - Are there differences according to the overall teaching approach: e.g. research-led or community-of-practice?
2. What evidence is there which could point towards models for engagement with, and uptake of, OER by individuals and course teams: for example, workshops, one-to-one consultations with a learning technologist or staff developer)?
3. What are teachers' preferred ways to incorporate OER into their students' learning:
 - Fully embedded into their teaching (i.e. as part of their personal style/approach?) versus offered as supplementary materials for students to study or explore at will?
 - Which levels of granularity of OER tend to be selected for these different contexts?
 - Is there a distinction in the kinds of topics selected (e.g. skills vs content) and/or specificity to a domain (i.e. domain-specific vs generic)?
4. Is there a relationship between an individual teacher's values and beliefs about teaching and learning and their disposition towards OER?
 - For example, is there a relationship between receptivity to OER and openness to innovation and creativity in one's teaching in general?
5. What is the importance of provenance? For example:
 - Are OER from the home institution preferred to those from elsewhere?
 - Are assumptions made between the reputation of the originating institution and quality of the OER it releases or are recommendations from peers the most significant factor?
 - Are there preferences for OER from one type of institution (e.g. research-intensive, post-1992) over another type, and do these relate to the type of the re-using institution?
 - What evidence is there of emergent formal and informal communities for sharing resources within and/or across institutions, and what are the drivers behind their formation?

In relation to learners, we set ourselves three questions:

6. To what extent are learners aware that a learning resource is an OER?
 - Do learners need to have the concept of an OER?
7. What is the importance of provenance, particularly where learners are independently supplementing their formal studies and/or choose to include OER (or references to OER) in formal coursework?

8. Is there a relationship between their beliefs and expectations regarding their learning and their disposition towards OER, in both their teacher-facilitated and their independent learning?

These questions were initially formulated at the start of the project and were subsequently refined in light of the literature review conducted by Joanna Wild and Liz Masterman. This is their final form.

2.2 Research design

In keeping with the exploratory nature of the study, we collected primarily rich, in-depth qualitative data from a small number of participants in order to understand the benefits and issues rather than to attempt empirical generalisations (cf. Hammersley & Gomm, 2000). These data were gathered using three principal methods: interviews, workshops and focus groups. A limited amount of quantitative data was also collected in connection with the workshops: ‘profiling’ information from a preliminary online survey, and the outcomes of ‘hands-on’ activities. Our approach is therefore more properly described as a ‘mixed methods’ one (Tashakkori & Teddlie, 1998).

Table 2.1 shows the composition of the project in terms of research questions addressed, methods, nature of data collected and participants.

Table 2.1 Operationalisation of the mixed-methods strategy adopted in the OER Impact Study

<i>Research questions:</i>	<i>Method:</i>	<i>Type of data:</i>	<i>Participants:</i>
1, 2	Interview and focus groups	Qual	‘Strategists’: those responsible for implementing an institutional OER strategy
3, 4, 5	Interviews and focus group	Qual	Teaching staff who were already using OER in their courses
3 (4, 5)	Online survey + workshops	Qual + quant	Teaching staff who had not yet used OER in their courses
6, 7, 8	Focus groups	Qual	Students

2.2 Participants and ethical considerations

Interviewees were recruited using purposive sampling through a ‘friend of a friend’ approach. To identify teaching staff, we started with known contacts in projects funded by JISC to create OER and enquired whether they knew teaching staff who were not directly involved in these projects but who were known to reuse OER in their teaching. This was because we wanted to minimise the effect on our findings of involvement in funded initiatives explicitly intended to promote OER. In the event, however, it proved difficult to identify more than a few such individuals, and at least three of the teachers interviewed had been involved in these pre-existing projects.

The ‘strategists’ were largely support staff in strategic roles, responsible for embedding and disseminating new practice within their universities. They too tended to be involved in the JISC OER creation projects; however, we did not consider this to be a problem in relation to our study.

For the workshops, we aimed to recruit lecturers studying on formal professional development (postgraduate certificate in HE) programmes, on the assumption that these would be a promising source of teachers who a) were OER ‘novices’ and b) would be likely to have given some thought to their teaching practice. However, we subsequently widened our search, again using a ‘friend of a friend’ approach.

The student focus groups were assembled by teaching staff at three of the universities.

The study received approval from the University of Oxford's Ethics Committee. The interviewees and focus group members signed consent forms, while the workshop participants indicated their consent in the preliminary survey that they completed in advance. The workshop participants also received an honorarium of £100 (plus travel expenses) in recognition of the time taken from their normal work.

2.3 Data collection and analysis

2.4.1 Interviews and focus groups with strategists and teaching staff

A series of interviews and focus groups was conducted with strategists and teaching staff between mid-February and mid-May 2011, and was intended, *inter alia*, to capture narratives of OER usage that was already embedded in lecturers' practice. The interviews were 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).

Our original intention was to conduct solely one-to-one interviews; however, in some instances where we had made an appointment to interview one person, their institutions offered additional participants, and so with no additional time available to interview these people separately, we conducted focus groups instead. Each interview or focus group was conducted by a single researcher.

To collect demographic information, the meetings with teaching staff were prefaced with a set of questions identical to those asked in the online survey of workshop participants.

The questions used in the interviews and focus groups are reproduced in Appendix A (strategists) and Appendix B (teaching staff).

2.4.2 Preliminary survey and workshops

In addition to gathering lecturers' self-reports of OER use, we also wanted to explore *in vivo* the pedagogic and logistical issues associated with discovering and evaluating OER for incorporation into learning designs, and to capture the reactions of lecturers as they encountered OER for the first time: i.e. as a counterbalance to the accounts of experienced practice. Modelling our approach on similar workshops run in the Learning Design Tools and Phoebe projects (Masterman, 2006; 2008), we held two workshops in March and April 2011. We asked participants to search for, evaluate and incorporate OER into a learning design for a forthcoming learning session or into one of their existing learning designs.

Before attending the workshop, participants completed an online survey administered in the SurveyMonkey tool.⁸ This collected demographic data, as well as data about their general experience using IT in their personal lives, research and teaching; their perspectives on the reuse and sharing of teaching and learning materials; and their existing awareness of OER. In addition to questions devised specifically for this study, we used survey questions from our previous projects, including Learning Design Tools, the Learning Design Support Environment⁹ and Sharing and Reuse of Learning Designs for English Studies (Lucas et al., 2006). In this way, the data would also contribute to a comprehensive longitudinal picture, both of sharing and reuse and of lecturers' learning design practice. The survey questions are reproduced in Appendix C.

Table 2.2 presents the format of the workshop, together with the data collection instruments and the appendices of this report in which they are reproduced.

⁸ <http://www.surveymonkey.com>

⁹ <http://www.ldse.org.uk>

Table 2.2 Format of the OER workshop

Activity:	Duration:	Data collection instruments:	Appendix:
Introduction to the workshop by research team	30 mins.	N/A	
Overview of suggested OER sites by researcher	10 mins.	N/A	D (list of sites)
Practical activity: searching for, discovering and evaluating OER for use in a specific learning design	1 hr. 30 mins.	Log sheets on which to record each search One-to-one 5-minute interviews with a researcher conducted during the activity	E (example of template) F (interview questions)
Post-activity review questions	10 mins.	Online survey administered via SurveyMonkey	G (questions)
Focus groups	40 mins.	Focus groups moderated by 2 researchers (2 groups per workshop)	H (questions)
Wrap-up	10 mins.	N/A	

2.4.3 Focus groups with students

Focus groups were conducted in order to elicit learners' perspectives on OER. These were organised for us by teaching staff at three of the participating institutions and were each facilitated by one researcher. The questions devised for the focus groups are reproduced in Appendix I.

2.4.4 Data analysis

All interviews and focus groups, including those during the workshops, were audio-recorded and transcribed professionally.

The qualitative data were analysed in two phases. First, the transcripts and online survey data (imported into spreadsheets) were reviewed for emergent themes. Three members of the research team each took responsibility for a number of transcripts; the fourth reviewed the data from the workshops and student focus groups. Themes were initially based on the research questions, but were revised (where mismatches occurred) and extended (where new, unexpected ones were encountered) as we progressed. The team then met to collate the themes and compile, and refine, a list of categories.

In the second phase, one researcher coded the data from interviews with strategists and lecturers, and another coded the data from the workshops and student focus groups. Any additional variations from the list of categories were discussed and agreed on.

The quantitative data from the preliminary survey and from the log sheets completed during the practical activity were imported into a spreadsheet for aggregation and analysis by one team member. A second team member subsequently checked all the URLs cited in participants' completed log sheets in order to determine which ones were *bona fide* open resources.

3. FINDINGS (I): PERSPECTIVES OF OER STRATEGISTS

3.1 Participants in interviews and focus groups with strategists

In this part of the report we present the findings from our interviews with strategists: that is, members of staff who have responsibility, in whole or in part, for implementing an institutional OER strategy. In order to address our research sub-questions 1 and 2, we met with a total of 10 strategists in four universities, individually and in groups, as shown in Table 3.1.

Table 3.1 Demographic data for the OER strategists contributing to the study

Uni code:	Characteristics of university	No. of strategists in group:	Participant code:	Role(s):
R	Research-intensive	3	SR01	Open learning support officer and project manager
			SR02	e-learning strategist
			SR03	Head of learning technology unit
T	Research-intensive	2	ST01	Learning technologist
			ST02	Senior learning designer
A	Art and design	4	SA01	OER project manager
			SA02	OER project manager
			SA03	Educational developer
			SA04	Researcher, OER project coordinator
Y	Open and distance learning (ODL)	1	SY01	Associate Dean

3.2 Institutional strategies for using OER

Our interviews with the strategists revealed that OER use is not embedded into any official policy documents, and that generally UK universities are still in the early stage of exploring the field and figuring out what place OER might take in their teaching and learning strategies:

At this stage we're trying to bottom out all of the benefits, potential benefits for us. And we're on a journey and [...] we're still trying to find out where all the different benefits are. And I think over time we will have far more focus in different areas. (SR03)

There are, however, grass-roots attempts to bring OER use closer to the universities' policy makers: for example, through consultation processes and contacts at senior level, or by trying to make OER sharing and use a part of the accreditation process for new courses:

When there was a recent consultation across the University about the new update to our learning and teaching strategy, we all, sort of, encouraged each other to put pro-OER suggestions on there such as: 'Boy, wouldn't it be great if there was some incentive or reward for academics in using OER as well as producing OER?' So, I know for a fact that a couple of those comments have gone into this consultation and I truly hope that that really does get discussed at the highest level because that's a document that ought to be produced. (ST01)

Again, policy-wise, and this is another thing that's floating around in our heads that some institutions do already, that part of the [accreditation] process is, before you ask for money for developing content, you have to prove that there isn't any open content that's valuable. (SA01)

However, the strategists from university A also admitted that attracting the attention of the university's middle and senior management staff to all the OER grass-roots initiatives is not an easy task:

Interviewer:

So, it seems to me, in terms of sharing, production, reuse, growing from the grass roots has been very successful, but the institution finds it difficult to recognise that.

SA01: I think so, and I think that the reason for that is like in many institutions, middle or up senior management are often not that in touch with what's going on, they're all busy with stuff that they've got to do [...] So, we've come up with a very simple concept, which was well established, is that we use existing communities of practice.

In university R, reuse of home-developed materials is highly recommended and pushed forward, mainly due to the perceived cost efficiencies that can be made when reusing the same programmes and modules within the university's satellite campuses.

University Y, in particular, seems to be more advanced in its strategic thinking about the use of OER coming from outside the university. This is an open and distance learning institution with a previous history of copyright clearance and embedding third-party materials into its teaching resources, as SY01 told us:

I think in my work, in university, we're now [...] looking at ways modules can be put together for students, drawing on as many external resources as possible, many of which will have, sort of, open access of a type.

He also reported on the faculty's attempts to create an open pedagogical framework that would provide a skeleton for reusing and learning with OER:

One of the things we're looking at is, can we create a, sort of, skeleton course, certainly at graduate level... could there be a, sort of, structure created, a set of learning outcomes very clearly articulated, some assessment devices and points; but actually the rest of the content, it's absolutely clear that students are expected to find it, and share it, and collaborate over it. So is there a sort of much more open architecture approach? [...] You're selling the framework, the assessment, and tutor support, but not necessarily creating the content in the way that we might have done in the past.

SY01 also reported that one of the main drivers behind sharing and reuse in the domain he represents is the scarcity of training resources in the whole sector and the possibility to change the status quo by joint efforts:

It's a, sort of, fairly poor sector in terms of provision of training resources, updating resources. And, I guess, one of the rationales was probably, you know, we need some sort of central facility for producing high quality resources that can be shared across the sector. (SY01)

In general, despite our best endeavours, the discussions with strategists kept reverting to issues related to OER sharing rather than reuse. However, what seems to have changed in institutional approaches to sharing in the last couple of years is the recognition that specifying the audience and understanding demand side should precede, and inform, OER production:

The first thing you'd do is say 'who's your market'? There we are, we don't know whether it's our own students, whether it's external students, prospective students, staff, our own institution. So, trying to understand those things might support reuse a little bit. It's what we're aiming at (SR01).

3.3 Promoting lecturers' engagement with OER

All of the institutions included in our study are undertaking initiatives to promote academics' engagement with OER, in terms of both production and use. We identified five distinct techniques, which we describe in the next few sections.

3.3.1 Embedding OER in the professional development of early-career lecturers

In university R OER have been successfully embedded in the postgraduate certificate in Higher Education (PGCHE) as an optional module focusing on, *inter alia*, introducing teachers to the idea of open licensing, directing them to the relevant repositories and discussing issues associated with attribution.

We've got a mirror workshop on the PGCHE [...] So, new lecturers joining the University can choose to come on that module [...] We take them through institutional repositories, subject repositories, search engines, MIT, how to build OER, licensing issues. So, everything that surrounds creation and reuse [of] OER, as well as talks to support that. (SR01)

A strategist from university T was also seeking to include in their postgraduate certificate a means to plant the seed of openness at the start of teachers' professional careers:

I'll tell you what I think the University should do – formalise all these things up to a consultation in the form of a policy document [...] This one is tricky and will take time [...] but what is not difficult is to introduce openness as a philosophy in the postgraduate certificate in Higher Education, which is something I'm discussing with its academic lead [...] that would foster the openness agenda right from the start in a contextualised, safe manner, right from the start in the University. (ST02)

3.3.2 Embedding OER in curriculum design initiatives

Strategists from university T reported on their initiative to engage academic staff with OER by bringing it closer to the module and course design teams at the university. They cited an example of an institution-wide professional development initiative to support use of media in teaching and learning. Within this initiative they were organising two-day workshops for course teams in which, *inter alia*, they made teachers aware of OER, help them to find useful materials and incorporate them into their modules or courses:

We are doing other things to encourage openness and to encourage inclusion of OERs both as part of our courses and inclusion of OERs for others to include in their courses. The [name of the initiative] is an instrument that does that every day. Our [name of the workshop] workshops do that all the time. We give incentives to people, not in the form of chocolates and things, but we give evidence and we show what can be done with what amount of effort to enhance a certain part of a programme by using OERs, and we do that as part of our systematic [name of the workshop] workshops [IS02].

The strategists from this university also believed that teachers' reluctance to share their own materials can be overcome by first showing the benefits of reuse, especially to less experienced teachers:

They've got to be happy with what they've done before they are in a position to share it. So, it's easy in the case of [experienced] course teams [...], they design for openness already and they know that's going to be the case. But for fresh ones, and we do get lots of fresh ones, the anxiety levels are high and the 'Will this work?'- type questions are high. It is not yet appropriate to force them to share, so we don't even ask them, if the situation is not right. So, we use what others have produced and then, maybe, a few weeks or a few months later we [say to them]: 'You also have this and this and this, you benefited from that, maybe you want to contribute?'. (ST02)

3.3.3 Promoting subject-specific use through customised workshops

The strategists in university R reported on initial attempts to bring OER closer to users by going out to individual schools (faculties) and offering customised workshops:

And that's the future of these workshops really, where the next stage is for us to go to schools and say: 'Right, we want to come and talk to you about what your reuse needs are and sorts of resources you want to find, and lets help you understand how you might do that'. And I think that doing it for [name of the school], you'll maybe prove [addressing her colleague] that that's the way to go, to make it subject specific reuse. Which I think is different across the schools. (SR01)

3.3.4 Online communities of practice associated with repositories

Strategists in university A were also trying to increase academic engagement by building a social network associated with the institutional OER repository:

We've come up with this phrase, the eco system for the open environment, and we've done a paper on it and we've got a diagram for it. So you've got your repository but you've also got... the repository isn't going to be enough, so you're going to need a presentation layer, and you're going to need a social layer. The repository is a file store, it's rubbish at presentation, so all the leading open education resource projects, MIT, MERLOT, Open Learn, they don't use repositories, they use content management systems. So, that's one thing, and we've learnt from them. And, also, those outfits are now saying that we need a social layer; it's not enough to have just your content and just to present it (SA01)

A similar initiative is in place at university Y, where the OER repository is at the same time a place for networking and feedback.

3.3.5 Individual mentoring

Finally, a simple yet effective tactic to raise engagement with OER was for early adopters to spread the word by literally knocking on teachers' doors:

We're using the concept of fieldworkers where the people who work for the [OER] Project actually go out and work with people, so, in the field, so to speak. (SA01)

3.4 Promoting learners' engagement with OER

Turning to promoting students' engagement with OER within their formal studies, there appear to be fewer initiatives. However, the strategist from university Y believed that modelling how OER are used within a coherent pedagogical framework is one possible step towards equipping learners with the skill of searching and using OER in their professional lives outside the formal education system:

I think one of the things is equipping our students for lifelong learning, that's still the concept [...] and to select and make use of resources that are out there in a, kind of... within a, sort of, purposeful framework of learning, you know, so after experiencing that in a number of modules, hopefully they will, kind of, be able to continue to do that, to keep themselves up to date. (SY01)

4. FINDINGS (II): PERSPECTIVES OF TEACHING STAFF EXPERIENCED IN OER USE

4.1 Participants in interviews and focus groups with teaching staff

The interviews and focus groups with teaching staff who had accrued a measure of experience in the use of OER were intended to address our research sub-questions 3, 4 and 5. In all, we spoke with nine individuals in a range of universities, as listed in Table 4.1.

Table 4.1. Demographic data for experienced users of OER

<i>Participant code:</i>	<i>Characteristics of university:</i>	<i>Role(s):</i>	<i>Subject(s) taught:</i>	<i>No. of years teaching in HE:</i>
Interviewees:				
IT01	Post-1992	Lecturer	Biology and Introductory Statistics	20
IT02	Open and distance learning (ODL)	Learning technologist	Health and social care	30
IT03	Post-1992	Teaching (UG & PG), Staff development, Programme approval/QA, Learning technologist	Cross-curricular, critical thinking skills	16
IT04	Research-intensive	Teaching (UG & PG), PhD supervision, Course director, Learning technologist	Engineering	17
IT05	Research-intensive	Teaching (UG & PG), Course director, Programme approval/QA	Genetics	Not stated
IT06	Post-1992	Teaching (UG & PG), PhD supervision, Learning technologist	Biomedical science, research methods, evidence-based medicine	8
Focus group members:				
FT01	Art & design	Teaching (UG), Learning technologist	Art & design	7
FT02	Art & design	Learning technologist (formerly teacher)	Photography, film, animation	10+
FT03	Art & design	Teaching (PG), Staff development, Course director, Learning technologist,	Educational theory; learning & teaching	5

Notes:

UG = undergraduate students

PG = postgraduate students

4.2 Teachers' conception(s) of OER

Most of our interviewees conceived of OER in terms of freely available materials that they can reuse, adapt and incorporate into their teaching because it has been liberated from traditional copyright constraints:

Something that's available to be taken, reused, repurposed and repackaged and put together in a way that suits the person who's reusing the educational resource. So there's no copyright issues, there's no worries; it's freely available. (IT03)

I'd probably say a resource that someone has created that they don't mind what you do with. (FT03)

Teachers also emphasised that OER is a two-way process that involves both sharing and reuse. FT01 and FT02, from the same institution, went even further and highlighted the difference between open publishing and OER, where the latter is understood as being the catalyst for a constant dialogue directed towards the improvement of a particular resource:

From my point of view it's something where practitioners and support staff can put materials to be shared and distributed and put forward in a way that then allows feedback to come, so it's a two-way process; it isn't a single, as you were saying [addressing his colleague], like publishing, it's something where you can go and get feedback, you can then look to improve it. Hopefully also find other similar resources that exist, again if you've got students you can then show them other opportunities, other processes, other approaches that exist within this that are showcased in this resource. (FT02)

They also referred to the concept of 'organised OER' in terms of 'a pot where I can just pull out some stuff that I know I can use, put together my own little learning package made up of 10 or 15 different items' (FT01) in which 'we can stream things together and organise them. I could go in as a person and maybe reorganise them into some logical grouping that I would find useful' (FT02).

IT01 and IT05 equated OER with 'free materials on the Web'. They were, crucially, unaware of Creative Commons (CC) licensing.¹⁰ When asked whether he adapts resources that he finds, IT05 explained that he would not, because: 'there is an issue of "Are you treading on other people's toes?" You shouldn't really be doing it in a sense, because it's someone else's intellectual property'. However, when introduced to the idea of licensing, he admitted that 'I'd feel much more relaxed then, about messing...potentially messing with it, if it really did come overtly with an open licence'.

Interestingly, unlike our other interviewees, IT01 and IT05 had no 'OER past': that is, they were neither involved in any of the publicly funded OER projects, nor did they participate in OER awareness-raising events.

4.3 The relationship between teachers' values and beliefs and their use of OER

4.3.1 Attitude to sharing and reuse in the pre-OER era

All of our interviewees were sharing and reusing materials within their home institutions long before the emergence of OER as a phenomenon, either informally with colleagues in the same subject area or formally through team-teaching or working in course teams. Factors such as team teaching (IT01, IT04), team projects (IT03), 'collaborative feel' of the working environment (IT06) and openness built into institutional culture (IT02) seem to be especially conducive to sharing and reuse of teaching materials:

¹⁰ <http://www.creativecommons.org>.

Locally within our small subject groups we naturally have always done that [...] I think everyone in the university does this local sharing with colleagues, emailing things around: 'Have you seen this resource? Use this presentation'. So I think, you know, if the subject was relevant, I think people would share freely, and readily, within [name of the institution]. I can't answer for other institutions I've been in, where there hasn't been that collaborative feel, but [name of the institution] got a lovely open working environment. (IT06)

IT02 and IT06 were also sharing and reusing materials more broadly. They named copyright clearance and difficulty in finding good materials as major limitations in the pre-OER era; however, they also made it clear that the problem of reaching critical mass of OER has not yet been solved:

I think it would be ludicrous to think that high quality content for many of the topic areas wasn't readily available [...] Probably not as much OER as we might have imagined, by now. I think, you know, three or four years ago we would have expected there to be an increasing amount that was available in that way; I don't think that has happened. So, we're tending to be clearing rights on quite a lot of material still. (IT02)

IT03 was initially very reluctant to share and reuse outside her home institution: 'I was very "old school" about that. It, sort of, you know, copyright and it's mine [...] so we were sharing [resources] in that context: it's free in-house and everybody else pays.' However, her approach changed dramatically after she became involved in one of the early OER projects:

I realised that that was, sort of, history and that's not... it's actually the knowledge of how to repurpose and the knowledge of helping. It's the knowledge that's more important than the actual object itself. Because nothing's going to be that special that they, people, can't go somewhere else and get it somewhere else.

4.3.2 Beliefs about their role as a teacher

Most interviewees felt that a crucial part of their role as teachers is to empower students to become self-directed, critical and confident lifelong learners who, once outside formal education, will be able to update their knowledge and learn new skills independently, selecting and drawing from all sorts of materials they can freely access and use. As you should 'practise what you preach', so they see use of OER as important part of their teaching and a way of modelling a desired practice to their students:

Ideally, I suppose we could argue that we need to be empowering students to understand that they can do exactly the same thing. If they have a learning problem, a learning issue, they need to find out how to use Harvard referencing or how to make your own Steadicam armature then they can just find these things through Google. I'm sure they know this on one level but it's a question of whether that's OK. If they see us doing it, then [they'll know, it's OK]. (FT03)

Teachers appreciated the variety of educational resources available on the web as a source of alternative practices, processes, and approaches upon which they can draw, and to which they can direct their students. They tend to see themselves as mediators and facilitators of students' learning rather than as experts in the domain and owners of content:

In a sense, increasingly, we're just a conduit, I think. We're making other people's work palatable to our students. And that's always been the case, text books [are] just a hard copy of a OER in many ways. (IT01)

The skill is teaching our learners and our academics, but in different ways, how to actually make use of existing materials or cheaply produce something that's quality, that's fit for purpose. (IT03)

IT04, however, believed that through creating most of her teaching materials, especially those relating to concepts, she comes to understand how best to present and explain those concepts to her students:

I wouldn't want to stand up in front of students, if I didn't have an expertise level, if I didn't have a real understanding. If I was just reusing somebody else's material, that would imply that

I hadn't really engaged, probably for me that's what it would feel like [...] So, if it's relating to how you use a piece of software and things, then that's a mechanistic process, so to me that would be fine to pull something from somebody else, if it was credited, and reuse that. If I was trying to explain a concept to somebody, an engineering concept [...] then I would need to think how to present that. And if I used somebody else's material in total, I probably wouldn't have thought through how I would explain it to the students. (IT04)

For IT04 the main value of OER lies in allowing her to account for different learning styles – to present the same content in different media.

4.3.3 Perceived impact of OER on teachers' identity and sense of ownership

When asked to comment about the possible impact of using OER on their sense of authenticity and professional reputation most interviewees did not have an immediate answer:

Interviewer:

What do you think OER does for your professional reputation, if anything?

IT03: I don't know. I haven't a clue. I haven't a clue. I'm sorry because I, sort of, don't care [...] If you asked me how it's affecting my student experience, you'd have my full attention.

IT01 felt that reusing other people's materials made him seem 'a bit more enthusiastic' in the eyes of others, in that 'It shows that I've been hunting around for things, for titbits, rather than just delivering the same old chapter summaries, year in, year out.'

Yet FT03 would like to believe that people's perceptions of what accounts for good teaching has been gradually changing:

I think it is a very pervasive thing, an expectation that people are going to get content that comes directly from that university. Like anything it takes time to change people's perceptions in that way but it will change. If you can give someone a link to a TED lecture that's really, really good and is Ken Robinson speaking for 20 minutes and they're really going to enjoy it, of course they're going to enjoy that more than listening to me for 20 minutes. I think just having that kind of experience on a regular basis shows them that actually it doesn't matter who's actually giving them that experience but that they are getting it and they're being directed to it.

Most interviewees seemed to perceive their role less in authoring all the teaching materials and more in their ability both to design meaningful, engaging learning activities around that content and to guide their students towards becoming self-directed, confident, lifelong learners:

It's one of my few talents is that I know what I want the students to know and I'll try and think up solutions to learning problems and then I start shopping around and seeing well, is there anything that will help me get there. (IT01)

Asked about possible impact of OER on their sense of ownership over the teaching material most teachers admitted that they still own/create most of the materials they use for teaching, with OER being just an extra: 'I would say 80% of what I produce is my own stuff, my own animation drawings, my own research, and, you know, 20% will come from elsewhere, and it will be the icing on the cake' (IT06).

However, it is possible that OER may play a larger role in subjects in which drawing from, discussing and building on the work of others form a crucial part of the learning process:

Interviewer:

How do you use OER in your teaching? Can you give me an example of a success story of an OER you reused?

FT03: Yes, all the time. Just in the last 24 hours I've probably used two or three. I think about an hour ago I posted up a resource, sent a resource out to my students produced by Pepperdine University on writing good action research questions.

There are also differences in the role that OER play in teaching plans. On one hand, some teachers consider OER as an important part of the core teaching content or an attractive supplementary material for their students. On the other hand, a number prefer to create themselves those materials that are conceptually complex, either to understand better how to

teach it to students (IT04), or because they feel they should own their teaching materials in the same way that they own the outputs of their research (IT05):

Writing lectures actually takes a lot of time, and I guess over the years I've thought more and more about restricting access to the actual lecture material – the ideas that go into it, the words that go into it. I'm not talking about the sort of support things like the animations or the diagrams or things, but just the whole structure of the lecture [...] I put, over the years, a huge amount of work into creating that set of lectures, to the extent now that I've been approached by a publisher to write a text book on that. You don't want to give away all your best ideas. (IT05)

When speaking about their colleagues, most interviewees felt that for the vast academic majority the creation of teaching content and ownership over that content constitute an important part – even, the most important part – of their professional identity:

The biggest challenge we are facing is that lecturers see themselves being written out of the picture. And they can't actually see themselves continue. They don't realise that the creation of the materials is one part of the picture and then the supporting... I mean, I do so much work around supporting students' learning, checking learning is occurring... The lecturers haven't made that mind-set shift. So it's not about feeding the information in, it's about checking what's happening with the information once it's in there. And that's... it's a pedagogic shift. (IT03)

4.4 Teachers' experience of using OER

4.4.1 Getting started

For most interviewees it was an immediate pragmatic need that acted as the initial trigger for engaging with OER: they were already on the look for extra resources either individually (IT01, IT03, IT05, IT06) or as part of a more organised activity within their faculty/discipline (IT02). Three teachers we interviewed found out about OER through externally funded OER creation projects: either they personally (IT06, IT03) or somebody else in their university (FT02) was involved in the first strand of the JISC OER Programme. FT03 found out about OER either 'through Twitter or a conference.'

4.4.2 Motivation to look for OER for a specific purpose

Most teachers said that they reported for OER in order to meet a specific need. Only a few also regularly look for resources more broadly, exploring what is available and might be of use in the future.

Reasons for seeking OER in a particular instance may include meeting learners' needs, modelling desired practice, improving learners' experience, avoiding 'reinventing the wheel', and meeting one's own teaching needs.

Meeting learners' needs was by far most often cited motivation to look for a specific OER. More specifically teachers look for materials that might support the following purposes:

- Preparation and reinforcement: 'Really, it's large class sizes and wanting to give students somewhere they could go to prepare for my classes or to reinforce what they'd covered. So I'm always on the look-out for extra learning opportunities, for reinforcement and preparation' (IT01).
- Learning difficult concepts:

Anything that I can identify that I can scavenge from somewhere else that might make my teaching a little bit easier. That really is probably in terms of the concepts that are difficult to get over to students. The things that I like to use for teaching are animations, because animations are fabulous for trying to get over multi step processes to students. And if you can show them animations instead of static pictures, or a series of static illustrations, it's very much better. (IT05)

- Practising specific skills, both generic and discipline-related:

Because I'm teaching a foundation course where people are coming from non-traditional backgrounds, [virtual microscope resource] is a great exercise for them to play around with and build up their confidence before they go into the lab. And it turns out from that group exercise that there really is a lack of confidence, and these little things to ease them into the task are quite useful. (IT01)

OER also provided a way to **model desired practice** to students and empowering them with lifelong learning skills:

Ideally, I suppose we could argue that we need to be empowering students to understand that they can do exactly the same thing. If they have a learning problem, a learning issue, they need to find out how to use Harvard referencing or how to make your own Steadicam armature then they can just find these things through Google. I'm sure they know this on one level but it's a question of whether that's OK. If they see us doing it, then [they'll know, it's OK]. (FT03)

Teachers also noted that using OER helped them to **improve learners' experience**. For example, multimedia resources are valued as a way to make courses richer and more interactive:

Engineers are very visually driven and they're very kinematic learners so I need something for them to hang a concept off. So a lot of the OER I grab off the web is to allow me to explain things in a visual or in an interactive way so that they can interact with things. And the things that I create similarly are to do with allowing them to interact. (IT04)

OER can also enable the teacher to accommodate different learning styles, by presenting the same content in different media:

I deliver a lecture and there are some lectures I know the students have great difficulty getting because I'm dealing with something that the conception is quite difficult [...] So I will create a sub study unit on the VLE which has the same material but presented in a different way [...] and with any luck I am then meeting the auditory, the visual, the tactile, and the kinematic sort of learners. So I do it to widen the style I teach, I guess. (IT04)

Moreover, OER that are fully incorporated into the learning design can ease the process of learning:

We're so aware now of the discomfort that can be caused to students, endlessly, kind of, clicking, and having to move, you know, all over the place [...] that we try to build as much in as possible, so that it feels like a, kind of, smoother journey for the student, and so, some of the material we would actually clear rights to be able to incorporate. (IT02)

'**Not reinventing the wheel**', as opposed to creating resources from scratch was another frequently cited incentive to look for OER:

I'm teaching in a discipline where we're all teaching much the same material, so it makes no sense for somebody to spend 60 hours creating something if they can reuse something. So I don't see any reason why I wouldn't, to be honest. (IT04)

Finally, teachers also search for OER **to meet their own teaching needs**. For example, rich multimedia resources are the most desired type of OER among academics who teach science subjects as they can be difficult and time-consuming to produce:

Part of the reason I use the videos is that it saves me the time of creating them myself [...] I do create visualisations and things but I've only got so much time I can put aside for that. So if I can pick up three visualisations for one I've created it means potentially I'm reaching the students in a deeper way. (IT04)

OER may also prove invaluable when one has to teach a topic outside one's own area of expertise:

I was doing some lectures on nutrition and obesity, and I wanted to cover the genetics, but that's not my area, so I went on and found a module on genetics of obesity, maybe ten pages long, and I think, yes, so I thought that was completely adequate. (IT06)

When designing a course or a programme, IT04 looked for OER to both benchmark her practice and get some inspiration:

Interviewer:

So you'd look at your competitors to see if they had any material you could incorporate into your teaching?

IT04: No, I'd probably look in to see...when you're starting off you look at more what level is appropriate. So I'd be looking at level appropriate sort of to find learning outcomes to make sure that I was creating something that looked equivalent or better. (IT04)

4.4.3 Discoverability and access

Most of our interviewees admitted to using Google to search for materials, especially for videos, images and, to some extent, animations and simulations:

It's like all roads lead to Google. If something's well tagged and well organised then you will find it through Google. (FT03)

So Google is your friend, and you've got to stick in the process for which you want an animation, put the word animation in and see what comes up [...] If I was looking for something new, I would just do another Google search, rather than have an expectation that there was somewhere that I know is good. (IT05)

However, FT01 and FT02 preferred to draw a clear line between searching for educational material on Google and searching for OER:

Yes you can use Google to find anything you want and you can learn anything you want on the Internet, that's pretty clear, but I don't really qualify that as an OER, I'd qualify that as learning online. I'm trying to draw that distinction really I guess even though the two are entwined. (FT01)

Other sites frequently visited as potential sources of OER are university and subject-specific websites, especially for factual material or for material that might serve as inspiration or a benchmark when one is designing a new course:

If I want factual information and content, then I will go to other universities and Jorum. If I want an image to maybe, you know, embellish a point, or to be a bit more artistic, I will just quickly go to Google Images first. (IT06)

[If] I was looking at a program or module [level], I'd probably go out and ask people first [...] And I would probably, at the same time, actually in parallel, hit the web and I would probably look to see what I regarded as the leaders in the areas that we were looking at. So MIT is an obvious leader for engineering. I'd probably look at Imperial, I'd probably look at Cambridge to see what they were doing. I'd probably then look at our competitors as well. (IT04)

Sometimes the material found on these sites does not fall into the category of OER in terms of licensing (cf. the definition on page 1); however, provided that it is clear how the material can be used, teachers may still regard it as OER:

There's stuff that I get from Pepperdine University and from Sheffield Hallam, these are both universities that have a very open and sharing philosophy in terms of the stuff that they produce and in terms of what they let you use, so in that sense you might say that it's an OER. (FT03)

Only two teachers admitted to regularly visiting OER repositories such as Xerte, MIT Open Courseware (IT04) and Jorum (IT06):

IT06: It's my first port of call now, Jorum. I'm on it all the time, looking for stuff, so I wouldn't necessarily know of anywhere else to go...

Interviewer:

What makes it so special? Why you go there, specifically?

IT06: Because of the wide variety of resources on there, so you can get a complete learning package, if you like, from the Open University, or there are images and photographs for

a medical subject, which are really important. So I like the variety. And it's, to me, it's always worked as a piece of technology [...] Perhaps if I'd come across a technical difficulty, I might have had a different attitude, and perhaps not gone back so readily, but to me, touch wood, it works, and, you know, I can find really good stuff in there. (IT06)

Most interviewees already belonged to some kind of 'OER community', which seemed to be an important factor in how they obtain new resources:

Interviewer:

Where do you look for OERs and where do you find them?

IT03: Other projects. That's the first thing I do is I just follow the OER trail

With the teams I work with in my faculty, they will have their ears to the ground all the time, you know, they'll be aware which other organisations are producing resources that they could incorporate. (IT02)

Some teachers act as a gateway for others through circulating useful OER or information on where to find it to their colleagues: for example, 'I tend to tell people around about Xerte. That gets out there because I talk a lot about it (IT04)'; 'any info that comes across my desk goes to where it should go. Any OER or any, you know, things on 'e-', get dispersed across faculty and institution in that way' (IT03).

Others actively engage in improving access to, and discoverability of, OER and other useful teaching resources by creating and contributing to subject-specific repositories. For example, after our interview FT01 was going off to another meeting about setting up a server in order to create a repository of resources for a specific discipline that would initially be just for the university, but would later be made available nationally.

In terms of the volume of good-quality material that they can find on the Web, most interviewees appeared reasonably satisfied. However, they also noted that OER still only comprise a small fraction among these materials and, until a critical mass is reached, copyright clearance and linking will remain the prevalent practice:

I think it would be ludicrous to think that high quality content for many of the topic areas wasn't readily available [...] Probably not as much OER as we might have imagined, by now. I think, you know, three or four years ago we would have expected there to be an increasing amount that was available in that way; I don't think that has happened. So, we're tending to be clearing rights on quite a lot of material still. (IT02)

It's a growing culture now. Well, actually, we can do this. We can share. I can put stuff out there. You know, not every member of staff is aware or doing it, but I would imagine 10% of people are actively doing that now. So I think OER has already changed our approaches. It's not 100% shifted. Perhaps it never will be, but I think it's... for us it's certainly making a huge difference. (IT06)

Two teachers felt that knowing where and how to look for resources was part of the challenge, FT03 telling us that:

I would always rather try and find something that someone else has done and re-purpose that than produce something myself from scratch because there is so much out there and it's just a case of knowing how to search for it.

Time is another key factor limiting how much and what they can find:

I probably don't have the time to go and look for long enough [to be sure that nothing of value is missed]. So I'm fairly happy that the Open Course web link that I've got allows me to find things [...] And if you know where to look then that's half the battle. (IT04)

4.4.4 Selection criteria

From our interviews with teachers we were able to identify four distinct criteria for selecting or rejecting OER: provenance, quality, fitness for purpose and logistical aspects.

Taking **provenance** first, all our interviewees reported using OER both from their home institution and from elsewhere. As we saw in section 4.4.3, Google is often the first port of call for outside materials.

Teachers mainly trust in their own ability to evaluate the the resources they find, however, they warned against the illicit licensing of other people's materials (IT03, IT06) and 'layers' of copyright (IT03):

...it is actually a lot more easy to produce your own stuff than to go and find and, you know, reuse someone else's because suddenly there can be many more layers of copyright than you envisage. You know, I've found images that have been stamped with Creative Commons, and I thought, 'Whoopee,' but when I've looked more into the provenance of these images I've found that actually they've not belonged to the people I thought they'd belonged to anyway, so I think sharing, I think there's a... yes, reusing someone else's I think is a little bit more complex at the moment, and we probably lag behind as an institution exploring all those, you know, complexities. (IT03)

Most teachers admitted to placing more trust in materials coming from universities (e.g. MIT Open Coursework, OpenLearn, Nottingham Nursing School, Manchester University Phrasebank) and other recognised public institutions and repositories (e.g. the Social Care Institute for Education, NASA, Engineering Subject Centre, Cold Spring Harbour Laboratory in US) than in materials originating from other sources, especially when looking for factual information and content (IT04, IT06):

Coming from a British university, for me, is fine. Why do I trust that more than some of the commercial sites? I don't know. That's odd, isn't it? I think the university brings it that stamp of authority and quality, and often it's been peer reviewed. (IT06)

Teachers also try to locate resources they can trust through peer or community recommendation, either by actively asking for specific material (IT04), or by 'following the OER trail' (i.e. the latest developments in the OER projects: IT03).

Teachers named a number of criteria for assessing the **quality** of a particular OER. Academic judgement and benchmarking with their own practice were particularly cited; for example:

Interviewer:

And how do you assess quality when you decide to reuse something?

IT03: Academic judgement and our quality processes and validation and, you know, all these other things plus student feedback actually. Well, I use the students a lot in... what do they like? What do they enjoy? What do they... what motivates them? What do they find useful? Currency... there's so many different things that we're using, you know, that there's so many variables that come in (IT03)

IT02, and also IT03, mentioned institutional quality and validation processes as definitive criteria in accepting or rejecting a resource

We still have a, kind of, quite a rigorous process [in terms of quality check], I suppose. Not only is there a, sort of, team process, normally, so other people are, kind of, reviewing what a particular academic might have pulled together, but then there's an editorial input, and there are critical readers, usually from other institutions, who would say, you know, this is up to standard, or not (IT02).

Students' feedback also seems to play an important role at a point of delivery. For example, IT05 once had to withdraw a resource because it did not allow the students to engage with it in the way originally envisaged.

Visual resources can be evaluated more quickly than textual ones:

I think it might be slightly easier for me, because I tend to go for resources that are visual, so animations, photographs, so you can look and see if it delivers what you want it to do. I have downloaded Open University's – was it Open Learn? – text-based resources, and I think, for me, they take a little bit more time to evaluate. (IT06)

There is also a different threshold for the quality of production and the quality of the science in a media-rich resource. Some teachers reported that they had actually lowered the bar in respect of production quality, in the belief that the emergence of YouTube videos and podcasting have made rough-and-ready media more widespread and acceptable: 'We used to have, sort of, very high standards, probably too high, around some of the audiovisual media [...] Now, you get much more of a mix. So you'll get short clips that are, you know, DIY' (IT02).

High quality of media production, however, may still be important for some. For example, IT06 reported on her attempts to deploy what she felt to be a good quality OER that was relevant to many subjects. However, she encountered criticism from colleagues that the quality of the resource was not good enough:

They might have, just on the surface, not liked the quality of the videoing, or something. And I think this comes out a few times, when we're making resources that staff feel that things have got to be, you know, amazing quality, but actually, students are a lot more lenient in what they expect, you know, because they go on YouTube they're not used, you know, they... the quality doesn't cross their minds, so I think it was more about that.

This quotation also provides evidence of a belief that students are unconcerned about the quality of media, evidence that is contradicted by the following statement from IT04:

I think it's a bit like Marmite, you've got half of the class that don't care what it looks like, they just want to get their answer, and they actually prefer the YouTube look almost, because it fits them all in, then you've got the other half of the class who regard that as being shoddy. (IT04)

In terms of **fitness for purpose**, relevance of content is, unsurprisingly, of great importance to all teachers. More specifically, currency of content (IT03, IT06) and adequacy of information (FT01, FT03) come under particular scrutiny:

I was doing some lectures on nutrition and obesity, and I wanted to cover the genetics, but that's not my area, so I went on and found a module on genetics of obesity, maybe ten pages long, and I think, yes, so I thought that was completely adequate. But my evaluation process was longer, and what I was looking for this time was currency, and I noted some of the references perhaps needed updating, but again, the 99% of the fabric of it was there, but the process was slightly longer, because clearly with science you need to bring things up to date. (IT06)

It depends on what it is. If I think it's clear and it hasn't got too much superfluous information in it that I don't think [students] need that's really the main thing. Does it get across what I wanted to get across and not much else? (FT03)

However, most teachers are ready to compromise: that is, they will accept some imperfections both in terms of the quality of media and the relevance of content as long as i) no alternatives are available and ii) the resource can be 'fixed' with minimal adaptation and/or an appropriate pedagogical wrapper to contextualise it:

You look, you have a look at them and then check it out and say to yourself: 'if I was designing from scratch, is this the way that I would do it?' Sometimes the answer's pretty close to being yes, other times it's not. But a lot of time you just end up saying: 'Well it's close enough and it's better than nothing.' (IT05)

[...] this resource was written in the context of US compulsory schooling rather than higher education action research but it was still very relevant. What I would do is just say: 'Bear in mind that this is written on the context of US compulsory schooling but the ideas in it are still relevant', making it clear to them that they have to find the relevance and to make the connections with their own practice in this resource. (FT03)

Turning to **logistical criteria**, we discovered that most of our interviewees were not only aware of, but also strongly advocated, open licensing:

[CC licence] changes how I bring things in, and I've just been briefing a colleague for a project with bringing in some OER materials [...] I've just said to them 'I don't want anything that we have to licence. It's got to be CC or we're not using it'. Because that just removes all the complexities. (IT03)

However, the CC licence is not necessarily important if a clear statement is provided about how the resource can be used:

There's stuff that I get from Pepperdine University and from Sheffield Hallam, these are both universities that have a very open and sharing philosophy in terms of the stuff that they produce and in terms of what they let you use, so in that sense you might say that it's an OER. (FT03)

Criteria in the category of logistics also include robustness of the host technology and editability of the resources, as demonstrated in these two quotations:

The first year we embedded [materials from a named institution], we did it as a link from their servers. We were using it, their servers crashed. So the week my students had to access their homework material, they couldn't. (IT03).

I probably re-edit most of the stuff that I use, actually [...] If it's a diagram or textual basis very often the language isn't appropriate. Some of the things [...] I might have picked up from a chemistry text where they've used different words than we would use in engineering. So, although they mean the same things, for the students it becomes confusing if I don't use the same vocabulary. (IT04)

4.4.5 Determining the place of OER in a learning design

Most interviewees appeared to use OER both as enhancements to the core teaching material and as supplementary resources for students to access and use in their own time.

When integrating OER into their **core teaching** teachers tend to select small items: predominantly multimedia (i.e. videos, animations, simulations, virtual labs) and occasionally diagrams or textual resources:

I think I'm using, you know, everything I find as a nugget or a grain, and then I'm maybe pulling that into a bigger teaching resource probably, to tie it all together and give it some context. (IT06)

I pick bits, I don't really want to take the whole chunks because I've already got the structure in place. (IT04)

Engineers are very visually driven and they're very kinematic learners so I need something for them to hang a concept off. So a lot of the OER I grab off the web is to allow me to explain things in a visual or in an interactive way so that they can interact with things. (IT04)

The things that I like to use for teaching are animations, because animations are fabulous for trying to get over multi step processes to students. (IT05)

IT06 also integrated what Weller (2010) calls 'big OER' into her learning design, but this was an isolated example:

I was doing some lectures on nutrition and obesity, and I wanted to cover the genetics, but that's not my area, so I went on and found a module on genetics of obesity, maybe ten pages long, and I think, yes, so I thought that was completely adequate.

Most interviewees admitted that OER constitute only a small fraction of all the teaching materials they select for their students; however, IT02 reported that his module teams try to reuse as much external content as possible, with the institutional stamp being rather on the pedagogical framework and the narrative around the resources than on the provenance of the content itself.

When used as **supplementary materials** OER are thought to offer a means for students to practise and reinforce in their own time what they have learned in their course (e.g. IT01, IT03, IT04). They also provide a way to accommodate students' different interests (e.g. FT03) or even different preferences in terms of modes of representation (IT04). Here, in terms of granularity, 'big OER' might also be appropriate:

I started directing my own students to whole open online courses [i.e. MOOCS], which are multimedia based and usually based around RSS feeds. If they're interested in a particular topic then I'll be able to direct them to a particular unit or a particular week of an open online course. (FT03)

It is unclear, however, how students feel about the presence of third-party materials in the curriculum. IT03 encountered criticism from learners when, as part of the core learning material, she provided a link to a resource created by another institution:

When I first brought in materials, I just did links to it [i.e. the university website with the resource]. And the students took me to task and said we were lazy and why were they paying us money, for us to use other people's materials. Which I thought was really weird. And so that's why I now use other people's materials as a secondary source, not as a key OER resource.

Asked to comment on students' likely perceptions of the presence such third-party materials, most teachers could only speculate; for example:

I wouldn't be able to answer what the students felt about that [...] Personally for me, if I signed up to an institution and all the materials had come from elsewhere, I'd ask questions about that, you know, it contradicts the credibility of the institution, really, doesn't it? And the credibility of the lecturers who can't produce their own materials. So, I think that's a really interesting area. I've had no feedback from them 'Oh, why are you using external materials?' You know, they're not questioning it. I wonder if they would question, a whole series of lectures that had come from another place. I think they would question it. (IT06)

I guess I would assume that they would expect us to be the authors of much of anything we gave them, to be honest. But I don't have any... I've never actually asked them so that's just my perception of what they would expect. (IT04)

Yet others believe that educating learners in the benefits of openness is one of their roles as educators:

I think it is a very pervasive thing, an expectation that people are going to get content that comes directly from that university. Like anything it takes time to change people's perceptions in that way but it will change. If you can give someone a link to a TED lecture that's really, really good and is Ken Robinson speaking for 20 minutes and they're really going to enjoy it, of course they're going to enjoy that more than listening to me for 20 minutes. I think just having that kind of experience on a regular basis shows them that actually it doesn't matter who's actually giving them that experience but that they are getting it and they're being directed to it. I'd like to think that anyway. (FT03)

I think we've already, sort of, if you like, educated our students to expect that there'll be a lot of third-party material being drawn on, and I think that's OK, as long as... it's the balance. (IT02)

4.4.6 Ready to use OER

Some types of OER, such as videos, simulations, animations, and virtual labs can be used mainly 'as is' – that is, without adaptation – provided that they convey the message and are perceived to be a good fit for purpose:

If I find an animation I don't think it would cross my mind to try and get the original files to adapt that, not just yet. I haven't felt the need to do that. (IT06)

[Editing a video] would take too long. If there is a 15 minute video and I want them to look at the last 4 minutes I'll say: 'just look at the last four minutes' [...] which would be much, much quicker and have the same impact. (FT03)

All our interviewees, however, tended to make some kind of adaptation to more text-based materials. Reasons for doing so included:

- keeping content and references up to date:
I noted some of the references perhaps needed updating, but again, the 99% of the fabric of it was there, but the process was slightly longer, because clearly with science you need to bring things up to date. [...] So it was a slight modification that was required. (IT06)
- accommodating discipline-related differences in vocabulary:
...if it's a diagram or textual basis very often the language isn't appropriate. Some of the things [...] I might have picked up from a chemistry text where they've used different words than we would use in engineering. So although they mean the same things, for the students it becomes confusing if I don't use the same vocabulary. (IT04)
- bringing materials into line with accessibility standards: 'some modifications work that we do is because we just have quite high standards around accessibility' (IT02);
- removing superfluous information (FT03);
- embedding the material into first-year students' learning experience (IT03).

For some teachers merely linking to the website where an OER is stored is not enough, especially if the OER forms part of their core teaching material or, as we have seen, the host technology cannot be relied upon. They would prefer to copy, or download the material into their own storage in order to give their learners a coherent and smooth learning experience, which is why a clear statement of copyright is required:

Quite a lot of it is linked to, but again, we're so aware now of the discomfort that can be caused to students, endlessly, kind of, clicking, and having to move, you know, all over the place [...] that we try to build as much in as possible, so that it feels like a, kind of, smoother journey for the student, and so, some of the material we would actually clear rights to be able to incorporate. (IT02)

A link, a link to me is the same as giving somebody a textbook and saying, you know, browse the textbook. (IT03)

Others remain happy to link to the external material but, at the same time, will provide a 'pedagogical wrapper' to contextualise it and advise the students how to approach it:

...this resource was written in the context of US compulsory schooling rather than higher education action research but it was still very relevant. What I would do is just say: 'Bear in mind that this is written on the context of US compulsory schooling but the ideas in it are still relevant', making it clear to them that they have to find the relevance and to make the connections with their own practice in this resource. (FT03)

One of the approaches that I use for teaching, I will pull together something almost like a study guide, in Microsoft Office, so in a Word document. So that guide will have learning objectives, it will have links to videos and resources, and it will have passages of text, so what I did with the genetics from the Open University is incorporate that into the study guide, of course attributing them, and giving the link back to the full module. (IT06)

4.5 Teachers' perceptions of the overall value of OER

4.5.1 Enhancing students' learning

As we saw in section 4.4.2, enhancing students' learning is one of the main motivations for using OER in the first place. In summary, the main value of OER in this respect lies in providing opportunities for:

- supplementary learning outside the classroom;
- preparation, practising, reinforcement and revision of skills;

- alternative presentation of content to address students' interests and preferences.

Two teachers in particular emphasised the role of OER in introducing their students to a bigger picture of the UK Higher Education and opening them up to other opportunities and approaches that exist; for example: 'it gives them a better sense of what the whole of the UK education system is like. You know, where does the research come from? Where does the information come from?' (IT06).

4.5.2 Enhancing teaching practice

Most of our interviewees believe that OER enhances what they are able to do in the time available to them. This seems to be especially true for rich media OER such as videos, animations and simulations: that is, resources that teachers lack either the skills or the time to produce themselves. This type of OER is often perceived to help teachers to visualise complex concepts and processes: 'Animations are fabulous for trying to get over multi step processes to students. And if you can show them animations instead of static pictures, or a series of static illustrations, it's very much better' (IT05).

IT03 felt that reusing OER had had a transformational value in freeing her to give time to students who are falling behind:

The impact on my teaching is that it's helped enormously, all right. So in terms of helping the student and helping my workload in terms of the student experience, it's allowed for very positive things to come out. I've got longer to deal with the ones that are falling behind. (IT03)

IT06 highlighted the value of OER as a source of inspiration and creativity: 'I think what's been lovely about it is... well, it is that creativity and getting ideas and inspiration from someone else, isn't it? [...] Yes, I think it is a great source of ideas and imagination, certainly, yes.'

The value of OER for benchmarking one's practice, especially when designing a new course or a programme, was highlighted by IT04:

I would probably look to see what I regarded as the leaders in the areas that we were looking at. So MIT is an obvious leader for engineering. I'd probably look at Imperial, I'd probably look at Cambridge to see what they were doing. (IT04)

4.5.4 Impact on productivity

The impact of using OER on teachers' productivity appears to depend on the type of the resource, its granularity, and the pedagogical intention underlying its use. For example, finding, evaluating and contextualising videos or animations can save substantial time in comparison with creating this kind of media from scratch:

It allows me to do things I might not be able to do in terms of... I do create visualisations and things but I've only got so much time I can put aside for that. So if I can pick up three visualisations for one I have created it means potentially I'm reaching the students in a deeper way [...] So for me it means I can probably do...I'm probably not spending any less time than I would be but I can make it more effective. (IT04)

However, when it comes to using more text-based media the impact on the teachers' workload can be negative:

In terms of impacting my workload, it's had a very negative effect because it's a huge job to prepare the material well [i.e. building the proper scaffolding around it, fully integrate it into the students' learning experience] [...] you know, there is nothing left of you, if you're into doing materials properly. (IT03)

IT06 reported that OER may save her some time in the long term – that is, when she has reused the same material over two or three years – but it is 'certainly not a short term time saver, because, you know, you do have to spend finding stuff, evaluating it, maybe correcting it, and getting it into the shape that you want.'

4.5.4 OER as a catalyst for changes in teaching practice

Our interviewees generally recognised the potential value of OER in transforming teaching practice, especially in avoiding duplicated effort, accommodating the new economic realities of HE and supporting non-traditional learners:

It's a growing culture now. Well, actually, we can do this. We can share. I can put stuff out there. You know, not every member of staff is aware or doing it, but I would imagine 10% of people are actively doing that now. So I think OER has already changed our approaches. It's not 100% shifted. Perhaps it never will be, but I think it's... for us it's certainly making a huge difference. In the quality of the resources we can find, you know, why reinvent the wheel, when there's great stuff out there already? (IT06)

Potentially it [i.e. OER] can be transformational. I think it can change how we support students. I think it can change the student experience for those that won't be able to afford the high level fees that are going to be charged [...], students who are working [...]. They're coming from different cultural bases. There's a different cultural capital base, there's a different economic base, there's a different social stratification base. All of those issues can be addressed in the design of OER materials. (IT03)

Finally, IT06 highlighted the value of OER for networking and collaboration across institutions:

You know, someone in Canada, he animates his intercell biology. He's been a tremendous find through these OER projects that we can collaborate on, and evaluate resources [...] (IT06)

5. FINDINGS (III): THE PROCESS OF SEARCH, DISCOVERY AND EVALUATION

5.1 Introduction to this section

In this section we report on empirical work with lecturers that was intended to uncover the reality of searching for, discovering and evaluating OER, a process that is difficult to capture in the field. By involving university teachers who had not previously sought out OER to incorporate into their teaching, we hoped to gain an additional insight into the issues facing OER 'novices' and, thereby, a sense of what might be needed to help them move towards the thinking and behaviour of the OER 'experts' reported in section 4. The principal research sub-question addressed in this work was 3, although we expected to elicit some data relevant to 4 and 5.

5.2 Workshop participants

As outlined in section 2.4.2, we conducted two workshops, preceded by an online survey in which we collected demographic data about the prospective participants, in addition to data relating to their experience of IT and aspects of their practice. A total of 26 teachers responded to the survey, of whom 16 subsequently attended a workshop; we therefore discarded the data from the other 10.

For brevity, in this report we focus on those survey data that are most directly relevant to the current study. Participants are identified by codes from W101 to W109 for the first workshop (9 participants) and W201 to W207 for the second workshop (7 participants). The survey questions can be found in Appendix C.

5.2.1 Professional data

Survey questions 1.2, 1.4, 1.5, 1.6, 3.1

In all, 15 participants worked in universities in the UK and one in the USA. One third (5) of the UK-based participants represented Russell Group universities and the remainder (10) worked in post-1992 ('new') universities.

Almost all (15) had teaching responsibilities for undergraduates and/or taught postgraduates, and 4 had staff development roles: initial teacher training, training of early-career lecturers and/or the continuing professional development of experienced staff. They taught a range of subjects, categorised in Table 5.1, although the natural sciences were disappointingly under-represented.

Table 5.1 Main subject areas of the workshop participants. Note that some people teach more than one subject

<i>Subject area:</i>	<i>No. of participants:</i>
Health, medical, dental & veterinary sciences	7
Social sciences incl. education	5
Humanities	4
Business & management	2
Natural sciences	2
Maths & computer science	1

In general, participants were very experienced lecturers: 9 had taught for more than ten years and 2 for between five and ten years. Only 2 people had been teaching for under three years. The majority appeared to take an interest in their own professional development: 15 indicated that they try to keep up with research into teaching and learning; all 16 try to take in taking in-house opportunities for professional development, and 11 would try to take advantage of such opportunities offered outside their institution.

5.2.2 Competence and confidence in IT

Survey questions 2.1-2.4

A number of survey questions investigated what kinds of IT participants used in three areas of their lives: personal/social, research and teaching. To summarise, all appeared competent in basic tools – primarily word processing, spreadsheets and search engines – across all three areas of activity, together with basic tools for research and teaching: reference management, VLEs, and specialist applications and websites. ‘Social’ (Web 2.0) technologies featured in the personal lives of 11 out of the 16 respondents, while 6 used them in research and 8 in teaching. Roughly one third indicated that they would seek out new tools and applications in their personal lives and in their teaching, so the picture is generally one of competent and confident users.

5.2.3 Reusing others’ learning materials and sharing one’s own

Survey questions 4.1-4.6; 4.7-4.11

In view of the subject of this study, the survey asked a number of questions about the extent to which participants i) use learning materials authored by other people and ii) share their own learning materials with others. Here, we report primarily on their responses regarding reuse, although data on sharing are included for comparison by interested readers.

Table 5.2 shows the spread of responses to the question ‘To what extent do you incorporate materials which have been created by others into your teaching?’:

Table 5.2 Extent to which participants reuse others’ learning materials

<i>Response category:</i>	<i>No. and % of respondents:</i>	
A great deal (50% or more)	2	12.50%
Quite a lot (20%-50%)	6	37.50%
A bit (5%-20%)	8	50.00%
None at all	0	0.00%

W109 elaborated on his reuse in this respect: ‘Scanned and pasted material from other authors – mostly graphs, tables, animations, diagrams. Basically anything that requires graphical skills, time and resources that I don’t have available.’ This comment is borne out on a larger scale by the types of material reused, shown in Table 5.3. The corresponding data relating to sharing is also shown, indicating a sharing of those materials that, conversely, may be easy to create.

Table 5.3 Types of learning materials reused and shared

<i>Type of material:</i>	<i>No. and % of respondents who <u>reuse</u> material of this type:</i>		<i>No. and % of respondents who <u>share</u> material of this type:</i>	
Images (photographs, pictures, diagrams)	10	62.50%	9	56.25%
Film/video clips	9	56.25%	10	62.50%
Activities/exercises	9	56.25%	12	75.00%
Exam questions and/or topics for assignments	9	56.25%	8	50.00%
Reading lists	9	56.25%	13	81.25%

<i>Type of material:</i>	<i>No. and % of respondents who <u>reuse</u> material of this type:</i>		<i>No. and % of respondents who <u>share</u> material of this type:</i>	
Lecture notes and/or slides (e.g. PowerPoint presentations)	8	50.00%	14	87.50%
Course syllabi	8	50.00%	10	62.50%
Audio clips	7	43.75%	8	50.00%
Handouts	6	37.50%	13	81.25%
None	0	0.00%	1	6.25%

The extensive sharing of curriculum-related materials and of resources such as lecture notes, reading lists, activities and handouts may be indicative of sharing within a institution; however, the question did not differentiate between types if materials shared inside and outside participants' institutions, neither did it differentiate in reuse between materials that teachers had authored and those that they had obtained from elsewhere (i.e. reused themselves) and were merely passing on to others.

To find materials that could potentially be useful to them, participants relied primarily on the Web and peers, as table 5.4 shows:

Table 5.4 How participants find out about others' materials

<i>Method:</i>	<i>No. and % of respondents:</i>	
Web searches	14	87.50%
Through informal conversations with other lecturers	11	68.75%
At conferences	8	50.00%
On subject-specific Web sites that you know about	8	50.00%
Through academic email discussion lists	6	37.50%
At department meetings	5	31.25%
Other: Journals and textbooks / Materials are 'centrally distributed'	4	18.75%

When questioned how they reuse the materials that they obtain from others, participants responded as follows:

Adapt them to suit my curriculum or students:	7	43.75%
Look at them for ideas or inspiration but create my own materials:	14	87.50%
Incorporate them into my teaching without modifying them:	12	75.00%

Since the question did not subdivide the nature of usage by type of material, these figures are meaningful only in a very general way. For example, it is possible that a lecturer lacks the skills to modify an image or video clip obtained from the Web (or it might not be licensed for modification), but might want to make changes to learning activities acquired from others.

Provenance, often expressed as the 'not invented here syndrome', is an off-cited stumbling block to reusing materials. To gain a picture of provenance and its converse – the range within which university teachers are willing to share their own materials – Table 5.5 collates the responses to questions 4.4 and 4.9 of the survey. These asked participants how much importance they attached to specific conditions relating to provenance and the 'range' of reuse. For simplicity and clarity, the figures combine percentages from the three categories 'Essential', 'Very important' and 'Fairly important'.

Table 5.5 The relative importance of different conditions under which participants were willing to a) reuse and b) share learning materials.

Reusing others' materials		Sharing one's own materials	
Condition:	% giving the rating Essential/Very important/Fairly important:	Condition:	% giving the rating Essential/Very important/Fairly important:
The materials come from my own discipline	81.25%	The material must be only used within my own discipline	25.00%
The materials come from my own university	25.00%	The material must be only used within my own university	37.50%
I am personally acquainted with the author	12.50%	I must be personally acquainted with the user	31.25%
The author has a strong reputation for their teaching (if I don't know him/her personally)	56.25%		
The author has a strong reputation for their research (if I don't know him/her personally)	75.00%		
The author has been recommended by someone whose judgement I trust (if I don't know the author personally)	62.50%	The user must have been recommended by someone whose judgement I trust (if I don't know the user personally)	31.25%
		The user must acknowledge me as the original author when displaying the material	50.00%
		The user cannot pass the material on to a third party	37.50%
		The user cannot make any modifications to the material	25.00%

In terms of reuse, the home discipline is overall the most important condition, followed by the author's standing. Surprisingly, the 'not invented here' syndrome has a relatively low priority, likewise the role of personal acquaintance. In supplementary comments to question 4.4, three participants noted that what is most important are the applicability and quality of the content; provenance is secondary; for example: 'It's the material that is important not the author' (W105); 'Simple applicability trumps all these: I don't really think about it in relation to these categories, and the rating will change according to what the materials are' (W203).

Participants seemed to be less passionate about how their materials are used than they were about the provenance of material that they themselves reuse. Unsurprisingly, their key concern was to receive attribution. Their supplementary comments also manifest concern over the integrity and the quality of the altered materials: 'Modifications are OK, providing they are aesthetic and do not change the overall message of the content. Otherwise there is the potential for misleading or superficial material to have my name on it' (W109).

When asked about the value of using others' materials, participants rehearsed themes familiar from our previous research in this area; namely:

- New ideas and fresh perspectives, and opportunities to innovate in one's practice: 'Even if the content is not specifically created it provides inspiration and lateral thinking' (W201).
- A way to benchmark or critically appraise one's own practice: 'Allows you to critically analyze information and correct any errors. Can help with interpretation of a topic and allow you to have a better clarity of the topic' (W202).
- Disseminating good practice: 'It acts as a catalyst for the generation of ideas and strategies for facilitating such learning, i.e. learning in and on from others' practice and hopefully reciprocating' (W204).
- Avoiding a duplication of effort, particularly for new teachers:

When I started teaching I felt like nobody had ever taught the subject before. I was presented with a box full of dog-eared cuttings and a drawer full of irrelevant handouts, that was three years ago. I had to not only re-invent the wheel but had to re-invent fire, the steam engine and the computer. (W105)
- Incorporating materials that one cannot create oneself:

It could bring in other perspectives which may be illuminating. It could also introduce material in another format into the course e.g. audio visual that I may not have the time, technical skills, tools etc to prepare myself – adding variety and appealing to a wider range of learning styles.' (W205)

Despite these perceived benefits, it was difficult to perceive an active culture of sharing and reusing learning materials in participants' universities. In answer to our question regarding the existence of such a culture, semi-quantitative responses ranged from 'emergent' to 'a great deal'. Some sharing went on informally, through like-minded groups or at the departmental level. Where shared formally, materials were made available in institutional repositories or shared spaces in the VLE. However, a low level of sharing may not be the sign of active opposition: sometimes it is simply not thought about: 'not really opposition but just not the way we work generally' (W206).

5.2.5 Previous exposure to OER

Survey questions 5.1, 5.2

In answer to the question 'Before receiving the invitation to this workshop, did you know what OER (Open Educational Resources) are?' 5 (31.25%) responded Yes, 7 (43.75%) responded No, and the remainder were unsure.

Asked to comment on the possible impact of OER on their teaching, 6 participants made very general comments that could equally apply to non-OER materials – e.g. 'invigorate my lectures with innovative new technologies that will increase my effectiveness and efficiency as a teacher' (W109).

In response to the question 'Does your university actively promote the *creation* of OER?', only participant answered 'Yes' and 11 (68.75%) were unsure.

5.3 Capturing the unfolding process during the workshop

The key data collection instruments during the workshop itself were the log sheets (see the template in Appendix E), but we also elicited data from participants in short individual interviews conducted during the activity, a set of questions presented as an online survey on completion of the hands-on activity and collective reflections captured in focus groups moderated by the researchers (reproduced in Appendixes F, G and H respectively).

We received log sheets from 15 participants, recording 101 separate searches: i.e. an average of 6.73 searches per person in the 1½ hours available for the activity. Some participants, like W107,

stopped work before the official end of the activity as they felt they had found all the likely available materials. Most searches record only one find; however, some people reported multiple finds for an individual search, and some just recorded a URL linking to a list of search results. We decided, therefore, to treat each search at face value. This variation, together with the low numbers involved from some subject domains, limits the conclusions that we are qualified to draw; nevertheless, the findings are sufficient suggest questions for investigation in future such work.

5.4 Motivation for search: What were participants looking for?

We coded participants' responses to the log sheet question i) ('What are you looking for?') into four categories of material, as shown in Table 5.6:

Table 5.6 Materials sought by workshop participants (N=101 searches)

<i>Category:</i>	<i>No. and % of searches for materials in this category:</i>	
Content (e.g. background information)	11	10.89%
Specific media or forms of representation (e.g. podcasts, videos, animations, diagrams as well as text)	24	23.76%
'Instructional' material (e.g. explanations, guides, learning activities, lecture notes)	30	29.70%
Unclear	36	35.64%

Discussing OER in different media, W109 told his focus group that he favoured particular types for their cognitive benefits:

I tend towards animations because they are very powerful in terms of their ability to teach dynamic situations which are too... well, which fixed representations can't do. [...] something that they can't get from a textbook unless it comes with a CD-ROM.

For W108, OER provided the opportunity to incorporate into her teaching material that she could not create herself. She explained to her focus group:

I want to put in my own material; but yes, I want something to support me, like a video clip, which I won't have the time to do or probably the expertise to do it. Then I would be very happy to go to somewhere that I can actually take a link or take a clip somewhere, or some lovely diagrams I can't draw.

W205's motivation in looking for videos is that students tend to learn more by activity and demonstration; W104 felt that they would enliven a boring topic; and W106 believed that videos can motivate students to explore their subject for themselves.

In searching for specifically instructional materials, W101's principal criterion was 'the extent to which the resource either includes/suggests a hands-on activity for the workshop with the students, or an interactive resource that the students can use themselves after the session.' Others sought materials for activities that might help students to grasp difficult concepts such as statistics (W205) and literary theory (W203), or for online equivalents to F2F classroom activities (W206). Students' specific needs were also important: W109 wanted materials that would support dyslexic learners. However, W102 was after ideas as much as usable activities, explaining to her focus group:

another reason for me to look into those resources would be to try and find alternative ideas, alternative ways of engaging in that particular activity. I want different kinds of things that the students can be invited to engage with, different kinds of activities, tasks, me asking questions in a different way. It's not the actual substantive content; it's what I do with it basically.

The key feature of all these searches by was the granulaity of the resources being sought: individual assets or activities ('little' OER: Weller, 2010), not extended stretches of structured learning ('big' OER: *ibid.*). As W105 remarked to his focus group, 'I think somebody producing material that they imagine people could just open up a package and use would be wasting a lot of time because, as W108 said, it's the little twiddly bits that we can't do ourselves that we would most want.'

5.5 Discoverability and yield: Where did participants search and what did they find?

5.5.1 Sites searched

Table 5.7 lists the sites searched by workshop participants. In this section, we will just pay attention to the first four columns.

Table 5.7 Sites searched by participants in the workshops

<i>Name/title:</i>	<i>URL:</i>	<i>Specialist OER site?</i>	<i>No. of searches made:</i>	<i>Success rate:</i>
DiscoverEd ^R	http://wiki.creativecommons.org/DiscoverEd	Y	9	22.22%
Folksemantic OCW Finder ^R	http://www.ocwfinder.org/	Y	4	0.00%
Jorum ^R	http://www.jorum.ac.uk/	Y*	20	65.00%
MIT Open Courseware	http://ocw.mit.edu/	Y	1	0.00%
OER Commons ^R	http://www.oercommons.org/	Y	9	22.22%
OER Dynamic Search Engine ^R	http://edtechpost.wikispaces.com/OER+Dynamic+Search+Engine	Y	18	61.11%
Xpert ^R	http://www.nottingham.ac.uk/xpert/	Y	9	44.44%
BBC	http://www.bbc.co.uk		1	100.00%
Flickr ^R	http://www.flickr.com		3	66.67%
Google	http://www.google.co.uk		8	75.00%
Institutional VLE	N/A		1	100.00%
Intute	http://www.intute.ac.uk/		9	55.56%
Math Forum (Drexel University, USA)	http://www.mathforum.org/		1	0.00%
Temeo ^R	http://www.temeo.org		2	0.00%
UK Government sites	[xxxx].gov.uk		3	100.00%
YouTube	http://www.youtube		2	50.00%
Totals	Specialist OER		70	45.71%
	General		31	61.29%
	All sites		101	50.50%

^R Recommended by the project team: see list in Appendix E.

* Contains both OER and non-OER, but allows users to filter searches to retrieve only OER. All successful results that could subsequently be verified by the project team proved to be OER.

In the main, participants followed our guidance in conducting most of their searches in specialist OER sites, particularly Jorum and the OER Dynamic Search Engine, together with others in the list that we gave them (see Appendix D). Close scrutiny of the logs revealed

individual variations: 5 people searched only in specialist OER sites, while one person did not search any OER sites at all. However, one message stands out: individual teachers looking for resources to fit into their learning designs will consider any kind of resource, whether explicitly licensed as ‘open’ or not.

5.5.2 Defining the success of a search

For the purposes of analysis, we defined a search as successful if the participant:

- i) found one or more resources: i.e. typed a URL or description in response to question iv of the spreadsheet (‘What did you find?’) and
- ii) selected ‘Yes, definitely,’ ‘Yes, probably,’ or ‘Not sure’ in response to question v (‘Could this resource be useful to you?’)

We considered ‘Not sure’ to be successful outcome as a resource has a potential value (in that it may prove useful at a future juncture) even if it is not appropriate to the immediate purpose.

The overall success rate was about 50%, as shown in Table 5.8:

Table 5.8 Success of workshop searches (N=101)

<i>Outcome:</i>	<i>No. and % of total:</i>	
Successful searches, of which the response in log sheet question v was:	51	50.50%
Yes, definitely	22	
Yes, probably	17	
Not sure	12	
Unsuccessful searches, of which the response in log sheet question v was:	50	49.50%
Not really	15	
No	35	

5.5.3 Success rates by site searched

As Table 5.7 shows, searches of general sites were substantially more fruitful than those of specialist OER sites. A scrutiny of participants’ search behaviour showed that 12 made more than 50% of their searches in OER sites. Of these 4 switched to general sites following a run of unsuccessful outcomes on OER sites – in at least one case, with instant gratifying results:

I started with all of your links; I thought, OK, I’ll see what each of those; so I put it into both, so I put two search terms into there, into all of them, they’re nothing; and then went to Google and found those. (W201)

The only participant with a 100% success rate was the person who did not search any OER sites at all.

Even among the general (non-specialist OER) sites, those that may appear promising – such as learned societies for particular disciplines and government information sites – may have the information but prove disappointing, prompting teachers to visit more informal sites. Here are consecutive contributions from a focus group in workshop 1:

W101 [Social sciences]:

I was looking for something that can make things a bit more alive for the students, more lively; everything that I came across was very dry, block text. [Sounds of agreement from other members of the focus group.] When I moved to Google suddenly three cartoons and two photographs popped which were more... I mean, it wasn’t quite what I was after, but at least they were...

W108 [Health and medical sciences]:

That is what I sometimes find as well in my teaching. There are some specific sites that we can go to, what I call the big chunk of core teaching material. But if you want to widen it a little bit, like getting a YouTube video or things like that, yes, Google is where I go to.

5.5.4 Success rates by ‘openness’ of the materials found

To determine whether or not the resources retrieved were actually OER,¹¹ one member of project team subsequently checked all the links that were supplied for the 51 successful searches. The results are shown in Table 5.9:

Table 5.9 Analysis of successful searches to determine whether OER had been retrieved (N=51 searches)

	— Specialist OER sites —		— General sites —	
	No. and % of successful searches on this type of site:		No. and % of successful searches on this type of site:	
Yes: this is an OER	16	50.00%	2	10.53%
Not clear whether this is an OER	4	12.50%	0	0.00%
No: this is not an OER	2	6.25%	7	36.84%
No, this is not an OER, but information on the site suggests that the resource is intended to be used freely	4	12.50%	3	15.79%
Returned a mixture of OER and non-OER	2	6.25%	0	0.00%
URL points to a list of search results	1	3.13%	5	26.32%
Could not access (URL was not given, was broken or required log-in to institutional VLE)*	3	9.38%	2	10.53%
Totals	32		19	

* For logistical reasons, the sites were not checked until 8-10 weeks after the workshops took place.

Confronted by such uncertainty it is unwise to draw specific conclusions; however, three points are worth noting. First, OER-specialist sites cannot be relied upon to yield only OER: users still need to check the licence terms. Second, resources in the category ‘No, but information on the site suggests that the resource is intended to be used freely’ in Table 5.9 may predate the OER phenomenon, and thus constitute an anomaly that perhaps needs to be addressed. Sites of this type included a number of university websites. Third, it is not clear what is OER from searching general sites: ‘It’s usually faster to use Google for instance, though I appreciate that in that case it is not always clear whether the material is open source’ (W102).

5.5.5 Accounting for the variability in success

We identified five interrelated factors in both the qualitative and the quantitative data that might account for the variability in these success rates: volume, preciseness of requirement, discipline differences, persistence on the part of the searcher and technology-related issues.

The **volume** of materials retrieved could be both too much...

The correct stuff could have been there somewhere, but looking at 3,000. It has happened to me with Xpert. They had 3,000 so you end up checking on them randomly. I couldn’t... (W207)

...and too little, in that the critical mass of OER may not have yet been reached to make searches viable:

¹¹ Bear in mind the definition of OER that we espoused in section 1.1.

a general scarcity of decent resources, rather than accessing them, seemed to be the main obstacle (W203)

Some participants had very **precise, 'minority', requirements**, as W107 herself acknowledged. In search of an interactive truth table for teaching logic, she commented: 'I think the problem, which may be a reflection of the problems of many in the sciences and math, is that my requirements are very precise and very technical and they rely heavily on notation.' But she was realistic – and also ever-hopeful, coming very close to her goal at one point.

W106's requirement for materials on the application of forensic techniques to art fraud was also a minority one, but she felt that she should have found something and continued to believe in the ultimate benefits of OER (as indicated in her responses to the post-activity questions).

Discipline differences are related to volume, and may be a substantial factor. Although our numbers are too small to be meaningful, it is worth reporting that success rates in the three broad domains where more than 10 searches were conducted, success rates ranged from half to two thirds.¹² Cross-disciplinary searches looked less likely to succeed: between them, W106 and W204 carried out 10 searches for materials that cut across two subject areas, with a combined success rate of only 10%.

The workshop participants themselves voiced a sense that discipline differences played a part. W104 was a lecturer in medicine:

My experience of OER today [is that] my colleagues around the country are not engaging with this in order to help each other out. I need specialist information, and at the moment in my field there is very little in these systems. I started out here today, [...] and I thought: 'Wow, I'm going to learn loads' [...] And then I realised, OK, this is really discipline specific'

Here is a dialogue from a focus group in workshop 2 that makes the same point:

W204 [Health & medical sciences]:

Yeah, they're all excited about it; why haven't I become excited?

W206 [Social sciences]:

You know, just wondering how they had a different experience... I don't know, because one of the things I do is I talk to people from all different disciplines. I'll go to a physicist. You know there's just loads up there. I don't know whether...

W204: I guess it's just the topic and the subject.

Discipline differences can also apply to general sites: W103's Google search for materials on public history proved fruitful, while for W109, a lecturer in nutrition, Google yielded results of varying pedagogical quality, much of it dubious.

Participants' **willingness to persist** in their searches manifested itself in statements about time and effort. For example, W203 persisted in his searches longer in the workshop than he might have done in reality: 'Yes, worth the effort, just about: think I would have stopped after 20 minutes or so on my own time, though, as rapidly seemed to exhaust useful material' (response to post-activity question). In similar vein, W105 noted: 'If we had an infinite amount of time we would go on the internet and probably find exactly what we wanted. In the meantime it would be quicker to do it yourself.'

W204 did not disguise his frustration in the post-activity questions:

Effort/time taken was not commensurate with the reward! [...] Rather disappointed as I had hoped for more. I feel that my hope was that I would find material quicker and therefore I could progress sooner to devising how/where/when/why it could be used. Instead I spent the whole time period experiencing repeated abortive searches.

In the focus group he described himself as 'disappointed and sulking', but laid the blame on the technology:

¹² Figures combine both OER and non-OER.

I felt like I was a first year undergrad doing my interims again and thinking 'What happened, where is my thesaurus, what word have I not used?' And I was exhausted on coming up nil, nil, nil and it is as if, 'Well what's the block there, what's getting in the way but...?' [...] And it feels a waste of time. [...] I'm just disappointed that the expectation I had of the engines hasn't materialized. [...] I believe my search strategy is good, I believe the functionality of the system isn't and I believe there is stuff still out there.

In contrast, W206's failure to find anything led her to doubt her own skills, with W204 sympathising:

W206: ...it's been very interesting for me as well being with you guys because I would have thought it was just me. If I'd sat at home...

W204: You're not alone.

W206: I would have been thinking it's my searching...

They followed in the footsteps of W106 in workshop 1, who had similarly turned the blame for her lack of success on herself: 'I didn't find what I wanted but part of that may be my inability to create a search term that is more productive.' Interestingly, though, both W106 and W204 continued in their belief that the resources they sought were to be found somewhere.

In contrast, for W206, the effort spent searching was worthwhile, 'because it would take longer for me to produce a similar material' - which is, of course, one of the key motivations behind reuse, as we have noted already in section 4.4.2.

Technological issues centred on shortcomings in the OER sites' search engines, on other usability issues in the design of the sites and on their general robustness.

Some specialist OER sites appear to process search terms in a very simplistic manner. For example, W103 had more success with Google searches, as the specialist OER search engines did not seem to recognise the subject area 'public history' as an accepted term: 'the term I was putting in was public history, which is a particular type of history, and I was getting all kinds of public... the history of public health, and all kinds of other things.' Happily for her, however, her final five searches of Jorum yielded useful OER.

The failure of specialist search engines to recognise common domain-related terms was also discussed by W105 and W106 in their focus group:

W105: Whoever does the indexes to these things has a very narrow interpretation of it, because probably... talking about chemical analysis of works of art, I mean there are people who preserve paintings in museums who obviously publish on that material, but they probably call it something different, don't they? And the indexer has to recognise that.

W106: Which is the constant problem with searching: are they using the same terminology I'm using? And I find that a frustration generally.

W105: Because I put 'journalism' into anything and I get media studies, because media studies is studying journalism; it's not doing journalism. [...] the indexing is obviously the key to usability in my view.

W106 found the implementation of search conditions lacking, noting on her log sheet "'exact phrase" and "all of these words" gave nothing. "Contains any words" gave far too much irrelevant material.' She subsequently summed up her experience of searching for OER thus: 'This session is a reflection of how I find searching for such materials on the web in general - very frustrating and plagued by irrelevant hits.'

Weaknesses in the search engines were also noted by W107, who wanted to be able to locate actual examples, not just occurrences of the word 'example' in text. This is an extract from her focus group discussion:

W107: I teach logic and I want an example of an *ad hominem* argument, which is a fallacy. So you know, I type in 'ad hominem argument' and at first I'm not going to find any examples of an *ad hominem* argument [...]

W103: But if you put 'example' in your search string would that make any difference?

W107: Hardly ever. I mean, I've done this from time to time and it hardly ever makes a difference. Usually the word 'example' was taken to mean some other part of the text.

W109: If you have a very common word that's all very narrow searching.

W107: Yes, but I think this is, as I say, a difficulty with teaching materials in general.

In terms of the results returned from the searches, an element of sloppiness was discernible in two OER sites, which appeared to return results from Answers.com, some of them not educational: 'the search seemed to bring up answers.com a lot – not proper useable teaching materials – maybe it is my search term that is the problem and I am not wording it to focus search' (extract from W106's log sheet).

Poor usability and **lack of robustness** in the specialist sites were another source of frustration, and could lead to their abandonment, as evidenced in W106's log sheet: 'Didn't understand what site was doing. Seemed to be "error on page" so lost interest.' Two people recorded software breakdowns in their logs, which resulted in failed searches: W204 ('program froze three times!') and W203 ('search took forever, and never concluded (despite refreshing, etc.).'

5.6 Assessing the materials: What factors determined selection or rejection?

Question vi on the log sheets asked participants to state how they decided whether or not the resource retrieved from each search might be useful to them. We suggested factors such as subject matter, pedagogic fit, provenance, granularity and media. Analysing the log sheets, we identified a total of 129 citations of specific factors, which we have categorised in Table 5.10. Note that all retrieved materials are included in the analysis, whether or not they were *bona fide* OER.

Table 5.10 Factors in the selection or rejection of materials retrieved from searches (N=129 citations)

Category of factor:	Frequency:	% of all mentions:
Pedagogic aspects: incl. fit to the current learning design, fit to one's general approach, fit to the students' needs, clarity of the pedagogic intent (or absence thereof) in the resource	38	29.46%
Relevance: incl. subject-matter, national/cultural/discipline differences, topicality	35	27.13%
General quality	9	6.98%
Provenance	8	6.20%
Media	7	5.43%
Logistical aspects: incl. restrictive or unclear licensing conditions; user required to register for access to materials	6	4.65%
Nothing retrieved by search	9	6.98%
Technical or usability problems with the software which prevented any outcome from being achieved	6	4.65%
No factors stated	11	8.53%

We have reported the aggregate figures for each factor rather than the breakdown into selections and rejections, as we are more interested in the categories of factors and the apparent weight of each one than whether a particular factor plays a greater role in selection than rejection (or vice versa). Clearly, a number of different factors could be at play in any one decision, as will be evident in some of the quotations in the following sections.

5.6.1 Pedagogic factors

Pedagogic factors in decision-making fell into four principal categories: pedagogic intent, granularity, fit to the user's approach and the needs of the learning design, and appropriate to the students themselves.

First and foremost, it was important to determine the **pedagogic intent** of a resource: that is, was it intended as a learning resource, and/or was it usable as such (even if it did not appear to be deliberately educational)? This point is illustrated particularly vividly by one of W203's log sheet entries:

This is a slightly peculiar case, as it's the appropriate resource from the course I'd be teaching: however, the nature of the course and its delivery is such that the classroom teacher will probably not be aware of what the appropriate lecture covered, and how, and may not even be aware of the resource. [...] This resource is useful for giving an idea of what the lecture covered, but exactly how it did so is hazy at best (unless you can find time to attend the lecture yourself). Student feedback suggests the lecture (and thus the resource as it stands) isn't sufficient for helping them understand the basic parameters of the topic either.

An example of an educationally unusable resource can be found in W106's log: 'Not in a usable form; too much text, just looks like a page of an encyclopaedia. Wouldn't be something my students would trudge through.'

Where participants were looking for resources to fit into a learning design of their own, **granularity** was also a key consideration:

One example, the Yale lectures: most useful content found by a long way, and comprehensive, but the delivery of the course in an institutional setting is going to be so unique in terms of time available/teaching contact etc. that a set of online lectures from another institution could be challenging to integrate into effective teaching. At best a kind of back-up, secondary resource, or supplement. (W203, response in post-activity questions)

To fit within a learning design, therefore, 'little' OER (Weller, 2010) are preferred over 'big' OER. Here, W109 is telling his focus group about his customary practice:

...my resources range from an image from a PowerPoint slide all the way through to a 70-minute lecture done by someone at [unclear] university. So it really depends on what you want to... obviously that wouldn't... a 70-minute lecture would be part of the lecture, but it would be supplementary teaching material; whereas, sometimes I'd be looking for ways to make my lectures more visually appealing, which would be more image and small video based.

The smaller a resource, the greater control one can exercise over its use:

I was looking for interactive truth tables, so something very small, and I know exactly where it would fit into the context of the course that I have in mind. I would be much more comfortable with small pieces so that I can control the context, so that I can assemble the framework myself. (W107, to her focus group)

It is also essential that a resource **fits in with the lecturer's own approach and the intended objectives** of the learning session; otherwise, students' learning may be compromised. In this respect, a contribution by W109 to his focus group discussion is worth quoting at length:

It's quite frustrating when you find something that's good quality resource, it's well prepared, but it just covers your subject from a slightly different angle. And I worry if that my students look at this, or take this material they will think that's what I've got to learn, whereas actually I'm asking them to look at the material from a different perspective, with a different level of details perhaps, with a different angle. So I might... in my case I might find a very generic medical video of atherosclerosis which is what I was looking for today, but actually with my students I want them to understand the nutritional biochemistry underlying atherosclerosis, which covers it from a completely different point of view. [...] confusing students, even if it's not misinformation, it's confusing them as to what they need to learn - it's almost as bad as misinformation in some sense.

This problem can be overcome by adapting or contextualising the resource, putting a ‘pedagogic wrapper’ around the resource to contextualise it and advise the students how to approach it (see section 5.7.2). These two log entries by W203 illustrate such solutions:

Firstly, possibly rather too advanced, and the bit that interests me is embedded in a larger pedagogic fit (26 classes/lectures!) that doesn’t fit my teaching objectives or resources (time, principally). Would need to highlight or extract relevant section; and still would, I expect, need considerable class time to supplement it.

A clear overview, and at an appropriate level for the class I’d teach, and the purposes of the class: which seems to be at reference book entry level! But might save me time fulfilling this function, as I currently have to do. This text would then be used as a prelude to attempt to apply the theory to actual texts.

Finally, the resources must be appropriate to **students’ needs**, as shown in participants’ interest in animations and other graphical representations: ‘I tend towards animations because they are very powerful in terms of their ability to teach dynamic situations’ (W109, in focus group).

Student-related cultural, geographical and logistical factors came into play in W103’s searches: she was designing distance learning sessions for international students from several countries who had little access to material in academic repositories – a situation to which OER should, in principle, provide an ideal solution.

5.6.2 Relevance of content

The relevance of the content of learning resources also scored highly in the list of decision-making factors. Subject-matter – which also includes discipline differences – could be a make-or-break factor. Contrast these two log entries:

Good content and easy to extrapolate from this particular example to examples which my students will know e.g. ref to Gettysburg. (W103)

Turned out it was historical not chemical analysis of Napoleonic painting. (W106)

In another example, W202 told her focus group of an occasion when she showed her healthcare students an explanatory video on statistics, which failed to meet the required purpose because the students were unable to transfer the examples used in the video – analysing data about doughnuts – to their own domain:

The only difference was we weren’t talking about patients, we were talking about doughnuts and that blew their minds. And you sit and you go, actually, you can’t do those jumps, that jump was just too much. I didn’t use it again.

National and cultural differences were also prominent: one resource was rejected because it was in Spanish (W101), others because they were US-based (W105) or, surprisingly, too British (‘I want materials for US students’: W103).

Resources scored well where they had contemporary relevance, as shown in one of W205’s log entries: ‘These videos [on YouTube] could be used to explore the ethics behind the Vioxx situation in an online learning activity. The benefits of this will be to bring ethical considerations into real world situations.’

5.6.3 Provenance

Unsurprisingly – in view of the survey data reported in Table 5.5 on page 30 – the provenance of resources was not a major consideration for participants. However, faith was expressed in materials emanating from universities with strong research and teaching reputations: ‘if it comes from a Russell Group university department you think, well, that will be all right’ (W103) or from research data: ‘Gives a prospective view about waterbirth from a research point of view, from the medics and the users’ (W108, log entry). Other institutions also carry weight: ‘I have used BBC material before and found it of good quality’ (W201, log entry).

5.6.4 Media

As already noted in section 5.6.1, resources that are diagrams or animations of processes are perceived to have a strong cognitive benefit for students: 'It can help students visualise things that are difficult (non-intuitive) to visualise' (W102). Representations with which students can interact directly are also valued: indeed, W107 rejected one of the truth tables that she found for this very reason: 'Very very close! Generates a table from an expression of propositional logic. But does not show the intermediate result columns. And does not allow editing that would show how a change in one truth-value affects the results' (W107, log entry).

In relation to media factors, teachers may be willing to compromise production quality for pedagogic value: 'Good diagram of an atherosclerotic heart – useful as a PowerPoint image. Not a perfect image – could be better quality, but adequate for purpose' (W109, log entry).

Teachers are not only on the look-out for rich media: text documents are also sought. For example, W102 noted in response to the post-activity questions: 'I find educational research articles that focus on particular concepts most useful. Generally these articles have examples that I can transfer to my own teaching, and go into details about what are the particular.'

5.6.5 Logistical factors

Logistical factors that could help determine whether a resource was selected or rejected included licensing terms, the requirement to register with a site, the need to download software to run the resource, 'editability' and copying *versus* linking.

Participants' awareness of the **licensing and IPR issues** associated with the use of online resources varied. For example, W202 had previously been aware of these issues in relation to images and took care to purchase the images she used; however, she confessed in her focus group that she had assumed that, when looking at an OER site, one does not need to concern oneself with licensing. W205 reported that participation in the workshop had alerted her to the importance of licensing: 'I don't think I thought about it that much before but it is something that I'll be a bit more aware of.' Here too, there are discipline differences: as W203 remarked, licensing is less of a problem in literature than in other domains.

W202 raised a dilemma: namely, what licence terms govern the formal structure of a learning design?

Some of the material I looked at and found, I thought, that is really nicely laid out, it doesn't apply to my field but what you could do is say, 'That's a good structure and I'll lift that over and I'll just bring in examples and embellish it with, you know, the appropriate, you know, material to sort of apply it to.' [...] you just think, 'Gosh, you know, why go away and spend hours coming back to probably the same thing because they'd just...?' And I didn't know, if I did that, would I, how would I appropriately reference to the [producer] for that?

There was evidence that people might fall into the trap of assuming that a resource from a respected site that appears to be freely available is automatically open: 'The resource that I found that was useful was a US government video, so I assumed again that it was open source' (W101).

The **requirement for users to register** with some sites for users could act as a deterrent:

it was all too complicated to download them so I'm afraid I didn't even get there. You had to click on and post your email address and various other things, as well, so I just didn't bother. (W103, focus group contribution)

What I really found annoying was the hurdles, so having to register on a site and then download to your email address and then anything that got in the way of my just being able to access something quickly. [...] I was just put off. [...] And I felt like a recalcitrant student where I'm just thinking, 'Oh I'm bored now.' [...] And then if you don't know that the quality is actually going to be any good at the end of it... [...] Or even if it's actually suitable. (W206, focus group contribution)

Equally off-putting could be **the need to download software** in order to use the resource, as the two log entries show:

Gives Mathematica code for interactive truth table, but not a web service for an interactive truth table. But I also see a link to a CDF version... which requires a player. Wanted something very simple that does not require any installation on students' client computers. (W107)

Couldn't access it directly as download and email address involved [...] Any hurdles would put me off pursuing what might not be a useful resource. (W201)

'**Editability**' relates to the possibility of modifying a particular resource, regardless of whether one has the tools and skills: i.e. has the resource been created such that others can make changes to it, or is it 'read-only'? This is particularly the case with graphical representations and videos: in her description of the unsuccessful use of a video on statistics (see section 5.6.2), W202 felt that 'if I could just have adapted it so they carried on talking about patients and not doughnuts, we'd have been all right.'

'**Copying versus linking**' contrasts copying (downloading) an online resource to local storage with simply giving students a link to its location on the Web. Both behaviours have their advantages and disadvantages. Copying obviates the problem of 'link rot' but invites licensing and IPR difficulties: 'The problem with links is they can be dead, whereas if you download it then it's never dead, it's always there but then of course you have copyright issues because you are essentially copying it' (W109, focus group contribution). Linking, of course, is less risky in terms of IPR and may be the only viable way to provide access to large videos, but may require a 'pedagogic wrapper' to contextualise a resource (W101) and, of course, requires particular precautions:

I even write down the website, write down the URL and also the name of the website in case the URL changes, and also copy it into a text file. I have to grit my teeth to do that when I find something useful because otherwise I'll never be able to find it again. (W107, focus group contribution)

5.7 Appropriation: How would participants fit the resource into their learning design?

Appropriation – making a resource acquired from elsewhere part of one's own teaching – is an essential step for many (if not most) teachers. It entails:

- i) determining its place within the learning design: e.g. will it form part of the core reading and activities, or will it be offered a supplement, or optional extra?
- ii) readying the resource for use with one's students: e.g. can it stand as it is, does it need a 'pedagogic wrapper' to explain or contextualise it, or does it need to be adapted (if, indeed, it can be)?

5.7.1 Determining the place of the resource within the learning design

Table 5.11 records participants' responses to question vii of the log sheet: 'How would you embed this resource in your curriculum?'

Table 5.11 Intended destination of resources retrieved by workshop participants in successful searches (N=51)

<i>Option:</i>	<i>No. and % of occurrences:</i>	
In this plan, as a core resource	17	33.33%
In this plan, as a supplementary resource	20	39.22%
In another teaching plan that I have in mind	5	9.80%
Not sure yet: it might come in useful sometime	9	17.65%

Just under three quarters of resources would be used within the current learning design. Supplementary usage could lie in preparatory activities (W103) before the learning session itself or in follow-up activities afterwards (W101).

It is interesting that over a quarter of successful searches were, in effect, serendipitous, yielding materials that were not appropriate to the immediate purpose but could be of use in the future, for teaching or research by the participant or their colleagues. Here, for example, are two of W103's log entries:

I liked the material and would come back to it if I have a student particularly interested in the Third Reich and memory and guilt and I would direct my GCSE stage son to it.

Some very useful material for art historians, but not enough about general museology to be useful to my general historians: but I found this very interesting and might return to it as a researcher or for other reasons.

W206 also logged a particular find as 'Not relevant for me but may be of interest to my colleagues who are also lecturers', while W205 provided the following general reflection to her focus group:

It would be good to have in mind some of these materials because if I get approached to do, put together a course on, online course on such and such, it's quite good to have in mind where you might go back to find some materials that will add a bit of depth and context.

5.7.2 Readyng a resource for use

Participants' responses to question viii) of the log sheet - 'What would you need to do to this resource?' - are summarised in Table 5.12:

Table 5.12 How participants would need to ready a resource for use with students (N=51 searches)

<i>Action:</i>	<i>No. and % of occurrences:</i>	
Nothing: I can use it as it is	20	39.22%
Nothing: I'm only using it for ideas	6	11.76%
Provide a 'pedagogic wrapper' to contextualise it	11	21.57%
Adapt it to suit my context/students	14	27.45%

The comparatively low number of 'ideas only' material contrasts with the data from the preliminary survey (see section 5.2.3), which may imply that teachers look elsewhere for inspiration (perhaps to their colleagues), or that 'big' OER are a more fertile source of ideas and inspiration than the 'little' OER that constituted the bulk of the materials retrieved in the workshop.

The predominance of 'as is' use may reflect the motivation for searches for images and multimedia in particular: that is: resources which cannot make themselves, for lack of skills and/or tools the skills or resources to make themselves. However, it can be time-consuming to watch a lengthy video clip in order to identify the parts of interest:

I will have to work out which snippets, you know, which periods of the video that I would like to use and to be able to know that I get to three minutes ten in order to get to the content that I want to convey rather than starting it at zero-zero-zero and saying, right, watch this video for the next 15 minutes, because they'll be asleep by three minutes because it's quite dry stuff.
(W109, focus group contribution)

For this reason, W101 would welcome transcriptions alongside the actual videos: 'If I had the transcript I can find that activity in five minutes rather than waiting for 40 minutes before I stumble across it' (W101, in focus group).

Personalising materials to fit one's own teaching 'voice' is a basic and strongly felt need, as this extract from a focus group discussion demonstrates:

W106: 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, so you sort of jar against that. [Non-verbal agreement from other participants.] And then you spend a couple of hours re-jigging it to sound like you; using the concepts but put it in your style because you don't like their style because we're individuals.

[...]

W105: When it comes to delivery you need to put something of yourself into the material. If you just took something generic and delivered it you...

W108: It's not the same.

W105: You wouldn't feel right with it; you want to put something of yourself into the design of the course.

Two ways to personalise resources authored by others are adaption and providing a 'pedagogical wrapper'.

Adaptation may involve harvesting the content and applying it within one's own structure: 'Editing out/in content pertaining to the course structure I'd be implementing, rather than the pedagogic structure it originally came from' (W203, log entry). Conversely, it may involve harvesting the structure and discarding the content: 'maybe as a structure for covering this sort of topic online - the Q & A approach for example' (W206, log entry).

A 'pedagogic wrapper' offers a way to make a sub-optimal or non-editable resource, or a resource that offers a different slant on the topic, fit the current purpose without compromising the learning that the teacher wants the students to achieve. The following dialogue from a focus group in workshop 1 provides a vivid example of such a wrapper:

W109: I will post it to my virtual learning environment site and I would say... and I would give a little sort of paragraph underneath the link trying to tell the students how to use this resource, rather than just saying here's a video, have a look at it. I'll say this is a really useful video looking at this subject from this point of view, this is what I would like you take away from this video, but please don't...

Facilitator:

So you'd be prepared to use material that isn't exactly right?

W109: Yes.

Facilitator:

And rather than modify you'll give it a context?

W109: Exactly. I'll try and qualify it, I'll try and qualify their learning experience of that video.

5.8 Teachers' perceptions of students' perspectives on OER

The workshop participants' thoughts regarding students' likely perspective on their use of OER were unprompted by the research team. Nevertheless, we report them as they are relevant to the findings from the focus groups that we conducted with students (see section 6).

5.8.1 Scaffolding students' online searches

At least two participants felt that their students needed to be given a place to start when locating and accessing online materials, if only to save them time: 'I see my role as being the gatekeeper of the things that they should be seeing, otherwise they can waste so much time' (W109, in focus group); 'I think they need a starting point, because otherwise they will just give up' (W101, in interview). Indeed, W102 had begun to consider engagement with OER as a way to develop students' digital literacy: 'I'm also curious about how to teach students to use internet resources properly.'

5.8.2 Students' preferred learning resources

Participants felt that they were aware of the kinds of material that students appreciate, which – surprisingly perhaps – include PowerPoint slides:

I find that the students actually like... they like the PowerPoints. I mean, you know, I hate them, but they find the PowerPoints very easy to digest. And, you know, if you just put a handout, you know, a long handout, they won't read it, whereas they will read a PowerPoint. (W105, interview)

Equally surprisingly, textbooks were still considered to carry authority with students. Here is W105 again, this time speaking to his focus group:

But there is a lot to be said for a book. Students often are quite comfortable with a book, because you just say: read these ten pages. And it's nice and encapsulated; they can sit on a bus and read it; they're quite used to it. They're not that... the idea that they're obsessed with a screen is probably true in their social life, but I think they do associate books and learning very closely together.

5.8.3 The tension between paying tuition fees and obtaining free resources

Two participants in workshop 1 articulated a previously unanticipated situation: students may soon be paying substantial tuition fees to their university, only to be offered freely available online resources originating from others. W109 was particularly concerned:

I do sometimes worry about the issue, the fact that the students who come to your university will have paid to be taught by your university. [...] And here we are, taking them through an hour's lecture and then saying, right, go and have a look at all this other stuff that's freely available on the internet as part of your teaching experience at this university, which you're paying for. I sometimes feel a little bit... well, I don't know, I wonder if there are issues there with the students thinking, 'Hang on, aren't you supposed to be teaching it?' [...] The feedback I've got from the students is they don't seem to care that much, but I think with increasing fees they might do, I don't know.

[...]

textbooks cost money, access to periodicals and journals cost money, so when they're paying their book and course fees to my university they're getting access to these journals, therefore they're getting some value for their fees. But by just giving them a YouTube link: that stuff they could have done without coming to university.

In reply, W103 pointed out that the difference with paying to study is that one has the benefit of a teacher to provide a structure, context and support for one's learning: the 'pedagogic glue':

No, because you're providing the pedagogical glue to hold the facts together. [...] it makes you think, well, you know, what is it as a tutor that... what value are you adding as a tutor coming into face-to-face contact with the student? So I think that's what you've got to think about.

Even so, it is important for a lecturer to make it clear to students where they are not the authors of the learning materials being provided, as W104 remarked to her interviewer that she did anyway (interview data).

5.9 Overall perceptions of the value of OER

Although we did not explicitly ask workshop participants what they felt to be the overall value of OER, we can nevertheless draw a number of inferences from their oral and written contributions.

5.9.1 Potential impact of OER on teachers' practice

Perhaps the principal observation under this heading is that OER are perceived as a way to improve general quality and keep one's teaching up to date, but not to save time:

The main concern is to improve the overall quality of learning in the class, to try and stay up-to-date with... and use all the resources that are available. I don't see it as a time-saving method. (W109, in focus group)

But what you're probably doing is just adding richer, adding richness to your course. You're probably spending just as long. I would never imagine it'd save time, it's just that you carry on just getting it better and better. (W202, in focus group)

For W201, the experience of searching for W201 served primarily to stimulate her thoughts: 'Effort did not reward in most of the OER or even in the Google search except it stimulated my thoughts about how I might teach a bit more inventively so the thinking was the useful bit' (response to post-activity questions). Moreover, W108 felt that the most effective means to improve one's practice is peer observation:

What I actually find useful as a learning tool to be a teacher is sitting to observe my peers teaching, observe other people teaching and learn from them. I've done a couple of bits of observation; I've been observed at least three or four times. But to actually sit in on someone and actually learn from the way they deliver their lectures, some of the tips on the way they use their PowerPoints and things actually I find very useful.

This observation, made in a focus group, invited the obvious suggestion from the facilitator that one can do the same by looking at an OER video of someone lecturing, but sadly the conversation was not pursued.

There is, however, a tension between lecturers' desire, on the one hand, for resources that can save redundancy in effort and, on the other, the over-riding imperative to keep their teaching authentically theirs. This quote from W204 illustrates the first of these two opposing elements:

I have always looked for, in principle, OER before it was called OER stuff and I will continue to do that until I die. Because it's that bit of not recreating the wheel and to be stimulated by my peers as to their orientations and perspectives and that I always have the eternal hope that it could act as a catalyst. (W204, in focus group)

In contrast, the need for the personal aspect in one's teaching is voiced by focus group contributions from W101, W106 and W105:

The problem I have with whole packages is they kind of assume that we are kind of neutral deliverers of objective content to those passive recipients, and that's not what happens, at least in my classroom ever. [...] I teach philosophy to social science graduates [...] And we construct it through the very act of being in that classroom and talking about those things. (W101)

We haven't made it and used our thought processes to make it. [...] you spend a couple of hours re-jigging it to sound like you; using the concepts but put it in your style because you don't like their style because we're individuals. (W106)

...you want to put something of yourself into the design of the course. (W105)

5.9.2 The added value brought by OER to the repertoire of online materials

The key characteristic distinguishing OER from other materials on the Web that are, in principle, available online for use in teaching and learning is their licensing. Instead, workshop participants appeared to focus on the fruitfulness of particular specialist OER sites; for example:

The list of sites will be very useful for looking for material for other teaching I do so although not useful for this particular teaching plan I would check Jorum and Intute again in the future. (W104, response to post-activity questions)

Very glad to know about Jorum which seems an excellent site for this and a variety of other projects. OER are just another resource that one would have to pull together for one's own purposes, much as one would use other types of resource. (W103, response to post-activity questions)

The second sentence in W103's comment appears to be the nub of the problem when we are studying individual teachers' use of OER. That is, they appear to consider OER largely as a

particular subset of the sites generally providing educational resources, the distinction being largely one of quality: 'For me it gives me the sense of using material that has been academically researched and authentic' (W102, response to post-activity questions).

5.9.3 Benefits deferred

The rhetoric surrounding OER promises teaching staff much, but as yet expectations are not being met. W204 articulated this situation during his interview somewhat passionately:

What I found torturous and dismaying is that my hopes, it's almost like a meal, I expect the meal to be beautiful and when you get it you think is that all the meal is? So, I find a number of these resources, the same as these, I'm now on my sixth search, and I could have done better in Google myself at times, or they end up with 32,000, and I go into advanced searches, and they freeze and they break and you start again, are you with me? So, you expect the engines to be, their functionality to be slicker, smoother, quicker...

The two principal challenges to the uptake of OER, which almost certainly detract from their current value for individual teachers seeking materials to support their learning designs, are:

- critical mass, which has not yet been reached in a number of subject disciplines: 'If the critical mass would have that and achieve' (W108, in focus group), and
- visibility and discoverability of the resources themselves: 'If we knew it was there and we could find it we would use it' (W105, in focus group); 'various sites had nuggets of good stuff but too highly buried to make them worth using' (W103, response to post-activity questions);

Even so, participants continued to believe in the promise of OER, whatever their initial experience in the workshop: 'I hope value of OER will be beneficial to my students and to retention of students. Hope that it would save time for me and be interesting to students' (W106, response to post-activity questions).

6. FINDINGS (IV): LEARNERS' PERSPECTIVES ON OER-RELATED ISSUES

6.1 Participants in student focus groups

To elicit data relevant to our last three research sub-questions (6, 7 and 8), we conducted three focus groups conducted with a total of 17 students in three contrasting institutions as shown in Table 6.1:

Table 6.1 Demographic data for the participants in student focus groups.

<i>Uni code:</i>	<i>Characteristics of university:</i>	<i>No. of students in focus group:</i>	<i>Student codes:</i>	<i>Subjects & level:</i>
N	Post-1992	6 (5 female; 1 male)	LN01 – LN06	Accounting, finance, business All 1 st year
R	Research-intensive; active producer of OER	8 (7 female; 1 male)	LR11 – LR18	Economics, finance-related, animal science, international relations 7 UGs (various years) + 1 Master's
A	Art and design	3 (2 female; 1 male)	LA21 – LA23	Fashion 2 1 st -year UG; 1 Master's

Findings are reported in relation to the key themes that emerged from the discussions.

6.2 Students' awareness of OER and of IPR issues

Students displayed little or no awareness of OER, even those in university R, which is an active producer of resources. This is, perhaps, of less concern than their generally low level of understanding of IPR: for example, when downloading music one student was more bothered by the risk from viruses than by the legal implications of copyright infringement. Another seemed to confuse IPR with plagiarism.

Uncertainty was also apparent regarding IPR and differing forms of representation: while one student was aware of the need to reference graphics and images in their PowerPoint presentations and another knew something about the regulations of the Copyright Licensing Agency (CLA) regarding photocopying, two (including, surprisingly perhaps, one of the arts students) were unaware that these forms are subject to IPR as well: 'you would easily copy a model or something for a report, but you wouldn't really think, am I allowed to do this, or not?' (LN02). There was tentative evidence to suggest that copyright and referencing in relation to non-textual online media are not adequately covered in students' study skills classes (LA21). Even though a large number of such sites may be untrustworthy (lecturers' reasons for discouraging their use: see section 6.3.2 below), some may nevertheless contain academically acceptable resources.

6.3 Searching for material online

6.3.1 Preferred material

Students were primarily interested in obtaining text-based materials such as journal articles from the Web, although two students at university R would occasionally look for videos that might explain difficult topics. The students at university A were particularly interested in blogs and media sites as they need to keep up with current trends in their sector.

A marked distinction was drawn between books and other textual sources. Three key issues were discernible: locating books, the cognitive effort involved in reading them and rapid obsolescence.

The students at university N in particular had difficulty locating printed books – in part, perhaps, because the university had diverted considerable funds into the provision of online resources. For example, LN01 eventually tracked down one book needed for an essay in a public library in Essex, on the opposite site of London to the university. LN06 also pointed out that searching for books in a library is harder because one can only do a general search (i.e. not sophisticated searches by keyword or topic), and so they have to ask the librarians for assistance.

Given these challenges, it is unsurprising that students at all three universities read e-books, including those which are available in fragmented form on Google Books. The latter permit a highly strategic approach to reading: ‘you don’t have to read a whole book. You can just find a word you’re looking for, and it brings out certain pages that have those words in it, so you just read like four pages and get what you want’ (LR15) – provided, of course, that the required pages are included in the Google Books selection.

LR15’s approach leads us to other two issues associated with books (both printed and electronic): namely, the effort required to read them and their tendency to become obsolete relatively quickly:

I don’t like reading books, because I find the article more concise and to the point, because I can read it like in 25, 30 pages, and I get all the information I need, instead of a 100-page book. (LR13)

I find journals, though, that they’re more up to date, like current, and there’s less, like... because obviously a book, you can read it all to understand the flow of it; with a journal it’s only like, what, five, ten pages. (LN05)

Printed books do have their advantages: they are easier to read on public transport (LN02), one can annotate them (LN02) and one can insert a bookmark to keep one’s place (LN04). Interestingly, the printed word was perceived by LN03 as a guard against plagiarism. Having lost marks in early assignments for copying materials from the internet, she now found books a safer medium:

I would stick with the books because I used to use loads of websites in the beginning because I was pretty lost; I had no idea how to write an academic-level essay, and I started pretty much rewriting some people’s thoughts on the internet, which became a disaster because those people rewrote those thoughts from some other books, which is pretty much a plagiarism. And I got, like, loads of percentages cut off because of that, and now I just try to, you know, put the correct quotations and citations, and just stick with the books. And I just use the internet for comparison, nothing else. (LN03)

However, some aficionados of the print format appeared attracted by the idea of an iPad or Kindle when these were suggested by their peers as alternative vehicles for reading text documents.

6.3.2 Websites searched

Students at universities N and A in particular appeared to value the provision by their lecturers of a walled garden of online resources, whether these were available through the VLE or on a recommended list. Not only does this relieve them of the problems of information overload and trustworthiness, it also means that they can access, free of charge, sites for which they would otherwise have to pay:

I think we’re lucky because [University A] pays just so many really, really good industry sites that are so specialised, that you really do find what you need within those sites, and you know that you can go straight to them, and so often you don’t even need to go out to the wider web. (LA23)

The economics students at university R also made use of industry sites, as well as journal sites such as media JStor and PubMed). Google Books was another popular source at university R, as one can read just the necessary pages (LR15). Two students would also look at sites from other universities for lecture notes, multiple-choice quizzes and essay questions. Students at universities N and R also looked at the websites of other universities (e.g. Cambridge and St Andrews), but others felt that there was enough on their 'home' site to keep them busy; besides, other universities' sites are often protected by user names and passwords.

Unsurprisingly, students spoke of being actively discouraged from consulting Wikipedia – 'You're not supposed to. You're just not allowed to' (LR14) – and at university N it is actually 'banned' (LN02). Another deterrent to using Wikipedia and other 'suspect' sites is the fact that the references are marked as well as the assignment itself (LA21). Nevertheless, students would make judicious use of such sites, but to gain initial ideas (LA22, LA23), alternative perspectives on a topic (LN05) or as a stepping-stone to other, more authoritative sources (LN02, LR11, LR14), not as an authoritative source in their own right:

To be honest, at the stage of Googling, you're at that first stage where you want to find your your initial idea, you want to find out what, if you're meant to be researching the basics, but I wouldn't Google for anything I was going to write properly. I wouldn't reference the sites that I usually found on Google, I'd be going to specialist sites that are trusted by the Uni, that they recommend for us, because we know that they're from a trustworthy source, and if we reference them they're going to understand why we've referenced them, and it's going to be factual information. (LA23)

I tend to also Google stuff so I can see other people's opinions on the subject, because there might be some additional authors that I can use. So I do Google, but I don't use, like, the information that I find on Google; I just compare things. (LN05)

When I find websites that don't look reliable, but I find useful information on it, but I can't reference it because it's not a reliable site, I could learn from it, I might copy it, but when I put it in my essay or something I would change the words [...] But those sites that are not reliable, they can sometimes like increase my understanding. (LR15)

...we go on Google, search for a websites, and then it's, if it's got some useful information we use the key words from the website and search it in the PubMed or Web of Science so we can get some actual data. (LR11)

Google Scholar, on the other hand, was considered a trustworthy source (LN02).

Students at university A tended to locate blogs by word of mouth rather than Google (LA23), and fellow students' recommendations were taken up by students at universities R and N, particularly where those students were perceived to be successful learners: 'if this person usually does a good job in everything, and if she or he suggested something I'd definitely go for it' (LN02).

6.3.3 Evaluating online resources

All of the students had received training in searching, selecting and evaluating online resources, evidence of which was found in comments such as: 'if it ends with "com", it means that it's a commercial organisation, so you cannot trust a lot of these websites, and it's better to look for like academic stuff, and it must be "ac", for example "ac.uk"' (LR17). Industry and business sites such as Mintel and Verdict¹³ (used by the students at university A), and The Economist and Financial Times (university R) were also trusted, but in general students were wary of the media, apart from the BBC.

Students who consulted blogs were aware of their potential bias: 'Sometimes you refer to things like blogs, because blogs tend to be quite well based, and they're quite opinionated, and

¹³ www.mintel.com and www.verdict.co.uk (sites specialising in market intelligence and retail analysis respectively).

sometimes that's what we need for our marketing.' (LA23). A fellow student outlined his strategy for reading and evaluating blogs:

...if you're reading one that you like, they often, they're quite good, they support other people's work, so they'll have, you may like, or, follow this person. And then you just read the first page and if it grabs you then you continue to read it, if it's dull then you move on. I think you can make the decision quite quickly. If there's an article about someone you like then you'd keep following. And also just things like if it's a great layout, and if it's modern and interesting, then you'd follow it. (LA22)

Website presentation was also a measure of credibility and trustworthiness for students at university R: 'I think it's really important if it looks professional, because otherwise I won't be able to take it too seriously.' (LR18); 'it should look like it's a proper site maintained by proper people and updated' (LR17). Sites with a lot of advertising were viewed with suspicion (LR15).

However, lecturers were considered to be the ultimate arbiters of the trustworthiness of websites:

...if the professor has recommended it, then we trust it. (LR16)

If the lecturer's saying it, that's fine. (LN02)

[On the course discussion board] we got the lecturers to approve whose thoughts were right and whose was [?] wrong, and we had to say to the lecturers: 'Right, can you go in and... ' because we don't want to go in and say, 'You're wrong or you're right'; everyone's entitled to an opinion, but we need the lecturers to then draw a line and say, 'No, actually, follow this and follow this link and your Businessballs¹⁴ is out the window because it's not, you know...' (LN02)

6.4 Online materials from other institutions

As we have seen from the data collected from strategic managers and teaching staff, the value of OER lies substantially in sharing good practice, in finding visual resources that one cannot produce oneself and in saving oneself from 'reinventing the wheel' by garnering relevant materials from other institutions. It would be logical, therefore, to investigate the obverse of this particular coin and ask students for their perspective on being presented with learning resources that might not only be authored by someone other than their teacher, but also might originate from another institution entirely. We posed the following question to all three focus groups: 'How would you feel if the course you have enrolled in was made to a large extent out of materials coming from other universities?'

The students at university R appeared relatively unfazed by this prospect,¹⁵ unlike those at the other two institutions, who said that they would feel 'let down' (LN04) or 'cheated' (LN04, LA22) unless the teacher credited the source. There was a sense that the lecturer's teaching should be authentically their own:

I do have certain expectations if I come to a university; I expect them to know something, to teach me something from their own, not from, everything from other people, otherwise there's no authenticity to that. (LN04)

You want to be taught by someone who thoroughly knows, they've come up with their own ideas and etc. (LA22)

Unsurprisingly, given the current climate, financial objections were voiced: namely, the purpose of paying for materials that can be accessed *gratis*: 'Yes, I think I'd feel like it was, 'What are we

¹⁴ www.businessballs.com, a website of professional development resources maintained by a private individual.

¹⁵ It might be tempting to ascribe this relaxed attitude to the fact that University R is a major producer of OER; however, these students were relatively unaware of the existence of OER, and so we would be reluctant to make such a connection.

paying for, if I could do this myself online?’ (LA22); I could have gone to that university [...] and got it firsthand’ (LN05).

A photographer, LA21 put herself in the shoes of a person whose images might be appropriated and voiced concerns about IPR. However, she was satisfied that her own lecturers referenced online images adequately.

Arguments in defence of OER practice were proposed by LN01 and LN02: it is acceptable if the materials are presented in a credible manner, and – the ultimate standard – have the lecturer’s endorsement:

I think if they presented it well enough to come across and give the person that made it the credibility, it doesn’t matter, you know, what you present, because that person made it; it’s being presented in a way that is so credible that it’s good. You wouldn’t really mind if it helped you, and you understood it. (LN02)

I think it’s perfectly OK. If the lecturer, who is the person who’s trained in everything, if they thinks it’s a credible enough source and they think it’s good enough, and that they think that they can’t do better than this source, then we should [...] have access to that source. (LN01)

6.5 Putting their own work online

Our questioning about students’ readiness to put their own work online was prompted by the notion that students might also be creators of open content. However, it did not go down well with the two focus groups with whom we explored it. LN02 was worried about uploading low quality material, while others were more concerned about the potential for plagiarism by others: ‘It’s not fair, if you’ve done all the work, it’s not really fair. If you were writing for a different task, but we’re writing for a grade, we’re writing for our own, to benefit ourselves’ (LA23).

There was, though, a difference between uploading a finished piece of work and posting to a blog as part of a group exercise:

I did a blog in my group, but it wasn’t really... we were actually asked: ‘Can you upload some music or a picture?’ So with us being the accounting guys, and I knew the new business guys and that, and I uploaded a picture of – it was Dürer’s[?], actually, and I put: ‘It’s all about the money.’ So yes, it was just... it was something fun, it was something different; you know, I commented on it. And so, yes, I don’t know, I suppose more fun and more, not necessarily work, but there were comments: someone did actually then ask something about an essay in there... (LN02)

Students at university A had also carried out a blog activity, but they seem to have avoided posting anything contentious.

7. REFLECTION ON THE FINDINGS

7.1 Introduction to this section

The principal discussion of the findings of the OER Impact Study, together with recommendations for future research and practice, are to be found in the companion report by White and Manton. Nevertheless, it remains appropriate to conclude the present report with a reflection on our findings – and, indeed, we adopt a narrower focus than our colleagues, who have addressed questions of reuse in general in addition to those specific to OER. In this section, therefore, we draw together the data reported in sections 3 to 6 in order to determine the extent to which we have been able to answer the two principal research questions, and to characterise the current impact of OER on individual practice in UK HE.

Since the overwhelming majority of our data came from teaching staff, our reflections inevitably dwell most on this group of participants; however, we elicited sufficient material from the strategists and learners to enable us to construct a provisional picture and make tentative conclusions about their perspectives on OER use.

7.2 The benefits of OER to educators and learners

Research question I:

What benefits can OER offer to educators and learners in HE and FE in the UK?

7.2.1 Educators

Sub-question: 3 (teachers' preferred ways to incorporate OER)

Combining the data both from those lecturers who were already experienced in incorporating OER into their learning designs and from those who encountered OER for the first time during the study, we can summarise the key benefits of OER to individual educators as:

- Enabling resources to be seamlessly integrated into students' learning environments (typically, a VLE area), obviating the need to click to external websites and reducing the risk of broken links where an individual resource has been moved or deleted by the originator.
- Addressing learners' specific needs through providing opportunities for i) supplementary learning outside the classroom; ii) preparation, practising, reinforcement and revision of skills; and iii) the alternative presentation of content to address students' interests and preferences.
- Saving teachers effort, through enabling them to offer their students learning materials and TEL activities where they lack the skills or the means to create these themselves. Note, however, that teachers do not necessarily perceive OER as a means to save themselves time: searching for the required resource can itself be a lengthy process.
- Benchmarking their own practice in terms of content, approach and general quality, when designing new programmes or modules of their own ('big' OER are considered particularly relevant for this purpose).
- Enabling them to teach topics that lie outside their current expertise, through the appropriation of 'big' OER that cover the required curriculum.
- Stimulating networking and collaboration among teachers, based on a 'give and take' (or, more accurately, 'take and give') principle: appropriating resources authored by others in order to fill a gap in one's own repertoire and, conversely, identifying a specific

gap in the resources available to support a particular subject domain, and contributing materials to fill that gap.

- Making like-minded individuals more visible, thereby improving possibilities for new collaborations in researching fields of common interest.

However, we should be concerned at the lack of precision in teachers' conceptualisation of OER, including a lack of awareness of Creative Commons licensing terms (and, indeed, of IPR and licensing in general) and an inadvisable tendency to assume that, just because a resource is found on an educational site, one can use it as one wishes.

7.2.2 Learners

Sub-question: 6 (learners' awareness of OER)

From the three focus groups that we conducted with students, it would appear that learners' awareness of OER can best be described as hazy, and that there is a pressing need for them to understand the IPR issues associated with the incorporation of outside materials (in any media) into their written work.

The benefits to students of their lecturers' use of OER can be inferred from lecturers' own rationale for offering such resources (summarised in the previous section), although we can also note students' preference for online over printed materials and for materials that are up to date: criteria which, in principle, should be met by OER.

We collected no data on students' perceptions of the benefits to be accrued from independently seeking out OER to support their studies, to 'read round' their subject or to catch up on skills and knowledge that they might be lacking. However, since they clearly appreciate being given a 'walled garden' of online resources rather than being left to fend for themselves, the availability of reliable, good quality OER on identified sites can only be helpful to them. Yet, while giving them these 'safe' resources universities must continue to equip them with the skills to search for, obtain and evaluate materials on the wider web and – equally important – to be aware of, and act in accordance with, the IPR conditions associated with them.

Finally, students' negative reactions to the idea of putting their own work on the Web leads us to advise against such initiatives, particularly where that work is subject to formal assessment. Even where students do create OER that will be made generally available, it would be advisable for these resources to be moderated by a teacher for quality.

7.3 Enabling factors and impediments to uptake and sustained practice

Research question II:

What are the pedagogic, attitudinal, logistical and strategic factors conducive to uptake and sustained practice in the use of OER; conversely, what are the impediments?

7.3.1 Pedagogic

Sub-questions: 3 (teachers' preferred ways to incorporate OER), 5 (teachers' perspectives on provenance)

Relevance of content and fit to the lecturer's current purpose are paramount, but are contingent on any one lecturer's requirements at any one time. Clearly, some topics will be in more demand than others; however, 'minority' interests also need to be accommodated and lecturers should be encouraged to make even the most esoteric resources that they create available as OER.

Five other principal pedagogic factors are worthy of comment here:

- **Provenance.** OER produced by higher education institutions and other academic bodies (e.g. research institutes and learned societies) are perceived to have a stamp of quality and as such seem to be preferred over resources from more 'general' sites (with a few exceptions among sites run by media organisations). This places an additional onus on producers to ensure that their OER indeed undergo a quality assurance process before release.
- **Pedagogic intent.** This is related to provenance, in that teachers appreciate resources that have either been explicitly developed for educational purposes or can readily be co-opted for such a purpose – and, of course, the former are more likely to be found on the sites of academic organisations. The clarity of pedagogic intent is particularly important where a resource is being offered to students for self-directed study. However, a fine line is to be drawn between explicitness of pedagogic intent and the amenability of a particular resource to deployment in a variety of pedagogic contexts – again, a quality that is arguably more likely to be found in 'little' than 'big' OER.
- **Granularity.** We can discern what Amber Thomas (in a personal communication to the project team) has called an 'asymmetry' between OER production in UK HE. That is, while institutions may have concentrated on releasing 'big' OER (i.e. whole lessons, units, modules or courses), lecturers are looking, in the main, for 'little' OER – individual images, short audio or video clips, or readings – for incorporation into their teaching plans (learning designs). (An exception, as noted in section 7.2.1, is when a lecturer is faced with teaching a substantial topic with which they are unfamiliar). Therefore, 'little' OER need to be discoverable within 'big' OER, and the production of easily discoverable 'little' OER should be promoted.
- **Media.** Rich media resources are perceived to help students visualise and grasp difficult concepts, while virtual laboratories and simulations are seen as a way for students to practise skills in their own time (and in a cost-effective manner). However, to speed the process of evaluation and selection, audio and visual media should be accompanied by transcriptions.
- **Topicality, contemporaneity.** Students and teachers alike value resources that are up to date in relation to current affairs, as well as in relation to current academic research, with students in particular perceiving this as a key advantage of online resources over books. Although time and resources are required to review and revise OER regularly in order to keep them 'fresh', investing this effort may well help to further the provider's reputation and the volume of use over the longer term.

7.3.2 Attitudinal

Sub-questions: 4 (teachers' beliefs and values), 5 (teachers' perspectives on provenance), 7 (learners' perspectives on provenance), 8 (learners' beliefs and values)

A positive disposition towards the reuse and sharing of learning resources, together with an essentially collaborative outlook (even if one is not actually co-designing or co-teaching at any given time), are essential prerequisites for the uptake of OER at both the individual and institutional levels. Data from the OER Impact Study and from our other work in the learning design field indicate generally favourable attitudes among lecturers in this respect – albeit with some anecdotal evidence to the contrary from our interviewees regarding authorship and an aversion to resources from other institutions (often characterised as the 'not invented here' syndrome). However, even though a substantial proportion of teachers appear to be active in social networks (judging from workshop participants' responses to the preliminary survey), we have not had the opportunity to review historical data in order to explore Lane and McAndrew's (2010) suggestion regarding the enabling role that socialisation in cyberspace might play in the uptake of OER relative to earlier initiatives in reuse.

In terms of the characteristics of this positive disposition, our data point towards individuals who exhibit the following traits:

- A conceptualisation of teaching as, *inter alia*, helping students to become active, independent learners.
- A recognition that combining materials that they have authored themselves with relevant materials from other sources may be both valuable (in terms of enhancing the quality of students' learning) and valid (e.g. acceptable if they may lack the skills and resources to create a particular resource themselves).
- Confidence, both in their command of subject matter and in their teaching skills, to share their own materials and thereby to contribute to the collaborative construction of knowledge about, and resources for, teaching and learning in their domains.
- Readiness to learn themselves (i.e. develop their professional practice), both from engaging with resources that others have made available, and from obtaining feedback on the resources that they have shared with others.
- A sense of responsibility for encouraging similar attitudes among their colleagues.

That said, participants in our study were at pains to emphasise the vital importance of preserving the authenticity of their teaching (i.e. their own 'teaching voice'), which is not open to negotiation, still less surrender, in adopting OER. They are willing to use materials authored by others, but they must retain the freedom and flexibility to appropriate those materials: that is, to make them their own through adaptation (where the licence allows) or contextualisation (through a 'pedagogic wrapper'). Any expectation on the part of the institution that lecturers are 'some kind of neutral deliverers of objective content to [...] passive recipients' (in the words of a participant) can – and should – be quickly scotched.

Turning briefly to students' beliefs about the learning experiences that they feel they should have at university, these may have a particular bearing on their lecturers' use of OER which perhaps could not have been envisaged in the early days of OER: namely, the considerable increases in university fees taking effect in 2012. Just as lecturers wish to preserve the authenticity of their voice, so students want their learning to be distinguished (and distinctive) by virtue of that authenticity – all the more so when they will be paying substantial sums and incurring sizeable long-term debts. There is evidence that teachers, too, are aware of this, and of their responsibility to provide structure, support and context to students' engagement with open materials, and to make clear when they are using such materials.

7.3.3 Logistical

The role of logistical factors in inhibiting the large-scale uptake of OER is not to be underestimated. Even though, given the enormous volume of resources already on the Web, a search for OER is unlikely ever to return the same quantity of hits as a general-purpose search, a critical mass has yet to be reached to make OER viable across the board. Our data suggest that this problem is more severe in some disciplines than others, although the patchy representation of disciplines among our workshop participants means we cannot be precise about the areas of greatest need. Interdisciplinary searches, too, are problematic, although this may also be, in part, the consequence of the compartmentalisation of resources into discrete subject areas.

Teachers need to be able to conduct searches quickly, with the minimum cognitive effort, keystrokes and mouse clicks. The following are all likely to deter would-be users of OER: poorly indexed materials; inadequate search engines that can handle only one-word searches (rather than whole phrases) and/or cannot recognise accepted pedagogic terminology; the requirement to register with a site before one can even evaluate a resource; the need to download an application in order to 'run' a resource; and unreliable hardware or software on the hosting site. Substantial technical effort is therefore required to remedy these shortcomings.

Currently, problems of discoverability can be mitigated to some extent where teachers are part of a community and can benefit from word-of-mouth (or word-of-email) recommendations. However, as we have seen from the workshops, lecturers who are working on their own may fare less well, and without the support of others in a similar situation, some may even give up the hunt prematurely.

Licensing – or, rather, the lack thereof – poses a problem where a resource appears to be intended for general use (i.e. to all intents and purposes, it should be open), but does not carry a licence. It is clearly not practicable to check and license such a vast number of resources retrospectively. However, where a teacher may wish to deploy one of these resources in their teaching and/or to build an OER that includes the resource, an easing of copyright restrictions and the implementation of a ‘fair use’ policy would make it possible for them to do so legitimately.

7.3.4 Strategic

Sub-questions: 1 (drivers for institutional strategies), 2 (potential models for engagement with OER)

Our study has considered the use of OER primarily within the dimension of individual practice (cf. the UK OER synthesis model: OER Synthesis and Evaluation Project, 2010d). However, 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.

The optimum way to foster such collaboration within an institution is open to discussion: whether to rely on the *ad hoc* diffusion of ‘bottom-up’ initiatives; or to implement an institution-wide strategy to ensure some degree of consistency in OER use and, hence, in teaching and learning across different faculties and departments; or to adopt a middle way by identifying ‘pockets of innovation’ – individuals and small groups using OER – and co-opting them into a more organised strategy for diffusion. Whichever approach is adopted, universities might capitalise on the professional development opportunities that they already offer both to early-career lecturers and experienced staff in order to imbue in them an awareness of the potential benefits of OER and an understanding of IPR and copyright.

Although our interviews revealed signs of emergent institutional strategies for fostering OER use, these appear to be triggered primarily by a drive for the production of OER and, more specifically, by a desire to understand the potential market rather than by a rationale of the pedagogic benefits to their own students and staff. Moreover, we should further question the long-term viability of the production-use nexus as a strategic driver for OER use, particularly where production (of ‘big’ OER) has been funded largely from external sources. It should not require a large-scale institution-level production initiative to kick-start the use of OER by its staff: as this report has made clear, there is a compelling pedagogic motivation in terms of enhancing both students’ learning and teachers’ professional development.

Whatever strategy for OER use is adopted, we would make the following observations, based on our discussion in section 7.3.2:

- Quantitative measures should be used as a yardstick of OER practice with great caution: OER should be used only where teachers find them relevant and genuinely beneficial to the quality of their students’ learning.
- Teachers need to be free to incorporate OER in the manner most appropriate to the task at hand: on some occasions as part of core content or core learning activities, and on others as a supplementary activity or reading.
- Lecturers’ keenly felt desire to place their personal stamp on their teaching must be acknowledged and allowed to flourish.

7.4 Commentary: determining the impact of OER use

From our reflections on the two principal research questions of the study, we are now in a position to comment – albeit tentatively – on the impact of OER use on teaching and learning in UK universities. To recapitulate the position adopted by the study, we have focused on individual practice, investigating the relationship between OER use and the way teachers and learners both go about, and think about, their respective practices. We also argued in the introduction to this report that changes of this nature lend themselves more to qualitative methods of research and measurement.

In the absence of strong evidence from learners about their engagement with OER, this commentary will concentrate on the perspective of teachers.

7.4.1 Changes in teachers' thinking and doing associated with the use of OER

As noted in section 7.3.2, the principal prerequisite to engagement with OER – indeed, with any materials that one has not authored oneself – is a belief in the value and validity of sharing and reuse of resources among teachers, which may be realised in an enhancement of the quality (and, hence, outcomes) of students' learning, and in teachers' personal professional development.

Initially at least, sharing and reuse by a single individual might not go hand in hand – that is, one can reuse others' material without making one's own available in return – but in a mature practice the two behaviours should be closely intertwined. Moreover, the practice does not necessarily involve a direct (reciprocal) exchange between two teachers, in that Lecturer A may reuse Lecturer B's resources, while Lecturer B reuses those of Lecturer C; moreover, the individuals do not have to know each other or work in the same institution or, even, discipline.

The overriding distinction between OER and other materials that can be found on the Web is, of course, the presence of clear, easily interpretable licences that govern the conditions under which each resource can be used within a piece of learning (including its potential recombination into another OER). However, this is primarily a logistical difference and – while we would not downplay the importance of the correct (legal) use of copyrighted resources by teachers – it cannot be said to relate to a substantial shift in their pedagogic approach. For this, engagement with OER needs to be seen as part of a nexus: a set of interrelated behaviours that together constitute open educational practices (OEP). Collating the OPAL guidelines on OEP (OPAL, 2011b) with the behaviours enumerated in a blog posting by Beetham (2011) and findings from the present study, we offer the following provisional list of teaching practices:

- **In relation to learners:**
 - Implementing open pedagogic models. In the most open of these, learners determine and govern their learning objectives, as well as the methods by which they will learn; and teachers act as facilitators, supporting learners through their different pathways by scaffolding, tutoring and coaching.
 - Providing learners with a repertoire of rich and diverse resources that may include reused content.*
 - Teaching in open networks.
- **In relation to other teachers:**
 - Sharing and collaborating on content with other teachers.*
 - Using or encouraging others to use open content.*
- **In relation to the community at large:**
 - Opening up content to students who are not on campus (i.e. distance learners) or to learners who are not formally enrolled on the university's courses.

- Making knowledge publicly accessible.

Asterisks denote a practice for which we collected evidence in the project: i.e. participants' self-reports indicated that they are already engaging in it. These practices are interrelated in that one may be conducive to the development of another, or they may co-evolve within a particular individual or institution. They may also not all be relevant within a specific context: for example, there may be students or topics for which a fully open pedagogic model is inappropriate. Whichever the case, the significance of OER is that they act as a marker of OEP: 'sometimes as signs that they are going on, sometimes as drivers to make them happen, sometimes just in the background' (Beetham, 2011).

7.4.2 Assessing impact

In its Open Educational Practice Maturity Matrix, OPAL (2011b) offers a comprehensive framework for implementing and promoting OEP which incorporates OER use and production at the organisational level. However, while doubtless beneficial to managers, the framework does not help us to appraise emergent practices by individual teachers. This is not only essential for research studies such as this to determine the current penetration of OER in individual practice, but may also be valuable for developmental purposes: i.e. to determine what support an individual teacher may need in order to progress within their practice.

To address this gap, we put forward, for consideration and discussion, a preliminary modification of the HEA's Academy Evaluation and Impact Assessment Approach (HEA, 2009). This comprises six progressive levels, which we have tentatively applied to teachers' use of OER in Table 7.1.

Table 7.1. Applying the HEA Academy Evaluation and Impact Assessment Approach to teachers' use of OER

Level:	Expected behaviour:
6. Effects on students' learning	Identify sustained instances of students' improved learning (in terms of motivation, enjoyment, outcomes) that can be attributed with confidence to the incorporation of OER.
5. Applying one's own learning	Apply these ideas by incorporating OER into students' learning more widely. Begin to identify the effects, both on students' learning and on one's own approach.
4. Learning from	Through incorporating OER, further formulate and develop ideas about the place of OER in one's practice, reflecting on the possible ways in which it might be improved (e.g. changes in one's approach to teaching, increased engagement with other teachers).
3. Engagement	Begin to search, locate, evaluate and incorporate OER, either experimentally or in response to a real-life need. In so doing, begin to form some more specific ideas about the potential role of OER in students' learning.
2. Reactions	Feel positive about the potential for enhancing teaching and learning in this way and seek out/take advantage of opportunities to do so.
1. Awareness	Read/hear of the existence of OER and their potential role in enhancing students' learning and one's own practice, <i>and/or</i> Recognise the potential for enhancing one's practice through using OER.

We recognise the close correlation between sharing and reuse, and between OER and OEP more generally; however, for clarity (and given our remit) these levels address OER use only. Future work might develop a more sophisticated framework that combines individuals' use of OER with the emergent creation of their own OER and the sharing of these (and/or resources by third-parties) with their colleagues and in the wider community.

Reviewing the data from our study in the light of this framework, the OER experts interviewed would appear to have reached level 5, in that section 4 abounds with descriptions of what appears to have become normal practice, but interviewees did not provide us with evidence of improved learning outcomes (this may also be because they had not yet had time to amass sufficient examples). In contrast, our workshop participants arrived at the workshop at around level 1: an awareness of OER and sufficient interest to find out more to give up half a day of their time to explore this promised potential. By the end they were, at best, hovering at or slightly below level 3: i.e. feeling positive about the potential of OER and just beginning to develop ideas about how to enhance their practice. However, it was of course impossible to determine, after just two hours' exposure, how many might progress to level 3 and beyond, and how many might simply abandon the endeavour altogether in the face of inadequate technology and a paucity of relevant resources of adequate quality. This throws another variable into our assessment: namely, the time needed to assess whether an observed change is a first-order one (i.e. short-lived and reversible) or a second-order one (i.e. lasting and underpinned by a permanent shift in beliefs) (Ertmer, 2005). Our study, therefore, may need to be repeated within two or three years in order to yield a clearer and more reliable assessment of impact.

7.5 Conclusion and recommendations

The OER Impact Study project explored the use of open educational resources in UK universities, with specific reference to i) the benefits to institutions, teaching staff and learners, and ii) the factors conducive to the uptake and sustained use of OER and, conversely, the impediments. We collected qualitative data from a total of ten participants with strategic responsibility for OER, 25 participants in teaching roles and 17 students. In addition, quantitative data were collected from 101 searches undertaken during two workshops that investigated the reality of searching for, locating and evaluating online resources.

From our findings, we have drawn up 15 recommendations. These are listed in the companion report by White and Manton, together with an extended rationale, but are summarised here for convenience:

Recommendations to academic staff for enhancing their teaching practice:

1. Approach online resources primarily as a means to enhance your practice, not necessarily as a way to develop a course more quickly.
2. Adopt an open approach to your academic practice, seeking to share resources and ideas both within your disciplinary community and beyond it.

Recommendations to academic staff for supporting learners:

3. Continue to evaluate and collate online resources in order to scaffold students' access to online resources.
4. Provide opportunities for students to share, discuss and critique the online resources that they have discovered themselves.
5. In study skills tuition, pay attention to sources other than 'conventional' text.
6. When teaching students referencing and citation skills, include non-traditional sources such as podcasts and videos.

Recommendations to institutions for improving services to students and staff:

7. When setting out students' expectations and entitlements in relation to their learning experience, provide appropriate justification and assurances regarding the incorporation of resources originating from other institutions.

8. Capitalise on existing professional development activities in order to foster a voluntary culture of sharing and reuse.
9. Consider the reuse of online resources strategically, assessing their potential to save time or offer other efficiencies over a longer term rather than a shorter term. However, take account of the fact that teachers may perceive the benefits differently.

Recommendations for the funding of OER-related activities:

10. Continue to support the production of OER in the context of reuse, and consider targeting that support towards the development of resources in under-represented disciplines and of interdisciplinary resources.
11. Support and promote 'open' approaches in teaching and learning practice.
12. Continue to support the development of technologies to improve the discoverability of OER produced by universities.
13. Lobby for the easing of copyright restrictions where resources are to be used for educational purposes.

Recommendations for further research into OER use:

14. Further research into the reuse, in a global context, of full courses/modules of OER produced in the UK.
15. Further research into the optimal ways to foster teachers' reuse of OER.

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APPENDIX A. QUESTIONS TO OER STRATEGISTS

1. What was your institution's motivation for getting into OER?
2. Tell me about your institution's strategies for the using/reusing of OER.
3. What does your institution see as the benefits and barriers in using/reusing OER?
4. Can you describe any techniques (successful or unsuccessful) you have employed to encourage the use of OER?
5. Which types of OER are most likely to be used/reused and why in the context of your institutional TEL¹⁶ strategy?

Prompts:

MIT-like = share as it is or designed specifically for reuse (who is the primary audience?) or
OU-like = support self-study

Granularity

Discipline and generic

Contains pedagogical framework or a picture?

6. Do you think certain departments/disciplines are more likely to use/reuse? Why?
7. What do you think your institution's next steps should be in relation to OER?

¹⁶ Technology-enhanced learning.

APPENDIX B. QUESTIONS TO TEACHING STAFF

Profiling information collected at the start of the interview

What role(s) do you have within the University? (You can tick more than one box if needed.)

- Teaching undergraduate students
- Teaching postgraduate students (Master's, PG Dip, PG Cert but not PGCE)
- Supervising research students (PhD, DPhil)
- Professional development of trainee teachers or early-career lecturers (e.g. PGCE or PG Certificate in HE)
- Professional development of experienced lecturers
- Directing a degree programme or a subdivision of it (e.g. a module)
- Approval and/or quality assurance of programmes or their subdivisions
- Learning technologist: advising staff in the use of IT in their teaching and/or developing e-learning materials
- General administration
- Other (please specify)

In what subject area(s) do you teach?

How many years have you been teaching in Higher Education?

Which of these statements most closely describes your use of digital technologies in your personal and social life?

- I use conventional tools: i.e. email, word processing, search engines.
- As above, plus IT is well integrated into my personal & social life: e.g. social networks, iPod, digital camera, smart phone and other tools to support personal interests and/or community activities.
- As above, plus I actively seek out new tools and applications (including mobile ones) that allow me to access information and to stay connected at all times.

Which of these statements most closely describes your use of digital technologies in your research?

- I use conventional applications for conducting research (e.g. email, Word, Excel, search engines, reference management tools), together with specialist applications and websites that are relevant to my subject.
- As above, plus established Web 2.0 technologies where these are appropriate to my research: e.g. blogs, wikis, social bookmarking.
- As above, plus I actively seek new tools and applications (including mobile ones) to help me with my research. *Also tick this box if you create websites or software applications for your research, e.g. for data analysis.*
- I don't do any research.

Which of these statements most closely describes your use of digital technologies in your teaching?

- I use conventional applications (e.g. email, Word, PowerPoint, search engines, VLE), together with specialist applications and websites that are relevant to my subject.
- As above, plus established Web 2.0 technologies where these are pedagogically appropriate: e.g. blogs, wikis, Delicious, Flickr, YouTube.
- As above, plus I actively seek out new tools and technologies and incorporate them into my students' learning where appropriate. *Also tick this box if you create websites or applications for your students to use.*
- I don't do any teaching.

Interview questions

1. What does OER mean to you?

Prompt: How did you become aware of the concept?

2. What was the trigger that got you started with using OER?

3. Before you started using OER, what was your attitude to the idea of sharing your learning materials [*define what we mean by these – give a few examples*] and using those of other lecturers? Did you ever....

- Share your teaching/learning materials with other lecturers?

- *If yes:* Were they colleagues in your university/people you knew outside the university? [personal network? + or formally organised?]

- *If no:* What were your reasons for not doing so?

- Use materials created by other lecturers?

- *If yes:*

- Were they colleagues in your university/people you knew outside university?

- Did you reuse them as they were, or adapt them at all?

- Did you ask the other lecturer's permission to use/adapt them?

- *If no:* what were your reasons for not doing so?

- Whatever your response was to the previous 2 questions, what difference does the existence of OER make to a) sharing your stuff with others and b) using other people's stuff?

Prompts:

What is the effect of the CC licences that govern how an OER can be used (answer from both the producer and user perspective if they can)?

What do you think is the impact on the lecturer's sense of ownership of their materials, whether they are incorporating someone else's into their own, or making theirs available for others to use?

Do you think that using OER can have an impact on a lecturer's feeling of authenticity and/or creativity? In what way?]

4. Tell me about a successful/unsuccessful OER-reuse story from your own teaching practice.

The next 2 questions are supposed to be asked with specific reference to an example of their use of OER, and then generalise from them. So... ask the prompt and, when they have answered in the context of that example, follow up with the question: 'Is that typical of your approach to using OER? If not, how else do you...'

Prompts:

What motivated you to use/reuse the OER?

What kind of material you were looking for?

Where did you look for them, where did you find them?

How did you assess the quality of the OER you decided to reuse?

How were the students supposed to be using the materials? (i.e. were OER fully integrated into the learning design or was it optional material for students to self-study)

What was the impact of reusing OER on your workload?

5. How do you assess the quality of a piece of OER?

Prompts:

What criteria do you use?

Are there particular sources of OER you trust?

How do you go about looking for stuff?

Do you use OER from other institutions?

6. To what extent do you make students aware that some of the materials that they are given were written by lecturers in another organisation?

Prompt: General questions about students and OER; e.g. what is your perspective on students referencing and/or generating OER?

7. What do you think your institution's attitude to reusing OER is?

Prompts:

- *Colleagues' attitudes; stakeholders' attitudes. We might want to try to uncover possible conflicts: e.g. institutional policy says: 'you should reuse' but at the same time does not offer any support or recognition mechanisms.*
- *Reflections on institutional culture: 'What do you think using OER does for your professional reputation?'*

APPENDIX C. WORKSHOP PRELIMINARY SURVEY

OER Impact Study: Sign-up form and preliminary survey

1. Welcome

Welcome to the sign-up form for the OER Impact Study workshops. These will take place on the 24th March and 4th April, from 11-3 at Ewert House, Summertown, Oxford. There will be a £100 payment for participation.

As well as acting as a sign-up form this survey is intended to collect information about your background, experience of teaching and learning in HE, and how you use IT in different areas of your life. It should take between 5 and 10 minutes.

If you would like to take part in our workshop please answer the questions below. We will be in touch to confirm your place and send final joining details shortly.

For convenience, the survey questions are divided into pages. Use the "Next" and "Previous" buttons to move through them. When you have finished, click the "Finish" button after the final question (don't click the Cancel message or close this browser window as you'll lose everything that you have written).

If you encounter problems completing the survey, please contact [Marion Manton](#) at Oxford University.

Thank you!
The OER Impact Study Team

1. Your name

2. Your university

3. Your email address

4. What role(s) do you have within the university? (You can tick more than one box if needed.)

- Teaching undergraduate students
- Teaching postgraduate students (Master's, PG Dip, PG Cert but not PGCE)
- Supervising research students (PhD, DPhil)
- Professional development of trainee teachers or early-career lecturers (e.g. PGCE or PG Cert in HE)
- Professional development of experienced lecturers
- Directing a degree programme or a subdivision of it (e.g. a module)
- Approval and/or quality assurance of programmes or their subdivisions
- Learning technologist: advising staff in the use of IT in their teaching and/or developing e-learning materials
- General administration
- Other (please specify)

5. In what subject area(s) do you teach?

OER Impact Study: Sign-up form and preliminary survey

6. How many years have you been teaching in Higher Education?

OER Impact Study: Sign-up form and preliminary survey

2. Questions about the use of digital technologies in your personal and profes...

1. Which of these statements most closely describes your use of digital technologies in your *personal and social life*?

- I use conventional tools: i.e. email, word processing, search engines.
- As above, plus IT is well integrated into my personal & social life: e.g. social networks, iPod, digital camera, smart phone and other tools to support personal interests and/or community activities.
- As above, plus I actively seek out new tools and applications (including mobile ones) that allow me to access information and to stay connected at all times.

2. Which of these statements most closely describes your use of digital technologies in your *research*?

- I use conventional applications for conducting research (e.g. email, Word, Excel, search engines, reference management tools), together with specialist applications and websites that are relevant to my subject.
- As above, plus established Web 2.0 technologies where these are appropriate to my research: e.g. blogs, wikis, social bookmarking.
- As above, plus I actively seek new tools and applications (including mobile ones) to help me with my research. *Also tick this box if you create websites or software applications for your research, e.g. for data analysis.*
- I don't do any research.

3. Which of these statements most closely describes your use of digital technologies in your *teaching*?

- I use conventional applications (e.g. email, Word, PowerPoint, search engines, VLE), together with specialist applications and websites that are relevant to my subject.
- As above, plus established Web 2.0 technologies where these are pedagogically appropriate: e.g. blogs, wikis, Delicious, Flickr, YouTube.
- As above, plus I actively seek out new tools and technologies and incorporate them into my students' learning where appropriate. *Also tick this box if you create websites or applications for your students to use.*
- I don't do any teaching.

4. In your view, what can digital technologies bring to teaching and learning in Higher Education?

OER Impact Study: Sign-up form and preliminary survey

5. What, if any, initiatives are organised in your institution to help lecturers to incorporate digital technologies into teaching and learning? Examples might include:

- Workshops for course teams or departments
- Lunchtime events that focus on a particular technology and show how it can be used in teaching and learning
- "Champions" who spearhead the use of digital technologies
- Learning technologists or others who provide one-to-one support to individual lecturers

Please also comment on how successful you think these initiatives are.

OER Impact Study: Sign-up form and preliminary survey

3. Questions about your teaching

1. Below is a list of statements about things that lecturers might do as part of their teaching practice. Please indicate how strongly each one reflects your *current* practice:

	Very strongly	Fairly strongly	Not very strongly	Not at all
I try to keep up to date with new ideas and techniques from research into teaching and learning (e.g. through journals, conferences and online sources).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like to try out new technologies that might enhance my students' learning.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When opportunities arise, I attend professional development courses or other events organised in my institution to improve my teaching.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When opportunities arise, I attend professional development courses or other events run by other organisations to improve my teaching.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Feel free to comment on any of your responses:

OER Impact Study: Sign-up form and preliminary survey

4. Questions about reusing and sharing learning materials

We now wish to explore the types of material you reuse, what you do with it, where you find it etc.

1. To what extent do you incorporate materials which have been created by others into your teaching?

- A great deal (50% or more)
- Quite a lot (20%-50%)
- A bit (5%-20%)
- None at all

Feel free to clarify your response, especially if you answered "none at all":

2. Which of the following do you reuse when developing materials for use in your students' learning? Remember, we are interested only in material that was originally created by someone else. (Please tick all that apply)

- Images (photographs, pictures, diagrams)
- Audio clips
- Film/video clips
- Course syllabi
- Reading lists
- Handouts
- Lecture notes and/or slides (e.g. if you use PowerPoint presentations)
- Activities/exercises
- Exam questions and/or topics for assignments
- I don't reuse others' material
- Other (please specify)

3. What do you do with these materials? (Please tick all that apply)

- Incorporate them into my teaching without modifying them.
- Adapt them to suit my curriculum or students.
- Look at them for ideas or inspiration but create my own materials.
- I don't use others' materials.

OER Impact Study: Sign-up form and preliminary survey

4. How much importance do you attach to where the materials come from and who created them? Please rate each of the following criteria:

	Essential	Very important	Fairly important	Not very important	Not at all important/Not applicable
The materials come from my own discipline.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The materials come from my own university.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am personally acquainted with the author.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The author has a strong reputation for their teaching (if I don't know him/her personally).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The author has a strong reputation for their research (if I don't know him/her personally).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The author has been recommended by someone whose judgement I trust (if I don't know the author personally).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Feel free to clarify your answer:

5. How do you find out about these materials? (Please tick all that apply)

- Through informal conversations with other lecturers
- At department meetings
- At conferences
- Through academic email discussion lists
- On subject-specific Web sites that you know about
- Web searches
- Not applicable
- Other (please specify)

6. Overall, what is the value of consulting other people's materials when designing your own courses, modules or sessions?

OER Impact Study: Sign-up form and preliminary survey

We would now like to explore your willingness to make the learning materials that you create available to other teaching staff.

7. Do you ever share your materials with other teaching staff?

- Yes, frequently
- Yes, occasionally
- No

Feel free to clarify your response:

8. Which of the following do you share, or are you willing to share, with other teaching staff? (Please tick all that apply)

- Images (photographs, pictures, diagrams)
- Audio clips
- Film/video clips
- Course syllabi
- Reading lists
- Handouts
- Lecture notes and/or slides (e.g. if you use PowerPoint presentations)
- Activities/exercises
- Exam questions and/or topics for assignments
- I don't wish to share any materials that I have created
- Other (please specify)

OER Impact Study: Sign-up form and preliminary survey

9. Under what conditions are you willing to share your material? Please rate the importance of each of the following criteria:

	Essential	Very important	Fairly important	Not very important	Not at all important/Not applicable
The material must be only used within my own discipline.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The material must be only used within my own university.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I must be personally acquainted with the user.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The user must have been recommended by someone whose judgement I trust (if I don't know the user personally).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The user must acknowledge me as the original author when displaying the material.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The user cannot pass the material on to a third party.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The user cannot make any modifications to the material.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Feel free to clarify your answer:

10. Through which medium (or media) are you willing to make your material available? (Please tick all that apply)

- Direct personal communication (e.g. if someone asks you)
- In a Virtual Learning Environment, intranet or repository available only to staff in my university
- In a Virtual Learning Environment, intranet or repository available to students in my university
- In a national repository available only to the academic community
- On websites that are available to the general public
- Not applicable
- Other (please specify)

11. To what extent is there a "culture" of sharing and reusing learning materials in your university?

OER Impact Study: Sign-up form and preliminary survey

5. Questions about OER

1. Before receiving the invitation to this workshop, did you know what OER (Open Educational Resources) are?

Yes

No

Not sure

If you answered "Yes" or "Not sure" please tell us what impact (if any) you think they may have on your teaching:

2. Does your university actively promote the *creation* of OER?

Yes

No

Not sure

OER Impact Study: Sign-up form and preliminary survey

6. Sign up

1. I would like to attend the workshop on the following date (tick as many as you are available for)

Thursday 24th March

Monday 4th April

2. Please tick the following to give your consent for us to collect and use data from you:

I understand that this workshop is part of the OER Impact Study, a research project being carried out by the University of Oxford.

I give permission for the work which I do in this workshop, including contributions captured in audio recordings, to be made available to the research team. I understand that reports and publications may be written about this project, and that part of the data I contribute may be quoted, but that nothing identifying me will be made public.

I am willing to appear in photographs and/or video recordings that may be taken during the workshop. I give permission for the image of me that appears in such photographs and/or videos to be used on the project Website and in activities and publications that report on the project (e.g. conference presentations, journal papers). *If you do not wish to be photographed and/or you don't want your photograph to be used, do not tick this option.*

APPENDIX D. LIST OF SUGGESTED SITES

Below is the list of recommended sites with which workshop participants were supplied before starting the hands-on activity.

OER Impact Study workshop: some sites to search for OER

To help you get going, here is a list of sites that might be useful. They are all hyperlinks, so click the one you're interested in and it will open in your browser.

- [OER Dynamic Search Engine](#) - a wiki page of OER sites with accompanied search engine (powered by Google Custom Search)
- [DiscoverEd](#) - 'Discover the Universe of Open Educational Resources'
- [Jorum](#) - 'free learning and teaching resources, created and contributed by teaching staff from UK Further and Higher Education Institutions'
- [OCWFinder](#) - 'search, recommend, collaborate, remix'
- [OER Commons](#) - 'Find Free-to-Use Teaching and Learning Content from around the World. Organize K-12 Lessons, College Courses, and more.'
- [Temeo](#) - 'a knowledge hub that eases a public and multilingual catalog of Open Educational Resources (OER) which aims to support the education community to find those resources and materials that meet their needs for teaching and learning through a specialized and collaborative search system and social tools.'
- [XPERT](#) - 'a JISC funded rapid innovation project (summer 2009) to explore the potential of delivering and supporting a distributed repository of e-learning resources created and seamlessly published through the open source e-learning development tool called Xerte Online Toolkits. The aim of XPERT is to progress the vision of a distributed architecture of e-learning resources for sharing and reuse.'
- [Flickr creative commons search](#) for images.
Note: You must tick the box labelled 'Only search within Creative Commons-licensed content' that appears towards the bottom of the 'Advanced search' screen.

APPENDIX E. WORKSHOP LOG SHEET

The original log sheet was presented as a Word form, with drop-down boxes questions v, vii and viii. To show the answer choices in those questions, the boxes have been changed to text on the second page of this reproduction. Each form contained space for 10 searches.

Name: _____

OER Impact Study Workshop: Record of Searches

How to use this document

Please save this document on your desktop now, giving it a name that includes your own: e.g. 'Fred Bloggs Log.'

Please complete one set of boxes for each search that you undertake. If you come to the end of this document, save a new one from this blank version and call it something like 'Fred Bloggs Log 2'.

Note: It's probably easiest to work on this log in Word's 'Draft' view so that the page breaks are less prominent.

If you are unsure where to look for OER, try starting with one of the sites listed in the document **OER Workshop – List of Sites.doc**.

1.	<p>(i) What are you looking for?</p> <p>(iv) What did you find? (Paste the URL)</p>	<p>(ii) Where did you search for it? (E.g. type 'Search engine' or name of site, or paste the URL)</p> <p>(v) Could this resource be useful to you? Yes, definitely / Yes, probably / Not sure / Not really / No</p>	<p>(iii) What search term did you use?</p> <p>(vi) How did you arrive at this decision? (Possible criteria might be: subject matter, pedagogic fit, provenance, granularity, media)</p>
<p>If you replied 'Not really' or 'No' to question (v), please go on to your next search.</p>			
<p>(vii) How would you embed this resource in your curriculum? In this plan: as a core resource / In this plan: as a supplementary resource / In another teaching plan that I have in mind / Not sure yet: it might come in useful sometime</p>		<p>(viii) What would you need to do to this resource? Nothing: I can use it as it is / Nothing: I'm only using it for ideas / Provide a 'pedagogic wrapper' to contextualise it / Adapt it to suit my context/students</p>	
<p>(ix) Any other comments about this resource:</p>			
2.	<p>(i) What are you looking for?</p> <p>(iv) What did you find? (Paste the URL)</p>	<p>(ii) Where did you search for it? (E.g. type 'Search engine' or name of site, or paste the URL)</p> <p>(v) Could this resource be useful to you? Yes, definitely / Yes, probably / Not sure / Not really / No</p>	<p>(iii) What search term did you use?</p> <p>(vi) How did you arrive at this decision? (Possible criteria might be: subject matter, pedagogic fit, provenance, granularity, media)</p>
<p>If you replied 'Not really' or 'No' to question (v), please go on to your next search.</p>			
<p>(vii) How would you embed this resource in your curriculum? In this plan: as a core resource / In this plan: as a supplementary resource / In another teaching plan that I have in mind / Not sure yet: it might come in useful sometime</p>		<p>(viii) What would you need to do to this resource? Nothing: I can use it as it is / Nothing: I'm only using it for ideas / Provide a 'pedagogic wrapper' to contextualise it / Adapt it to suit my context/students</p>	
<p>(ix) Any other comments about this resource:</p>			

APPENDIX F. WORKSHOP INTERVIEW QUESTIONS

1. Tell me about the plan you are working on. (*Subject/topic; how many learning hours*)
2. Who is it for? (Undergraduates, postgraduates)
3. Describe in a few sentences the setting where your teaching will take place. (In the classroom, away from the classroom, both)
4. What does the plan involve? (e.g. Expected learning outcomes, teaching and learning activities, assessment)
5. Are you creating it from scratch, or are you using an existing plan?

5a If from scratch:

Do you already have any specific materials in mind that you want to attach to this teaching plan?

If yes: Are you the author of these materials? *If you are not the author of the materials:*

How did you get hold of the materials you don't own?

Do you know the person who originally wrote them?

If yes, did you ask that person if you could use them?

Are you planning to make any changes to the materials and, if yes, did you ask the author's permission first?

Do you have any other concerns (scruples!) about using someone else's materials - e.g. attributing the original author, copyright implications?

For what kind of material are you looking now and what do you hope to find among OER?

5b If using an existing plan:

Are you the author of this teaching plan?

If you are the author:

Have you already taught this lesson?

Are there already any materials attached to this teaching plan?

If yes:

Are you the author of these materials?

If no:

How did you get hold of the materials you don't own?

Do you know the person who originally wrote them?

If yes, did you ask that person if you could use them?

Did you make any changes to the materials and, if yes, did you ask the author's permission first?

Did you have any other concerns (scruples!) about using someone else's materials - e.g. attributing the original author, copyright implications?

What do you hope to find among OER?

If you are not the author:

How did you get hold of this plan?

Why did you decide to use it?

How are you going to use it? (as it is, with modifications, just getting ideas)

Are there already any materials attached to this plan?

Are you planning to use them?

Do you have permission to use them?

APPENDIX G. WORKSHOP POST-ACTIVITY QUESTIONS

OER workshop: Post-activity feedback

1. Feedback on your experience today

Now that you have searched for and identified OER that you would like to use in your teaching plans, we would be grateful for your feedback. Please take a short time to tell us your individual opinions before the group discussion.

Thank you!

*** 1. Your name**

*** 2. How easy was it to find OER for the teaching plan that you were working on today?**

*** 3. How well did the materials you found suit your approach to teaching and learning?**

(i.e. If the underlying pedagogy was explicit, did it correspond with your own approach to teaching and learning?) Give us one example if possible.

4. If you found a resource you could use wholesale (i.e. without adaptations), what made it reusable in the context of your plan?

5. If you found material which you could use, but which you would have to adapt first, what kind of modifications would be necessary?

6. Did you have to reject any resource that you found because you wouldn't be able to adapt it (e.g. because it would take too long and/or you don't have the necessary skills)?

OER workshop: Post-activity feedback

*** 7. Please reflect on the value of OER you used in your teaching plan. For example:**

- Does it offer you/your students anything that couldn't be achieved otherwise?
- Do you think that looking for the materials was worth the effort?
- Did you feel that you had to make any compromises when deciding to use a particular resource?

*** 8. Overall, how does your experience relate to your expectations at the beginning of the workshop?**

(You might want to review your "Post-its" before responding to this question.)

Thank you!

APPENDIX H. WORKSHOP FOCUS GROUP QUESTIONS

1. Thinking about the process of looking for and discovering resources, how easy was it to find material that was:
 - a) OER (CC-licenced)?
 - How much of the material you found was CC-licenced?
 - Did it matter to you if the material you found was CC licenced or not? Why yes? Why not?
 - b) Relevant to your subject area in general?
 - How easy - or otherwise - was it to find OER in your subject area in general?
 - Did you find any materials that were not useful for the particular teaching plan you were working on but might come handy in the future?
2. Thinking about the value of OER, do you think you are likely to look for OER to support your teaching from now on?

Why/why not? Probe for reasons under these headings (and anything else that comes to mind):

- **Pedagogic:**
How well the materials fit one's own teaching; expectations of students; do they see a possible danger in using materials that 'will do' instead of creating something that fully reflects their teaching approach.
 - **Logistical:**
Time: quicker (or slower) to create one's own materials.
Strategy: looking for specific materials (like in this workshop) vs. saving useful material in the domain as you come across it and keeping it at the back of your mind for future use
 - **Media:**
Is the medium in which the OER is presented important? (Print, video, audio, an activity that has been designed to run in a particular piece of software)
3. Do you feel you now have enough skills to identify likely useful sources of OER, locate them and decide on their potential value or would you need support?
 - Do you think that these skills constitute an aspect of digital literacy that lecturers should acquire? (*May need to explain what we mean by 'digital literacy.'*)

APPENDIX I. QUESTIONS TO STUDENTS

1. Can you tell me your names, what course you are on and what year you are in?
2. What kinds of sites/online material do you use to help you in your studies?
Prompt: Do you like any particular sorts of things: video, audio, text, multimedia, SlideShare?
3. How do you find those sites/online materials?
Prompts:
How do you search?
Who do you trust the most to tell you about really useful sites/online materials? University lecturers, other students (mates or on your course) how do you share: Facebook?
4. Are there any sites you particularly trust? (*i.e. other universities etc.*)
Prompts:
Why? What makes you trust a particular site?
Do you look for materials online beyond what you have been asked to by your course? (*criteria*)
5. How do you use the stuff you have found?
Prompts:
In coursework?
Do you reference any of the stuff you find in work you hand in?, If not, why not? If so, how do you incorporate it?
6. What does the term Open Educational Resources mean to you?
Are you confident around referencing/copyright? What do you know about copyright?
7. Would you ever voluntarily put any of your coursework online for other people to use?
Sub-question: Why would you?/What motivated you to put your work online?
Sub-question: What would bother you about putting work online?
8. Have you ever been asked to put work online as part of your course?
Prompts:
If yes, ask about motivation for doing so:
Why did the teacher suggest putting the work online?
At what stage was the coursework put online: i.e. final product of the coursework after it was checked for quality by the tutor or was it ongoing work that was online (e.g. blog)?
Who was supposed to be benefiting?
9. How would you feel if the course you have enrolled in was made to a large extent out of materials coming from other universities?