



OTTER PROJECT FINAL REPORT

1. Title Page

Project Information			
Project Acronym	OTTER, University of Leicester		
Project Title	Open, Transferable and Technology-enabled Educational Resources Project		
Start Date	1 May 2009	End Date	30 April 2010
Lead Institution	University of Leicester		
Project Director	Dr Alejandro Armellini (Senior Learning Designer, Beyond Distance Research Alliance)		
Project Coordinator & contact details	Gabi Witthaus Beyond Distance Research Alliance 103-105 Princess Rd East Leicester LE1 7LG Gabi.witthaus@le.ac.uk Tel: (0116) 252-5745		
Partner Institutions	Not applicable		
Project Web URL	www.le.ac.uk/otter		
Programme Name (and number)	UK OER Programme		
Programme Manager	Heather Williamson		

Document Name			
Document Title	<i>OTTER Project Final Report</i>		
Reporting Period	<i>1 May 2009 to 30 Apr 2010</i>		
Author(s) & project role	Gabi Witthaus (Project Coordinator) Dr Alejandro Armellini (Project Director)		
Date	27/04/2010	Filename	OTTERFinalReport27april2010_v2.1.pdf
URL	www.tinyurl.com/OTTER-FinalReport		
Access	<input type="checkbox"/> Project and JISC internal	<input checked="" type="checkbox"/> General dissemination	

Document History		
Version	Date	Comments
1.0	15/03/2010	Submitted to JISC
2.0	26/04/2010	Resubmitted to JISC, incorporating feedback from Programme Manager and updates from project team
2.1	27/04/2010	Resubmitted with links to Research Report corrected

2. Table of Contents

1.	Title Page	1
2.	Table of Contents	2
3.	Acknowledgements	2
4.	Executive Summary	2
5.	Background	3
6.	Aims and Objectives	4
7.	General approach	6
8.	Implementation	8
9.	Outputs and Results	11
10.	Conclusions & Recommendations	16
11.	Implications for the future	18
12.	References	20
	Appendix A – OTTER Partners and OERs at Start and End of Project	21
	Appendix B – Carpe Diem workshops: an overview	24
	Appendix C – A sample Google Analytics results sheet	26
	Appendix D – Put-up and Take-down Guidelines	27
	Appendix E: Summary of key findings from research into stakeholder perceptions of OERs	31
	Appendix F – Plone Screenshots	35
	Appendix G: Mapping of OTTER Outcomes and Impact against JISC Synthesis and Evaluation Framework	37

3. Acknowledgements

The OTTER team would like to thank:

- The Higher Education Academy
- The JISC UKOER Programme staff, especially Heather Williamson, David Kernohan and Lou McGill
- Andrew Comrie (External Evaluator)
- The OTTER Steering Group: Christine Fyfe (PVC, Student Experience and University Librarian, University of Leicester), Louise Jones (Director, Library Services, University of Leicester), Professor David Hawkrige (Emeritus Professor, Institute of Educational Technology, The Open University and Visiting Professor, University of Leicester), Richard Taylor (Director of Marketing, University of Leicester), Helen Lentell (Director of Distance Learning, University of Leicester), Alex Smith (VP Academic Affairs, University of Leicester Students' Union), David Sadler (HE Academy)
- Project Partners (contributors from the departments listed in Appendix A)

4. Executive Summary

OTTER (Open, Transferable, Technology-enabled Educational Resources – see www.le.ac.uk/otter) started in May 2009 and concluded in April 2010. OTTER gathered, collected and created open educational resources (OERs) worth 438 credits, based on the University of Leicester's (UoL's) teaching materials, across a wide range of disciplines. An OTTER institution-supported repository was created at www.le.ac.uk/oer through which the OERs were released, as well as through JorumOpen.

OTTER attracted exceptional support and interest from Senior Management (although they are of course still asking about business cases, direct and indirect gains and losses) and the University Library, as well as commitments from some academics. Typical comments:

- ‘The prize is a more stimulating environment than the lecture hall.’
- ‘OERs are showing me how I could make my course more interesting.’
- ‘It has to be a good thing to share resources.’

Others became interested quite quickly when they saw the benefits – mainly in terms of quality and having materials checked for intellectual property rights (IPR) and released in multiple formats.

OTTER’s deliverables included a flexible quality framework and process for creating OERs from existing materials (CORRE - Content, Openness, Reuse and Repurpose, Evidence – described fully in section 8), a research report on initial responses by students and staff to OERs (see Appendix E), and strong institutional continuity plans involving the development of OERs for a worldwide distance learning programme from scratch, in particular through the UoL contract with iTunes U. From OTTER’s experience the future should include the cascading of institutional learning, evaluation of who is (re)using OERs and why, what types of OERs learners actually use (including learner-generated content) and the impact on saving of staff time and/or improvement of the student learning experience.

5. Background

5.1 OTTER within the UK OER programme

OTTER fitted within the institutional strand of JISC’s OER programme. Topics were drawn from 13 areas (Appendix A). OTTER’s key issues arose in developing and piloting a viable, replicable workflow process for the production of OERs out of existing teaching materials provided by project partners.

5.2 OER release and resource sharing in OTTER’s domain before the project

The UoL had a good track record of making content freely available, dating back to 1993, under the Teaching and Learning Technology Programme (TLTP), the STILE (Student and Teacher Integrated Learning Environment) project, which included an online editor tool as a precursor to today’s wiki-type tools, and an online database tool. STILE contributions from Archaeology, History and Education are mainly available now as web resources, and the university’s Chemistry website contains over 1,000 thermodynamic topics available under an open licence (<http://www.le.ac.uk/chemistry/thermodynamics>), published in 2004 and still in use.

Prior to OTTER, staff shared their theses and research output via the open-access Leicester Research Archive, but the sharing of teaching resources was ad hoc. There was no agreed process for putting up or taking down resources, or for institutional branding of such resources. Individuals engaged in OER production were often unaware of others doing the

same thing. One of OTTER's achievements was to create the university's OER repository, enabling all of UoL's OERs to be gathered under a single umbrella.

5.3 OTTER built on previous work and exploited opportunities

OTTER built on relationships forged between the Beyond Distance Research Alliance (which will be referred to as 'the Alliance' from now on) and university departments through previous projects such as ADELIE¹, MOOSE², IMPALA4T³, WOLF⁴ and DUCKLING⁵. These relationships enabled the Alliance to enter into partnerships - initially with eight and ultimately with 12 departments plus one international partner. Several OTTER partners – Genetics, Education, Student Support and Development Services, and the South African Institute for Distance Education (SAIDE) – had already published their materials: the 'OTTER-isation' process reassured them that their materials had been checked for third-party copyright material, as well as offering them wider dissemination through JorumOpen and other repositories.

5.4 OTTER proposed advancing OER release, important to stakeholders

OTTER proposed advancing OER release by developing procedures for copyright clearance, formatting and release of teaching materials under open licences, and by raising awareness among university stakeholders of issues involved in OER release.

Development of OERs and an institutionally agreed approach to ongoing publication of OERs was important to stakeholders, primarily to help potential students match courses and programmes to their interests and aspirations. The university saw that publication of high quality OERs would enhance its web presence and prestige. Academic contributors felt that their professional reputations would be enhanced by publication of their materials as OERs.

6. Aims and Objectives

6.1 Agreed aims and objectives at the start

OTTER's primary aim was to pilot, analyse and model effective processes for the successful release of highly usable, adaptable, technology-enabled OERs at UoL.

Specifically, OTTER planned to:

- a) Contribute, through effective models for OER release, towards the marketing and positioning of UoL and the UK HE sector among prospective students globally
- b) Modernise, update, tag, categorise and release at least 360 credits' worth of digital materials from at least eight departments, for open use and repurposing.

¹ ADELIE (Advanced Design for E-Learning: Institutional Embedding): <http://www.le.ac.uk/adelie/>

² MOOSE (MOdelling Of Secondlife Environments): <http://www.le.ac.uk/moose>

³ IMPALA4T (Informal Mobile Podasting and Learning Adaptation For Transition): <http://www.le.ac.uk/impala/impala4t/index.html>

⁴ WOLF (Workbased Learners in Further Education): <http://www.le.ac.uk/wolf>

⁵ DUCKLING (Delivering University Curricula: Knowledge, Learning and INnovation Gains): <http://www.le.ac.uk/duckling>

- c) Integrate lessons learned from previous OER experiences to identify the key challenges associated with the clearance of rights, licensing and release of existing resources for free open access and repurposing.
- d) Support individuals, teams and departments to release their digital content for free use and repurposing.
- e) Promote the sharing and reuse of high quality OERs within UoL and across the sector.
- f) Populate, test the affordances of, and inform future versions of JorumOpen and UoL's open repository.
- g) Build capacity and provide evidence, in usable formats, to influence future institutional and cross-sector policy in respect of OERs at UoL and elsewhere.
- h) Widely disseminate OTTER's outcomes locally, nationally and globally, well beyond the duration of the project, through UoL's high-profile presence at international conferences, communities of practice, publications and via Plone, Leicester's institutional OER repository.

These aims remained substantially unchanged during OTTER.

6.2 Final aims and objectives in terms of OERs

Appendix A compares the release of OERs as planned at the time of bidding with the larger numbers of actual OERs produced by the end of OTTER. From this, it can be seen that the list of contributing departments grew from eight to 13 during the project, and the number of credits to be processed increased from 360 to 438.

6.3 Final aims and objectives in terms of technical developments

The main technical developments planned at the start of OTTER were to:

- Publish the OERs in as many formats as possible, including e-book formats
- Use the university's institutional content management system (Plone – see item 8.4.3) as the main repository for the materials, as well as populating JorumOpen and other repositories with the OERs

Three further technical aims and objectives emerged during OTTER to:

- Create RSS feeds for appropriate multimedia OERs and find a solution to large file size for multimedia OERs, in order to enable publishing on iTunes U
- Create a permanent site with its own URL (www.le.ac.uk/oer) rather than a (temporary) project site
- Develop an OER submission tool to handle future requests for making OERs.

6.4 Final aims and objectives in terms of OER practices and processes

OTTER's main aim was to develop and pilot a rigorous workflow process for transforming the partners' teaching materials into OERs. The Alliance committed the dedicated OTTER team to this 'CORRE' process (section 8), thus making minimum demands on partners' time.

6.5 Final aims and objectives in terms of lessons to be learned about OER release

The three central evaluation questions that were to be answered at intervals throughout the project, through the external evaluation process, were:

- a) What has the project done/ built/ achieved, to what quality and how efficiently?
- b) What has been learned or confirmed through development activities?
- c) How has the learning been acted on or fed back on?

We planned to carry out interviews and surveys with stakeholders (students, staff and senior management) to obtain feedback on the OERs and on OTTER's draft documentation describing the approach and methodology being piloted. (See section 9.6.3.)

7. General approach

7.1 Engaging OER depositors

When OTTER started, individual academics (in departments listed in Appendix A) were potential OER depositors. As described in 5.3 above, the Alliance engaged them by building on pre-existing relationships, and stayed in touch with them throughout OTTER. The Alliance engaged new depositors through its Carpe Diem⁶ workshops for course teams, which focused on designing e-tivities for specific courses and supporting departments' learning design. (See Appendix B.)

7.2 Potential uses, and engaging potential users of the OERs

Based on research evidence from other institutions, it was expected that students considering enrolling for courses at UoL would use OTTER's OERs to assist them in making decisions about courses or programmes. In addition, existing UoL students, as well as students enrolled in other institutions were expected to use the OERs in addressing specific knowledge or skills gaps. The OERs were also likely to be used by academics, who could reuse or repurpose them and incorporate them into other learning programmes. (A summary of stakeholder analysis, indicating attitudes towards OERs, can be found in section 9.6.3.)

The OTTER team engaged potential OER users by arranging meetings with students via a Student Union representative, and with academics via existing contacts.

7.3 Sourcing potential OERs and working with potential contributors

The list of envisaged OERs at the time of bidding was based on agreements with individuals and departments. The Alliance, through meetings and telephone calls, reminded them of their commitments and requested their submissions. The agreement with contributors was that the OTTER team would handle all IPR/copyright checks and formatting technicalities. The contributors' role was to submit the agreed teaching materials at the start of OTTER, and then, on completion of the CORRE process (see section 8) in each case, to validate the transformed OERs. This plan was carried out.

7.4 Engaging key stakeholders at institutional level

⁶ Carpe Diem (<http://www.le.ac.uk/carpediem>) is a well-researched, well-rehearsed team-based model for promoting change in learner-centred e-learning design and assessment, institutional capacity building and innovation.

Key internal stakeholders were co-opted onto OTTER's Steering Group – the PVC for Student Experience, the Director of Marketing, a Students' Union representative, the Director of Library Services, and the Director of Distance Learning Development. Besides this high-level involvement in OTTER, stakeholders were to be interviewed and surveyed for their views on the OER development process.

7.5 Technical issues to be addressed

A major technical issue was adherence to general principles of sharability and interoperability through using standards as required by JorumOpen. The Alliance intended that OTTER would release all OERs in appropriate formats to ensure accessibility, easy adaptation and repurposing. Key learner needs such as easy retrieval, editing and linking to, from and within other materials, were particularly important, and OERs were, as far as possible, to be accessible via mobile devices (mobile phones, PDAs, MP3 players and pocket PCs), as well as e-book readers. Audio as well as video content was envisaged, as was content for use in Second Life.

The OERs were to be available for downloading, as well as syndicated content (e.g. through RSS feeds). The Alliance would develop an understanding of the advantages and pitfalls of different platforms for OER sharing, to inform future institutional choices. The use of various publicly available platforms such as YouTube was also to be tested. OTTER also intended to develop mechanisms for search engine optimisation and resource discovery, such as tagging and RSS feeds. (See section 8.3.3.)

7.6 Legal issues to be addressed

A significant component of OTTER was a focus on copyright and IPR clearance, including third-party rights. All OTTER OERs were to be released under suitable open licences. Depending on the discipline, context and type of OER, OTTER would select appropriate open licences, but all licences had to permit free reuse and repurposing.

OTTER expected to have to pay for permission to use some third-party copyright material, but the cost of clearing material for open access was unknown and had to be established.

OTTER planned to deliver transferable models for teams, departments and institutions to understand and address the complexities of IPR and copyright in using open digital content. As part of the long-term sustainability of the OER initiative, OTTER also expected to influence university policy so that systems, processes and support could be put in place that would address IPR and copyright for OER materials developed in the institution.

These issues were to be addressed through the activities of a dedicated copyright administrator, seconded to OTTER from the university's library.

7.7 Organisational issues to be addressed

OTTER had a dedicated team to carry out checks and transformations on the partners' materials, to ensure that they met IPR/copyright requirements, that they were as reusable and repurposable as possible, and that they were made available in a range of electronic formats. (The process by which this was achieved, 'CORRE', is described fully in section 8.) OTTER's Project Plan contained transformative processes shown as 11 work packages:

- WP1: Project management and setup
- WP2: Collection of existing digital material from all partners
- WP3: Clearance of rights
- WP4: Formatting and standardisation
- WP5: Validation with partners
- WP6: Reality check by students
- WP7: Release and testing
- WP8: Tracking
- WP9: Analysis of lessons learned
- WP10: Dissemination (ongoing)
- WP11: Project evaluation and sustainability (ongoing)

OTTER's OERs were to be made available to potential users via the university's own Plone content management site, and later via JorumOpen and other repositories. Users were to be alerted to the OERs' existence through awareness-raising activities with the Students' Union, ad hoc workshops with academics, and Carpe Diem workshops (see Appendix B) run by the Alliance. Evidence was to be gathered internally through surveys and interviews with students, academic staff and senior managers. External evaluation evidence was to be gathered through document review and interviews with the OTTER team.

OTTER was designed to be extremely supportive of the partners who submitted materials to be transformed into OERs. There was a clear understanding from the start that the academics had neither the time (nor, in many cases, the skills) to undertake their own copyright checks or formatting of materials for reusability, and that OTTER would carry out these activities on their behalf, in close cooperation with them. OTTER also planned to develop guidelines during the project to address frequently asked questions – particularly about IPR and copyright.

8. Implementation

8.1 Implementation overview

OTTER followed the work packages as listed in section 7.7, with minor amendments:

- a) The sequence of Work Package 6 and Work Package 7 was reversed, to ensure that the release of OERs would not be affected by any delays in receiving feedback from students during the reality check stage
- b) The reality check was broadened beyond students to include staff and senior management.

Project management and setup went according to plan, except that two staff (the copyright administrator, who was seconded from the Library, and one of the two learning technologists) joined the project four months late.

A major development was the creation of a workflow called CORRE (Content, Openness, Reuse and Repurpose, Evidence), based on OTTER's work packages and outlined at

www.tinyurl.com/otter-corre. The implementation of the CORRE framework is described below.

8.2 The CORRE Model: Content

The content element of CORRE involved collecting existing digital material from project partners and carrying out a brief assessment of the work required in transforming the material into OERs. Collecting existing digital material from OTTER's partners was less straightforward than the team had anticipated, as it emerged that several partners planned to revise their materials before submitting them to be transformed into OERs. Though this indicated commitment to quality, more 'chasing' of partners had to be done by team members than expected.

In assessing the materials submitted, OTTER flagged items to be dealt with in the 'Openness' stage of CORRE: for example, some materials referred to other items (such as a course handbook or a media file that was only available within the institution's VLE) that would not be available to OER users.

8.3 The CORRE Model: Openness

This element of CORRE called for rights clearance, followed by a 'transformation' phase where possible, in which the items flagged during assessment were addressed. The Openness phase also involved digitisation (formatting and standardisation) of the materials. These phases are described below.

8.3.1 Rights clearance

Rights clearance, rigorously carried out by the dedicated OTTER copyright administrator, was absolutely critical to the successful processing of all the materials as OERs: the Alliance sees it as essential to the initiative's sustainability. Every single page, screen or file in the OTTER collection was checked for potential infringement of third party rights. Much of this work was predictable from the start of OTTER, as in, for example, identifying images that were not attributed or that required permission for use. Some unexpected issues also arose – typical examples follow:

- a) More than once, OTTER learned that material that had been submitted by a project partner had actually been written by a consultant. The partner was unsure whether the university had been assigned copyright as part of the writing contract; often permission had to be obtained from the author.
- b) One set of materials could not be used because no contract had been signed assigning ownership to the university.
- c) Another submission was largely based on a published book (written by the author who contributed the material), and OTTER was unable to obtain permission from the publisher to use any part of it as an OER.
- d) Some materials were submitted by academics who had retired from the university, making it difficult to follow up with them, and in one case the author was deceased, but appeared to have used the module text in various published papers.
- e) Many images used in submitted materials included screenshots, for example from Microsoft and Blackboard software: such corporations were unwilling to allow such images to be used.

These issues are being considered in the consultation process around an OER policy for UoL. A draft OER policy for the university has been drawn up for internal discussion.

Perhaps the biggest surprise in the domain of rights clearance was that, in all but one case, major publishers were unwilling to allow us to use extracts of their material – even in return for a fee and full copyright acknowledgement.

8.3.2 Transformation

In the transformation stage that followed the copyright check, the OTTER team's OER evaluator made every effort to render the content as usable as possible by learners and academics in other contexts. This involved occasionally organising the materials into sections with subheadings, correcting typographical errors in the text and removing sections that made no sense in the absence of supplementary materials that were only available to UoL students inside the VLE.

8.3.3 Digitisation (formatting and standardisation)

OTTER published the OERs in as many formats as possible to cater for the many possible ways of reusing and repurposing the materials. Most of the OERs are printed materials published in a range of formats including RTF, MS Word or PowerPoint, PDF and ePub, as well as in HTML. OTTER also used the Wimba Create software to convert MS Word documents into web sites. This work proved to be time-consuming, and the team concluded that it would probably be unsustainable (See 9.6.1); nevertheless, the OTTER partners were delighted with the professional appearance of their materials as OERs.

The final aspect of the openness stage in CORRE was the dissemination and stakeholder engagement activities undertaken by the OTTER team. This was ongoing throughout the project. At the start OTTER intended to organise three large internal seminars to raise awareness about OERs and to invite more academics to participate in the project. After the first seminar on 23 September 2009; however, it became clear that such gatherings were likely to attract those academics who were already involved in the project and that in order to spread awareness beyond the existing project partners, the team would need to meet smaller groups in their departments or course teams. This was achieved through the Alliance's Carpe Diem workshops (see Appendix B), and similar learning design interventions including informal events held at the Alliance's Media Zoo.

8.4 The CORRE Model: Reuse and Repurposing

This element of the CORRE framework involved a series of validation checks to ensure that the materials were ready to be released to JorumOpen:

8.4.1 OTTER team validation

The first step in the validation process was for a member of the OTTER team to check the OER for any obvious errors and ensure that all hyperlinks worked.

8.4.2 Author validation

After the OTTER team validation, the authors were invited to check the OER and confirm that they were happy with them. OTTER devised a short form and sent the link to authors (<http://tinyurl.com/oerstaffsurvey>), giving them a week in which to respond, before releasing the OERs to JorumOpen. This enabled the OTTER team to address any concerns expressed by the authors and to feel confident in releasing the OERs.

8.4.3 Release to JorumOpen and other repositories

The release and testing phase involved using existing resources within the university, primarily the institution's Plone system. Plone is an open-source content management system, not ideally suited to being a repository but the most practical option available; it served the function well. Plone enabled us to upload the OERs and release each one on a web page which was contextualised by an abstract, along with metadata and key words. The OTTER OERs reside on the Plone site (www.le.ac.uk/oer), and are accessed from JorumOpen via web links. The key advantage to the Plone site hosting all the OERs is that they can be easily updated without needing to be re-uploaded onto JorumOpen. In addition, the OERs are available for both viewing and downloading on the Plone site.

8.4.4 Reality check by stakeholders

The reality check by stakeholders began at the stage where the materials were uploaded to Plone, but continued once the materials were released to JorumOpen. Preliminary findings of research with students, staff and senior management have shown positive attitudes towards the OERs, and enthusiasm among all stakeholders for continuity of the initiative. A draft report is available at www.tinyurl.com/OTTER-ResearchReport. This link will contain the latest version of the report as it is updated light of new findings over the next six months.

8.5 The CORRE Model: Evidence

The final stage in the CORRE process is evidence. Tracking is the main activity here. OTTER's Plone site was enabled with Google Analytics, which tracks access to the repository from global sources. (See Appendix C.) In addition to the OERs being placed in JorumOpen, each OER has its own Web page which includes a small abstract. This helps increase its visibility by being Google-searchable via the words on the abstract page. Google Analytics informs us of the number of visits and page views from different geographical locations. In addition, some OERs were made available to view before download on a second web server at the university; this server has a local tool for analysis of visits which provides more detailed tracking information. OTTER also implemented a satisfaction survey at the point of download to assess the value and usefulness of OERs (<http://www2.le.ac.uk/projects/oer/oer-satisfied-survey>). Data that is gathered from this source will be included in the ongoing updates to the research report mentioned in item 8.4.4.

9. Outputs and Results

The table below lists the deliverables as anticipated in the Project Plan, along with information as to where to find further information on each one.

Deliverables (From Project Plan)	Comments
1. 360 credits' worth of OERs in appropriate formats	438 credits delivered through JorumOpen and UoL's repository at www.le.ac.uk/oer . See also Appendix A and section 9.1.
2. A sustainable model for the release of existing learning materials as OERs at team, departmental and institutional levels	CORRE, available at www.tinyurl.com/otter-corre . See also section 8.
3. Piloted processes to provide evidence for institutional policy changes and support for the release of OERs	Extensive experience in the application of CORRE, with guidance for transferability. See also sections 9.3, 9.4 and 9.5.
4. A set of standards, processes and policies to support the continuation and extend the volume and quality of the release and dissemination of OERs	<ul style="list-style-type: none"> ▪ An internal draft OER policy has been developed for consultation with the appropriate UoL committees. ▪ See Appendix D for OER put-up and take-down guidelines.
5. Evidence of use of the OTTER OERs, including user cases with feedback.	See item 9.6.3 and Appendix E; also www.tinyurl.com/OTTER-ResearchReport
6. Documentation to support the release of future OERs	OTTER web site: www.tinyurl.com/OTTER-aboutOER
7. A comprehensive OTTER interactive web site and blog.	OTTER web site: www.le.ac.uk/otter OTTER blog: www.projectotter.wordpress.com
8. Reports to the funders.	Completed. Final Report available at www.tinyurl.com/OTTER-FinalReport
9. A minimum of two academic papers for submission to refereed journals and four conference papers presented within 18 months of the start of the project.	<ul style="list-style-type: none"> ▪ Chapter 10 of <i>Transforming Higher Education Through Technology-Enhanced Learning</i> (HE Academy, 2009, http://bit.ly/9DhrOj) contains a section on OTTER. ▪ Another paper is in preparation for the <i>Journal for Computing in Higher Education</i>. ▪ Conference presentations have already exceeded the promised four.
10. Three OER awareness-raising events involving UoL staff and students.	<ul style="list-style-type: none"> ▪ Internal OER event at UoL on 23 Sept 2009. ▪ Learning Futures Festival 2010 (http://bit.ly/ZEKPH). ▪ Carpe Diem workshops in the Media Zoo. ▪ PANTHER seminar (3 March 2010) (www.tinyurl.com/beyonddistance-panther)
11. An end-of-project OER symposium, in coordination with JISC and the HE Academy.	Planned for mid 2010, in collaboration with the funders.

9.1 Open Educational Resources released

Appendix A shows departments that have contributed to the project, and the OERs generated. The project has made available a broad range of resources available, from printed documents to PowerPoint presentations to Second Life artefacts, to entire web sites. The OERs were authored by UoL staff members and contractors, and were submitted by a range of UoL departments including Politics and International Relations, the Beyond Distance Research Alliance, Psychology, Genetics, Law, the Institute for Lifelong Learning and Staff Development, as well as an international partner, the South African Institute for Distance Education. For an indication of notional hours' learning, multiply the number in the 'Credit weighting' column by 10. All items can be accessed through JorumOpen and the UoL's Plone repository at www.le.ac.uk/oer.

In addition to JorumOpen, the OTTER OERs appear in the Nottingham Xpert repository (<http://xpert.nottingham.ac.uk>) through a feed (<http://www2.le.ac.uk/projects/oeer/oers/oers-jorum/RSS>). The following other aggregators and repositories were investigated, but had to be rejected for the reasons given below:

- The Open Courseware Consortium at MIT (<http://ocw.mit.edu>) – this body charges a £500 fee for inclusion. The OTTER team felt that this contradicted the principles of openness that underpin the OER movement.
- OER Commons (www.oercommons.org) – no RSS feed available; each OER would need to be added manually, which is not sustainable for the OTTER project.
- HumBox (the UK Humanities OER repository, at www.humbox.ac.uk) – as for OER Commons, there is no RSS feed available.

9.2 Technical developments

OTTER's OER Repository used an existing web service at the university. UoL's Web Team placed the university's web site on a web serving system using an open source content management system called Plone, which supports the easy creation of content folders and Web pages by individual authors and has a content management system. Plone supports a wide variety of file formats including those required by OTTER's OERs, namely: html, RTF, PDF, ePub and audio and video files. Plone's workflow supports the private publishing of an OER, to be signed-off by the author, before final publishing for 'world' access and inclusion in JorumOpen.

Plone's wide and varied content types also support online surveys and this tool was used to solicit responses from OER providers and users. The same tool will be used for future submission of OERs by academic staff for consideration for inclusion in the repository.

9.3 Innovations in practices/processes around OERs

OTTER has generated a systematic and replicable set of practices and procedures for the creation and management of OERs, designed to be sustainable after OTTER ends.

a) The CORRE framework has been central to the OTTER team's successful transformation of the submitted teaching materials into OERs. This framework is described and illustrated at: www.tinyurl.com/otter-corre.

b) A detailed checklist for CORRE was used throughout OTTER to help the team stay on track with the workflow. A sample of this checklist can be seen at: <http://projectotter.files.wordpress.com/2009/08/corre-detailed-checklist.pdf>

c) To manage the schedule, OTTER team members all participated in regularly updating the Project Schedule Monitoring Sheet. This was managed centrally by the Project Coordinator, and was updated by the team using the Adobe Pro 'Review' application. An exemplar is available at: <http://tinyurl.com/otter-schedule>.

d) To provide team members and other stakeholders with an 'at-a-glance' view of the project status at any given time, the team regularly produced Project Progress Presentations. An

exemplar can be seen at <http://tinyurl.com/otter-progress>.

e) Guidelines have been developed, for use within the institution, for putting up and taking down OERs (Appendix D).

f) A draft OER policy has been generated and discussed with the OTTER Steering Group. The draft policy is now being circulated internally for further consultation with stakeholders.

g) The Alliance has integrated OERs into the Carpe Diem workshop design, so that all its learning design workshops now include a focus on designing for openness from scratch. The Alliance is also modelling this approach in all its dissemination activities: for example, it is publishing all presentations from the Learning Futures Festival 2010 and the recent PANTHER seminar (www.le.ac.uk/departments/beyond-distance-research-alliance/projects/panther) as OERs.

9.4 Guidance on OER release and associated issues and processes

a) In August 2009, OTTER was launched to the ELKS (E-learning Knowledge Sharing) community. ELKS is a community of expertise for UN-GAID (UN Global Alliance for ICT and Development) managed by the Alliance at UoL. A short slide show was produced for this event explaining what OTTER aimed to do: <http://connect.le.ac.uk/opennessoersandotter>

b) On 23 Sept 2009, the OTTER team ran an internal seminar for academic staff at UoL. Documentation for this seminar included OER FAQs for academics, plus a presentation on copyright issues and how OTTER deals with them, as well as a presentation from a guest speaker, Tina Wilson from the OU, on the challenges and opportunities with OERs based on the OU's experience. All of these presentations are available as OERs at www.le.ac.uk/otter/otter-dissemination/open-educational-resources-at-leicester-23-september-2009.

c) The documents listed in 9.3 are available for use by academics and management at the university to enable continuity of the OER programme.

d) Guidelines for formatting documents for e-readers have been developed, in collaboration with colleagues on the DUCKLING project (www.le.ac.uk/duckling), and can be accessed from www.le.ac.uk/otter/about-otter-1/documentation.

9.5 Dissemination outputs not listed in the previous item

Further dissemination outputs can be found at www.le.ac.uk/otter/otter-dissemination. These include presentations given at the University of Nottingham (October 2009), Online Educa Berlin (Dec 2009), the Alliance's Learning Futures Festival (Jan 2010), a paper for the Open University's SCORE project given in Bristol (March 2010), the OER10 Conference at Cambridge (March 2010), and participation in events organised for the dissemination of the UK OER projects by the funders.

9.6 Outputs from the evaluation process and lessons learnt

External evaluation reports are available at www.le.ac.uk/otter/about-otter-1/external-evaluation.

9.6.1 Lessons learnt: technical development

OTTER learnt that the publishing of print-format OERs in such a rich variety of formats may be unsustainable. While a choice of formats provides ease of use for learners or academics who wish to use the OERs, publishing in so many formats is expensive. For sustainability of OER development, the team recommends using the format in which the academic submits the material (e.g., PowerPoint, MS Word or PDF) as well as RTF, which will enable other users to modify the OERs as part of the repurposing process. OTTER has developed guidelines for formatting of documents for e-readers.

OTTER learnt, too, that the university's Plone system is suitable for publishing and releasing OERs. While not designed as a repository tool, it is adequate to the task and serviced all the project needs as outlined at the start. The fact that this system was integrated into the university's technology infrastructure also ensured sustainability. In future, Plone is likely to be set up so that the CORRE workflow is built in, with signoffs. A template could be designed for academics to help them work through the submission process, thereby reducing some of the workload currently carried by the OTTER team. (The screenshots in Appendix F show the parts of the Plone system that are visible only to administrators.)

9.6.2 Lessons learnt – screening and transformation of OERs

The following lessons were learnt about the nature of the materials that academics submitted to be processed as OERs:

- a) Most of the teaching materials were predominantly text based with very little use of technology to enhance interactivity and provide visual cues for learners
- b) Materials provided were heavily linked to information available through Blackboard and therefore not accessible by external users
- c) For most materials it was unclear whether the target audience was formal learners or informal learners
- d) User level was in some cases not clearly stated (e.g., general level, UG or PG)
- e) Pedagogy used was very instructional and in many cases the materials did not have clearly stated learning goals, outcomes or assessment to help users reflect on their learning.
- f) Materials appeared to be more focused on disciplinary content; they neglected teaching and learning approaches and the context in which they would work best.
- g) The structure of the materials in terms of sequencing and pacing was sometimes confusing
- h) Images from external sources were found in some cases without appropriate referencing
- i) The uses of terms such as modules, tutor and units differ across different learning contexts
- j) Many hypertext links were not active.

A significant amount of time was therefore spent by the OER Evaluator on eliminating these problems during the transformation process. This has implications for any sustainability plan that is implemented after the completion of OTTER, and is being considered in the development of proposed policies and procedures for the university.

9.6.3 Lessons learnt – stakeholder research

Evidence of stakeholder engagement with the OTTER OERs, and with the broader concepts relating to OERs, has been gathered via surveys and interviews. The main findings to date are summarised in Appendix E. A draft research report, which contains more detailed information on the views of students, academic staff and senior management, can be found at www.tinyurl.com/OTTER-ResearchReport.

9.6.4 Lessons learnt – legal

The main lessons learnt in terms of IPR and copyright are summarised in a blog post at <http://projectotter.wordpress.com/2010/02/23/education-education-education>. The title of this entry ‘Education, education, education!’ summarised the key point – most academics have a lot to learn about the legal aspects of OERs. To this end we published a list of resources for academics (www.le.ac.uk/otter/about-oers/copyright-guidance-and-resources), and a presentation on IPR and copyright at <http://tinyurl.com/otter-guidelines>.

The OTTER project also taught us that publishers are very far from allowing the re-use of their text and diagrams in freely open and re-usable materials, despite the fact that it is likely to drive people to their sites and their books. (See section 11.1.)

9.7 Mapping OTTER’s outcomes and impact to the JISC Synthesis and Evaluation Framework

The OTTER outcomes and impact are described in Appendix G, in relation to key issues in the JISC Synthesis and Evaluation Framework.

10. Conclusions & Recommendations

10.1 Summary

OTTER has contributed to JISC and the Academy’s UK OER programme by producing over 400 credits’ worth of high quality OERs, along with a replicable model for OER development. Preliminary evidence gathered from stakeholders indicates that there is a high level of commitment from stakeholders towards supporting the ongoing development of OERs in the sector.

10.2 Awareness raising & marketing

a) Potential (currently unproven) for demonstrating excellence either as an institution or in a ‘pocket’, e.g. a specific subject, cutting edge research, generic learning materials, specific professional or industry, or mode of delivery: location, distance, work-based, especially to a world wide market. (Typical stakeholder cng and maximise use of our resources;’ ‘... find money to pay for this...it’s very valuable to have good resources...and teachers’.)

b) Wide ‘philosophical’ and practical appeal to learners and potential learners. (Typical comments: ‘I have a 3-hour commute to work when I could study;’ ‘The university could reach-out to a greater spectrum;’ ‘The university should say that it’s promoting this free and

open style of learning;’ ‘Need to reach out to others, not only in the university but through media’.)

10.3 Positive Institutional change drivers

- a) Very new thinking about the choice and development of teaching materials, and the potential to build in new ideas of quality, sharing and openness. (Typical comments: ‘Good materials... formal recognition’.)
- b) Potential money saving in long term – multiple use of materials: design once, deliver many times.
- c) Combination of top down (policy, support, resources, reward and recognition) with appeal of openness and time saving for academics resulting in transformational behaviours
- d) High level of support and interest from students. (Typical comments: ‘Great for revision;’ ‘Good for grasping basic concepts’.)

10.4 Higher Education sector

- a) The OTTER-produced model of quality checking and release of OERs is available to share widely, for testing and contextualisation by others, and now embedding OERs in technology enabled learning design and delivery.
- b) OERs are better, quicker and easier to develop from scratch (OTTER was based on conversion of ‘existing teaching materials’, as requested by the call). Designing materials with OER production in mind would help prevent many problems and save time.
- c) Academic staff are insufficiently aware of a wide range of issues including technical matters and IPR/copyright when creating learning materials. This is now a key and urgent issue for training, development and policy.
- d) Staff need appropriate support to include OERs in their teaching, especially for online and/or distance learners rather than ‘writing’ courses or ‘outsourcing’. Any learning design support that is offered by the institution also needs to incorporate a focus on using existing OERs.
- e) Members of the teaching community have genuine concerns about the publication of their teaching materials as OERs. They need to familiarise themselves with the literature that has become available through the UK OER programme, such as the FAQ sheets, presentations and guidelines available on the OTTER and JISC websites, to gain a better understanding of what it means to create OERs.
- f) We have very seldom encountered academics using OERs from other sources in their course design. Identifying suitable OERs for incorporation into course design could free up time for more research and teaching activities.

10.5 Recommendations for the learning community

a) Feedback from learners, lecturers and tutors is essential for the ongoing development and improvement of OERs. We would urge all who use OERs to take every opportunity to give feedback to the creators of OERs.

10.6 Recommendations for the research community

a) The focus in the UK OER projects was on supply-led production of OERs. More research needs to be carried out into the ways in which learners and educators around the world are using OERs. It would also be useful to research the ways in which future OERs might be able to meet identified learning needs.

b) How OERs are going to be used outside of the release institutions is as yet unproven, but this should be researched very soon.

c) Need to look beyond the obvious platforms for releasing OERs and alerting potential users to their existence, e.g. use social networking sites.

10.7 Recommendations for JISC and the Academy

Based on the achievements by the UK OER programme so far, we strongly recommend continuation through longer-term projects, focusing on the following outcomes:

- a) Cascading the skills throughout the sector
- b) Increasing the range and quality of OERs available
- c) Researching the impact of OERs
- d) Enhancing visibility of OERs
- e) Researching and applying standards to OER production
- f) Embedding OERs into curricula through learning design

Item 11.3 contains more detailed recommendations.

11. Implications for the future

11.1 General implications for the sector

OTTER found that publishers were unwilling to discuss having their texts used in OERs, gave blanket refusals, had very long response times and did not understand the concept of Creative Commons licences. The sector needs to tackle this and create an enabling pathway.

‘Beyond Jorum Open’: iTunes U is currently probably the most appropriate resource for reaching a wider audience, for multi-media OERs. Institutions approaching iTunes U are advised to assemble a multi-professional project team of five FTEs – almost certainly not viable in the current climate or with current levels of HEI commitment.

11.2 The future of OTTER and OERs at UoL

OTTER is enjoying interest and support in UoL through its achievements and a high level of commitment from senior managers. Sustainability plans are in place through the institutional

OER repository and policy discussions commencing, linked to the recent signing of a contract with iTunes U and the intention for Beyond Distance to commence its own Masters programme based around OER resources from October 2010. Further, Professor Salmon's role on the HEFCE Online Learning Task Force has generated interest in OTTER as an example of an institutional transformation project and its potential impact on promoting UK HE and exporting learning.

Extensions have also been secured for two OTTER team members to enable continuation of the OER development work for six months. However, in the current climate, it is unlikely that the project team will be able to secure any significant extra internal resource to carry out substantial further developments in the long term. On this understanding, the OTTER team has obtained the Steering Group's support for continuity of the OER work by allocating the key roles and responsibilities associated with OER development are allocated to existing University of Leicester staff. An OER team, comprising at least an IPR and Copyright Officer and a Learning Technologist, will conduct only the critical components of the CORRE quality process (described at www.tinyurl.com/otter-corre).

The aim of the extensions is to ensure that as many of the following benefits as possible are taken forward after the end of the funding:

- a) Ongoing OER evaluation.
- b) Range of OERs: more disciplines, more materials, greater scope.
- c) OERs in learning design activities, e.g. through Carpe Diem workshops
- d) Continuity and sustainability at UoL and beyond: for OERs to become embedded (production, quality enhancement, learning design, review), we need to continue gathering evidence of use and impact.
- e) Enhancement of the CORRE quality process (www.tinyurl.com/otter-corre): based on the additional evidence, the CORRE framework could be further enhanced and disseminated.
- f) Automation of the OER submission process: the OTTER project harvested OERs from partner departments which were processed via the CORRE framework and uploaded onto the institution's OER repository (www.le.ac.uk/oer). The repository needs to be developed further to include an automatic OER submission process, including the collection of all appropriate metadata. All such submissions would then be, as now, processed through CORRE before final release.
- g) External OER portals & RSS feed support: the contents of UoL's repository should be added to all appropriate external OER portal sites to enhance the presence and visibility of Leicester's contribution. In addition, appropriate feed data will be produced to ensure an effective and stable link between JorumOpen and Leicester's Plone CMS.
- h) iTunes U: the University's support of iTunes U will be delivered via the OER repository and its appropriate RSS feeds.

11.3 Extending the impact of the UK OER projects

Four scenarios have been proposed for sharing the lessons learnt with other institutions and extending the impact of the UK OER projects:

Scenario 1: scaling up projects such as OTTER and transferring lessons learned across the UK HE and FE sectors. The aim of this project would be to enable other HEIs and FEIs to develop and release high quality OERs in an efficient and sustainable way. This would be achieved by adapting and applying OTTER's deliverables (e.g. CORRE) and lessons learned in each context, building capacity for OER development locally, enabling partners to pilot and embed processes for OER production and offering partners support in OER policy development.

Scenario 2: effective integration of existing OERs in curriculum design. The aim would be to enable UK partners to make effective and innovative use of existing OERs in their curricula. This would be achieved by supporting institutions in the development of OER-based curricula, and equipping partners with the knowledge and expertise to cascade an OER-based curriculum model in their contexts.

Scenario 3: creating employer-friendly OERs. The aim would be to generate employability-friendly curricula through the creation, adaptation and release of FE and HE OERs with direct input from employers. This would be achieved by engaging with The Leading Edge at Leicester and a cross-section of employers from different sectors. Stakeholders would have hands-on input in the design, development, pilot and release of industry-facing OERs suitable for FE and HE.

Scenario 4: OERs for employers. The aim would be to generate OERs suitable for adaptation and release to FE and the employment sector, to underpin the skills requirements of national initiatives such as the Leitch Report: 'Prosperity for all in the global economy - world class' (<http://tinyurl.com/leitchreview>). This would be achieved by identifying departments within UoL who are involved with employer engagement, determining their immediate needs for OERs in areas of key skills, such as numeracy, literacy and time management, and identifying other institutions involved within our existing partnerships.

12. References

OTTER's dissemination: www.le.ac.uk/otter/otter-dissemination

OTTER blog: <http://projectotter.wordpress.com/>

Quality process model: www.le.ac.uk/otter/about-oers

Appendix A – OTTER Partners and OERs at Start and End of Project

	Source of OERs (module names or topic areas) at start of project	Source of OERs (module/ unit names or topic areas) at end of project	Level	Indicative credit weighting at start of project	Revised credit weighting at end of project
1. Beyond Distance Research Alliance	<ul style="list-style-type: none"> ▪ Learning Futures, strategies and scenarios for the future ▪ Learning Design ▪ E-moderation, e-tivities and the 5-stage model ▪ Second Life artefacts and resources. 	<ul style="list-style-type: none"> ▪ Learning Futures, strategies and scenarios for the future ▪ Learning Design ▪ E-moderation, e-tivities and the 5-stage model ▪ Second Life artefacts and resources. ▪ StartingUni ▪ Carpe Diem ▪ Introduction to UNIX ▪ Introduction to HTML ▪ Introduction to C Programming 	PG	12	40
2. Archaeology and Ancient History	<ul style="list-style-type: none"> ▪ Archaeological Theory (Second Life artefacts). 	<ul style="list-style-type: none"> ▪ Archaeological Theory (Second Life artefacts). 	UG	3	3
3. Education	<ul style="list-style-type: none"> ▪ Introduction to Applied Linguistics and TESOL ▪ Phonetics and Phonology 	<ul style="list-style-type: none"> ▪ Introduction to Applied Linguistics and TESOL ▪ Phonetics and Phonology 	PG	25	17
4. Law	<ul style="list-style-type: none"> ▪ Company Law ▪ Financial Services Crime 	<ul style="list-style-type: none"> ▪ Company Law (PG) ▪ Company Law (UG) ▪ Financial Services Crime 	UG & PG	35	35
5. Politics and International Relations	<ul style="list-style-type: none"> ▪ The Art of Negotiation ▪ Ascent to Pre-eminence: the United States Emergence as a Global Power 1898-1948 ▪ Visions of the Modern American Presidency ▪ American and the World: US Foreign Policy ▪ Dissertation writing 	<ul style="list-style-type: none"> ▪ The Art of Negotiation ▪ Ascent to Pre-eminence: the United States Emergence as a Global Power 1898-1948 ▪ Visions of the Modern American Presidency ▪ American and the World: US Foreign Policy ▪ Dissertation writing 	PG	180	180
6. Psychology	<ul style="list-style-type: none"> ▪ Selection and Assessment ▪ The Psychology of Organising 	<ul style="list-style-type: none"> ▪ Training and Development: Introduction and Overview 	PG	80	35

	<ul style="list-style-type: none"> ▪ The Individual at Work ▪ Ergonomics 	<ul style="list-style-type: none"> ▪ Occupational Psychology and Training Unit 1 ▪ Personnel Selection & Assessment (PSA) ▪ Introduction to Selection & Assessment ▪ Ergonomics ▪ Individuals at Work 			
7. Staff Development Centre	<ul style="list-style-type: none"> ▪ Introduction for Lecturers New to Teaching in Higher Education 	<ul style="list-style-type: none"> ▪ Introduction for Lecturers New to Teaching in Higher Education 	PG	5	5
8. Student Support and Development Service	<ul style="list-style-type: none"> ▪ Applying for Jobs ▪ Careers Service Resources ▪ Job Hunting ▪ Options After Graduation ▪ Career Action Plans ▪ Study, Presentation, Writing, Research, Numeracy and IT Skills. 	<ul style="list-style-type: none"> ▪ Applying for Jobs ▪ Career Planning ▪ Critical Student ▪ Grammar Guides ▪ Job Hunting ▪ Job Hunting Equal Opportunities ▪ Numerical Skills ▪ Presentation Skills ▪ Research Skills ▪ Study Skills ▪ Writing Skills 	UG & PG	20	7
9. Genetics	Joined OTTER after start of project	<ul style="list-style-type: none"> ▪ Developmental Genetics ▪ DNA Genes and Chromosomes ▪ Gene Expression and Regulation ▪ Genomics and the Human Genome Project ▪ Making and Running an Agarose Gel ▪ The Cell Cycle, Mitosis and Meiosis ▪ Using a Micropipette 	UG & PG	0	8
10. Institute for Lifelong Learning	Joined OTTER after start of project	<ul style="list-style-type: none"> ▪ Strategic Planning ▪ Researching & Managing Information 	UG	0	40
11. Media and Communication	Joined OTTER after start of project	<ul style="list-style-type: none"> ▪ Key Issues and Approaches to Media Studies (2 units) ▪ Media History and Social Regulation (2 Units) ▪ The Study of Media Audiences 	UG & PG		40
12. Criminology	Joined OTTER after start of project	<ul style="list-style-type: none"> ▪ Foundation Degree. Security and Risk 	UG &	0	8

Project Acronym: OTTER
 Version: 2.1
 Contact: Gabi Witthaus
 Date: 27 Apr 2010

13. SAIDE (South African Institute for Distance Education)		Management : Unit 2: Theorising Risk	PG		
		▪ MSc Unit 8: Technologies of Control			
	Joined OTTER after start of project	▪ Supporting Distance Learners	PG	0	20
Total				360 (min)	438

Appendix B – Carpe Diem workshops: an overview

Seize The Day!⁷

Carpe Diem is a well-researched, well-rehearsed team-based model for promoting change in learner-centred e-learning design and assessment, institutional capacity building and innovation.

At the heart of Carpe Diem is a two-day workshop in which discipline-specific course teams, in collaboration with subject librarians and learning technologists, plan, implement and review student-centred e-learning designs, focusing on learner activity, group work and assessment for learning. By the end of the second day, course teams have a blueprint and storyboard for their course, a set of peer-reviewed online learning activities (or e-tivities) running on their institutional virtual learning environment (VLE), a transferable model for e-tivity design and a practical action plan.

The Carpe Diem process comprises:

- **A pre-workshop meeting** for motivation and preparation. Our facilitator will meet with core members of the course team to clarify the aims of the course they intend to design for, explore what material already exists and what ideas the course team have agreed on.
- **The two-day Carpe Diem workshop:** The practical workshop involves a small course team in a single discipline (4 to 20 participants), a subject librarian and a learning technologist. The workshop takes place on two consecutive days, normally from 10 to 4.30. All team members must attend on both days. The workshop is run in a computer lab. At the University of Leicester, they are hosted by the [Media Zoo](#).
- **Follow-up meeting** to review the latest state of the online course with the course team, and fine-tune the work done at and since the workshop. This normally takes between half a day and one day. It is conducted in a computer room.

The Carpe Diem process:

- achieves successful, productive, collaborative working between academics, tutors, learning designers, librarians and technologists;
- exploits low-cost, high-impact technologies;
- focuses e-learning on learner activity and group work;
- is practical, outcomes-based;
- is based on 20 years of research into low-cost networked learning and five years of researching, developing and testing;
- offers a high return on investment of a small amount of time;
- reinforces the concept of *design once, deliver many times*.

⁷ See Carpe Diem web site: www.le.ac.uk/carpediem

Carpe Diem is suitable for:

- the design of new courses and re-design of existing ones;
 - campus, blended and distance modes;
 - any level (e.g. HE, FE, lifelong learning, work-based learning, etc.);
 - any short course, unit, module or programme;
 - any discipline;
 - any VLE.
-

You will need:

- a course team willing to commit to two full days of their time;
 - a module or programme the team needs to design, or an existing one that needs re-vamping;
 - access to the electronic resources that the team will use in their course, as well as the ‘module specification’, which should include details such as learning outcomes and assessment procedures;
 - a ‘reality checker’, who will join in for an hour at about 1pm on Day 2 of the workshop. Their role is to review and offer feedback on the work done by the course team.
-

References for further reading

Armellini, A. and Jones, S. (2008) Carpe Diem: seizing each day to foster change in e-learning design. *Reflecting Education*, Vol 4 (1) (pp. 17-29). Available at: <http://tinyurl.com/58q2lj>.

Salmon, G.; Jones, S. and Armellini, A. (2008) Building institutional capability in e-learning design. *ALT-J, Research in Learning Technology*, Vol 16 (2) (pp. 95-109).

Appendix C – A sample Google Analytics results sheet

Content Detail:

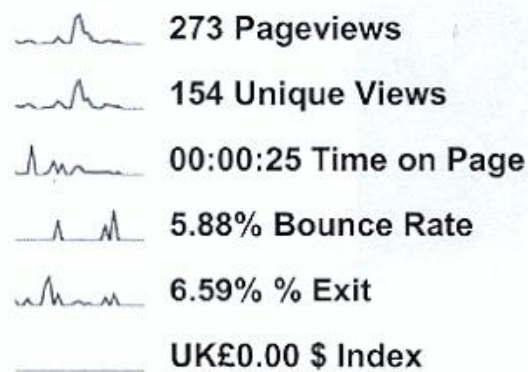
Feb 15, 2010 - Mar 17, 2010

/projects/oer/oers



This page was viewed 273 times

Visit this page Analyze: Content Detail Content /projects/oer/oers None



Navigation Analysis

Navigation Summary

How visitors found your content

Entrance Paths

Paths visitors used to get to your content

Landing Page Optimization

Entrance Sources

Top sources per page

Entrance Keywords

Top keywords per page

Click Patterns

Site Overlay

Click data on top of your website

Try Website Optimizer

Increase conversions by testing different content.

Appendix D – Put-up and Take-down Guidelines

1. The need for put-up and take-down guidelines

The purpose of this document is to clarify the OTTER team's current practice and approaches to the production, release and removal of OERs available through UoL's [OER repository](#). Not having these guidelines could:

- Threaten or undermine the university's reputation
- Weaken the university's position in the event of a legal challenge
- Compromise quality assurance of the OERs and their further enhancement.

2. Why there is a gap

The university currently has a policy on '[Open Access](#)' focused on research output through the Leicester Research Archive (LRA). This Open Access mandate does not cover teaching materials. The number of OERs and size of the repository currently available through [OTTER](#) require clear guidelines for production, release and take-down of resources, on the basis of which contributors and support colleagues can operate.

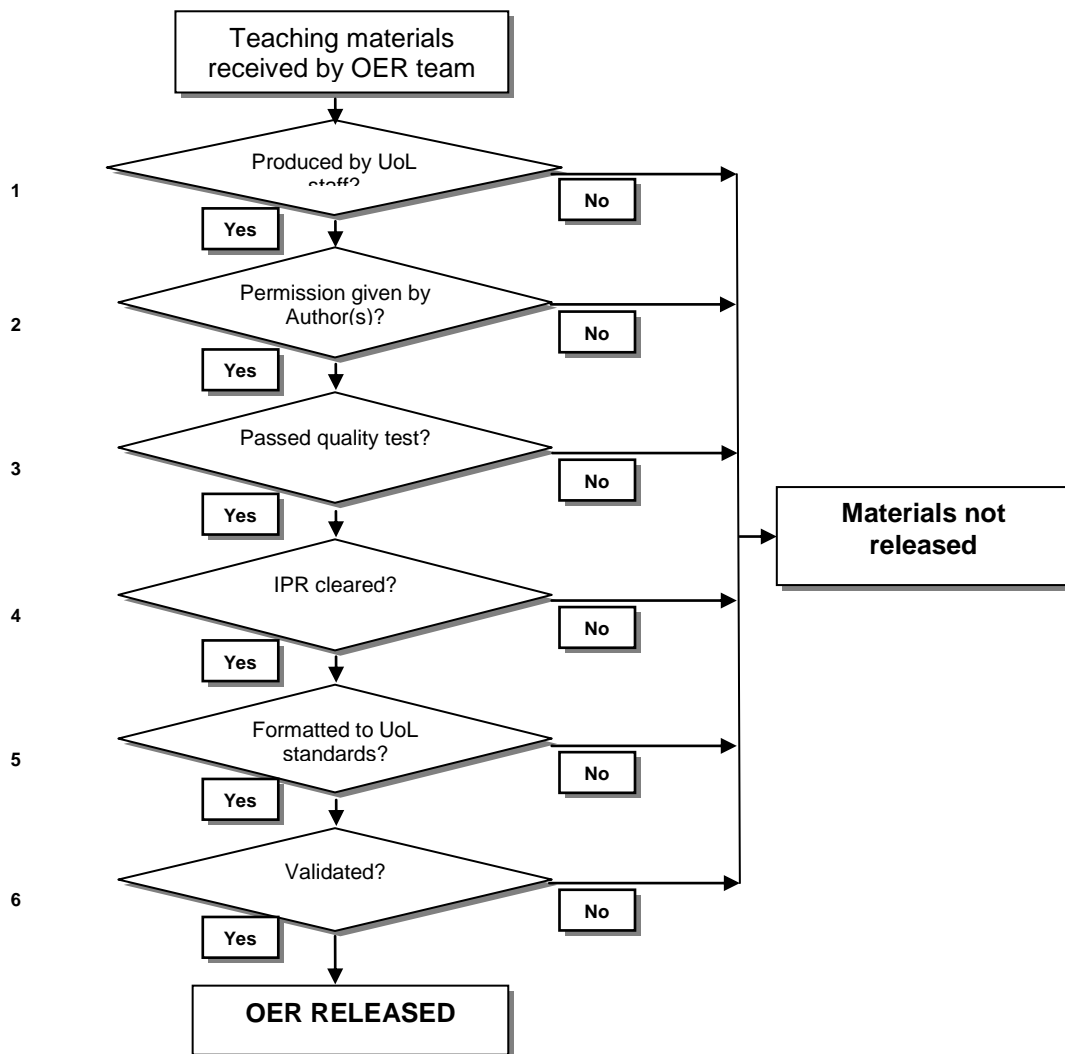
3. Principles

These guidelines are based on the following principles:

- The legality of making OERs freely and openly available
- Transparency of the process of releasing and taking down OERs
- Quality assurance of the process of producing OERs
- Sustainability and usability of OERs
- Consistency between research and teaching outputs
- OERs as a tool for enhanced institutional visibility

4. Process for releasing OERs

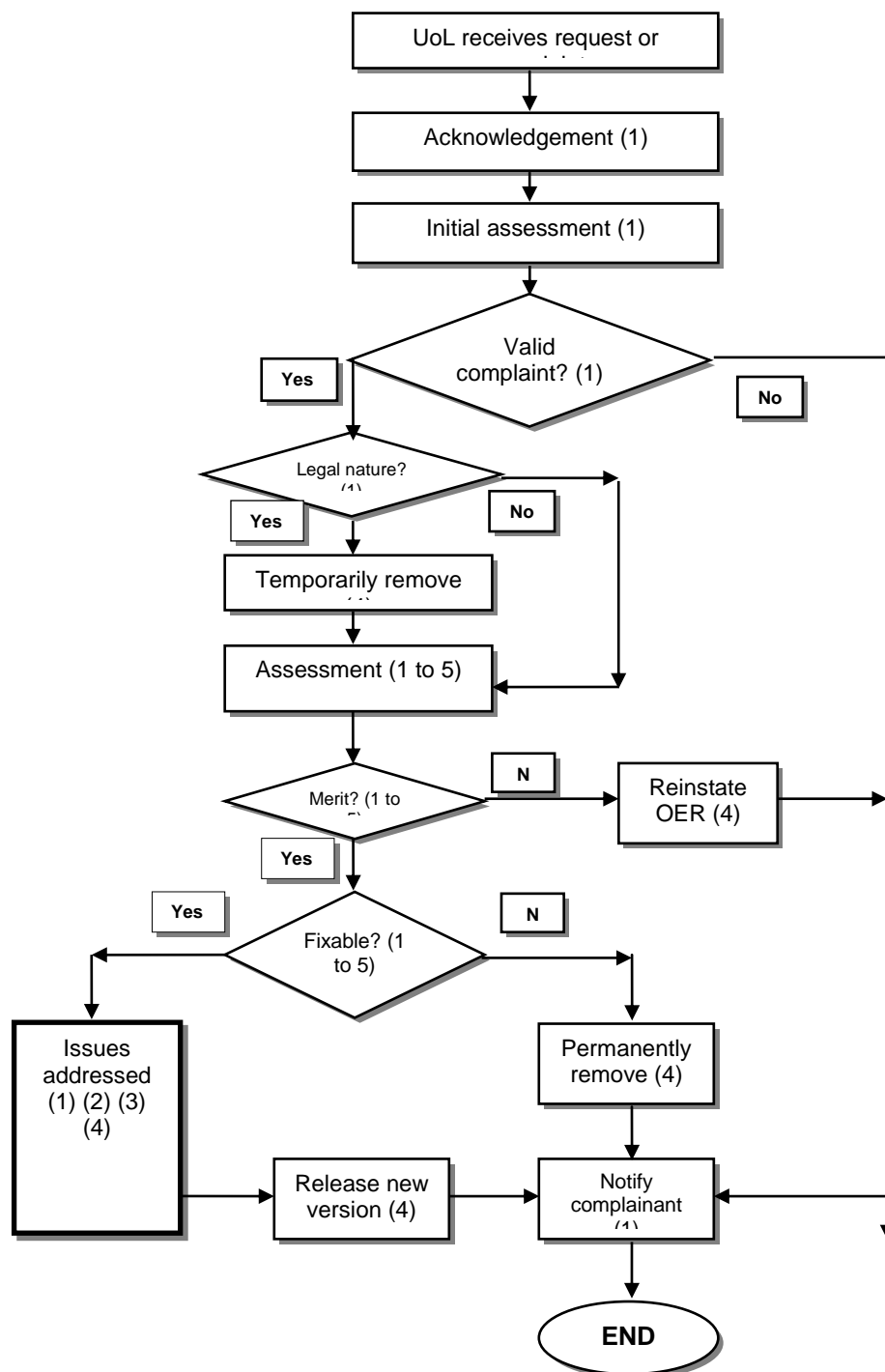
Diagram overleaf.



Person responsible at each stage: 1 & 3 OER Team; 2 & 6 Author(s); 4 IPR Officer; 5 Learning Technologist.

5. Process for removing OERs

Despite the team's efforts, there are circumstances when UoL may be obliged to remove OERs made available. For example, it is possible that the content becomes a subject of dispute, that UoL's attention is drawn to factual inaccuracies, or that the OER is found to infringe the rights of others. The procedure to be followed to remove OERs will be as follows:



Person responsible: (1) OER Team; (2) Author(s); (3) IPR Officer; (4) Learning Technologist; (5) external advisor(s)

6. Fit with current UoL policies

- UoL's institutional commitment and desire to engage with OERs is backed by the Vice-Chancellor's Advisory Committee's decision (05/02/09): 'The outcomes of the OTTER pilot will inform the university's future policy on OERs. The Beyond Distance Research Alliance, in collaboration with the Library and all participating departments, will undertake the research and development to establish evidence.'
- One of UoL's key missions is: 'Leading the UK in terms of innovation in learning and teaching', openness is seen as a key strand in the implementation of this strategy.
- These guidelines support the [teaching and learning strategy](#) which commits to 'providing a high-quality educational experience for all its students, and promoting excellence in learning and teaching, and further, 'an awareness of, and involvement in, the *informal curriculum*'.
- These guidelines also inform a future extension of the '[Open Access](#)' mandate beyond research output to include teaching output.
- They are in line with existing [copyright guidelines](#) which seek to protect all content created by staff.

Appendix E: Summary of key findings from research into stakeholder perceptions of OERs

The full research report is available at: www.tinyurl.com/OTTER-ResearchReport

1. Context and background

The following statements from recent influential literature provide an insight into discussions currently taking place in the field:

- *'...To be successful, OER must meet the needs of users.'* (The Committee for Economic Development Digital Connections Council, 2009. p. 2.)
- *'An essential part of the open education movement will be open teaching.'* (Laurillard. D., 2008 p.320).
- *'User studies that measure the number of "hits" or page-views to a site, or report out on anecdotal and random responses to online Web site surveys, are ubiquitous and frequently used as evidence that a particular Web resource has "value." These measurements surely indicate a form of popularity, but they tell us only about relatively enthusiastic users of a particular brand of content. They reveal nothing about whether a brand may be valued or useable by a wider potential audience operating in complex formal educational institutions that confer degrees or certificates.'* (Harley, D., 2008. p. 208)

As part of the OTTER project, data was gathered from staff, students and senior managers at the University of Leicester and students from University College of Falmouth on their views on Open Educational Resources (OERs). The aim of this research was to assess the potential value of the OTTER OERs to teaching and learning, and where possible, identify improvements that could be made to make them more reusable and repurposable.

2. Research methods and data collection

We followed a qualitative research methodology, designed not to measure statistical usage but rather to hear all the different voices and perspectives on the OTTER OERs. Data was gathered between December 2009 and March 2010 from students, academics and senior managers in the following ways:

- a. Face-to-face interviews with staff and senior managers across different departments of the university (see Appendix 4 of the full report for interview questions)
- b. Online survey of students using open-ended questions (see Appendix 3 of the full report)

E-mails requesting interview appointments were sent to academic members in departments that had contributed materials to the OTTER project, as well as non contributors who were willing to participate in the research.

Student recruitment for this research at the University of Leicester was carried out with the help of the Academic Affairs Officer for the Students Union. 61 UoL students took part in the research. Our relationship with University College Falmouth (through the CALF project, www.le.ac.uk/calf) enabled the participation of an additional 10 students from that institution.

a. Semi-structured interviews with staff (including senior management)

University of Leicester department or group	Number of people interviewed
Genetics Department (the GENIE project)	3
Psychology Department	1
Students' Union	1
Medical School	2
Institute for Lifelong Learning	1
Media and Communication Studies Department	2
Biological Sciences Department	1
Physics Department	1
Pro-VCs (Students & Internationalisation)	2
Staff Development Unit	2
Heads of Dept (Engineering and Course Design and Development Unit)	2
Library	1
Total	19

b. Survey of students

Disciplines	Number of respondents
Genetics	13
Psychology	8
Student Support and Development Services	10
Archeology and Ancient History	10
Politics and international relations	9
Media and Communication	9
Law	1
Education	6
Criminology	4
BDRA	1
Total	71

Students who completed the survey were invited to select materials from their own discipline as well as any discipline of their choice, and so the above disciplines are to be read as subject areas of interest to students participating in this survey, and not the departments to which they belong.

3. Key findings

Whilst in principle, staff and students are happy with the notion of openness in teaching and learning, questions and concerns still remain. Notable amongst these are cost-benefit, staff capacity and time to develop resources, quality of OERs, funding and sustainability of OER production and release, subject range and coverage and access to resources. Appendix 1 of the full research report shows how the views of senior management, academic staff and students compare on a range of questions. Below is a summary of the key findings.

a. Key findings from staff (including senior management)

- i. In general, staff support the open sharing of educational resources. They see OERs as helping to position UK HE, especially UoL, in the world HE market, although they believe that more evidence is needed to make a convincing case about the value and impact of OERs.
- ii. Most senior managers would like to see a mandate in the form of a policy and strategic action in order to take the OER agenda forward.
- iii. Staff are happy and very keen to use OERs released through OTTER, as well as other OERs available in the public domain, for their teaching. The OERs will be used either 'as is' or modified, depending on the teaching objective or context.
- iv. OERs are seen as potentially beneficial to teaching, learning and also as additional information resources for students
- v. Staff are happy to make selected teaching materials available as OERs based on conditions related to ownership, copyright, quality and support in 'designing for openness'.
- vi. A team effort, working with all stakeholders, is seen as the appropriate way forward for OER development and use.
- vii. Sustainability in terms of funding, staff capacity and support are seen as issues which need to be resolved.
- viii. Reward and recognition of academic staff are seen as key factors in successfully promoting the generation of OERs. However, non-financial reward is much preferred to financial reward.
- ix. More awareness of Creative Commons licensing is needed.
- x. For the future, a developmental approach around a pilot focused on production and evaluation of generic materials within individual colleges is preferred by some senior managers to a large-scale approach across the institution.

b. Key findings from students

- i. Students support the open sharing of teaching and learning resources and view OERs as supplementary resources that could improve the quality of their learner experience.
- ii. Students find it very easy to navigate through current OERs available through the Plone site of the UoL (www.le.ac.uk/oer).
- iii. 96% of students rated the quality of the OTTER OERs as 'good' to 'extremely good'. The 4% who were unhappy attributed this to links in the zipped files in the Plone site that appeared to be broken. (This has been rectified through a 'Read Me' message that appears on every page of the Plone site, advising users that zipped folders need to be extracted in order to function effectively.)
- iv. Students appear to have adequate knowledge of Creative Commons licensing, but express concerns about the implications for the institution's reputation in the event that the materials are misused by third parties.
- v. The preferred options for access to OERs are the institutional virtual learning environment (VLE) and OER repositories.
- vi. Students are happy with the quality of OERs produced through OTTER, based on the concise nature of information provided as well as the structure and layout. However, they express concern about quality and sustainability of future OERs.
- vii. A third of students say they would not be willing to turn their own materials (e.g. lecture notes) into OERs and share them with other students.
- viii. Students would like to see future policies address the issue of easy access to OERs in different formats to support teaching and enhance the student learning experience.

4. Conclusion

Our research shows that both staff and students welcome the use of OERs in teaching and learning and see their potential to transform UK higher education and potentially worldwide education as reflected in the following quotations.

All my life I have supported the sharing of open educational resources so to me it's a good thing...the issue is about how you make them easily available and usable and that is something that's bedeviled education for many, many years. (Senior manager)

OERs are starting to show me the kinds of things I could do to make our course a lot more interesting (Academic staff)

As far as OERs go, I am a firm believer. I think it is something that should be done I think it is something that will be done more and more (Academic staff)

It looks very, very useful and provided it is kept up to date, and provides something different from the resources already available on Blackboard it could be very popular (Student)

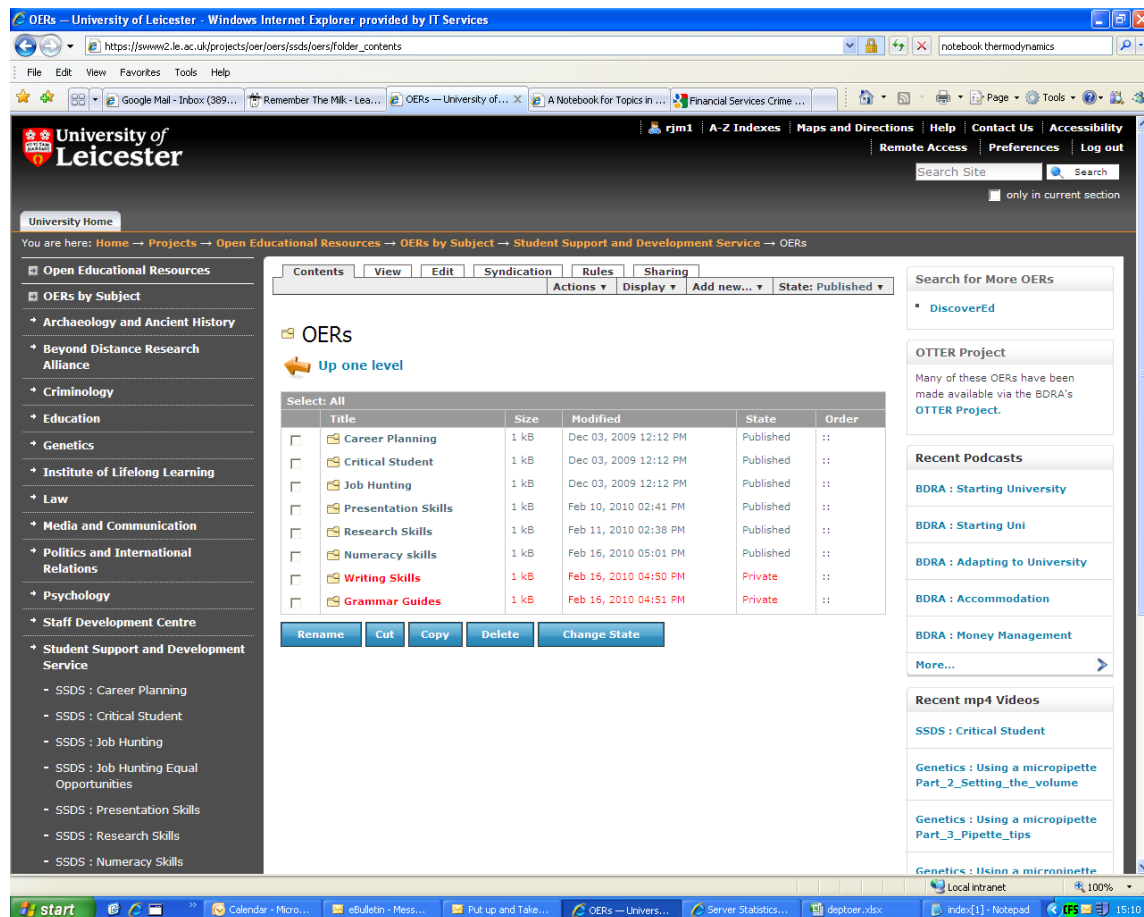
I look forward to it being more commonly used and more information to be available as I will definitely refer to it to improve my learning (Student).

I think the OTTER project is an excellent start... but I do think it needs to be publicised somehow, in some way, to try and get people more enthusiastic, particularly members of staff. (Academic staff)

If OERs are to make an impact, the following questions need to be addressed:

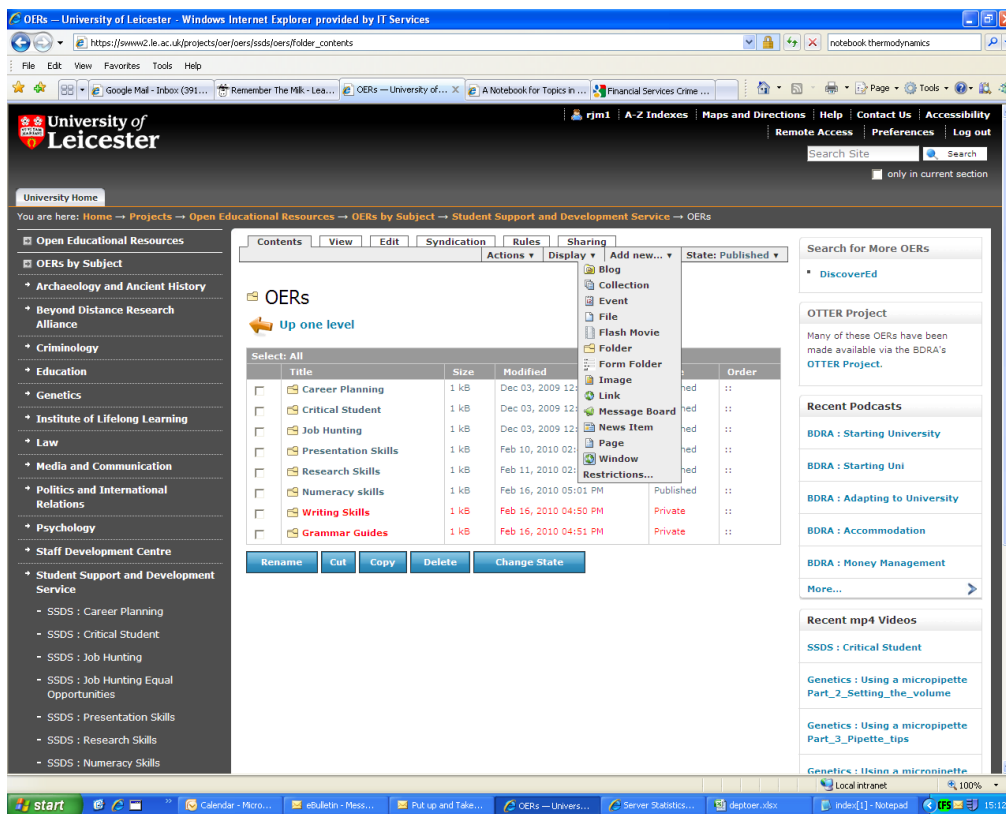
- i. What national and institutional policies are needed to encourage the development and use of OERs?
- ii. Who are the target audience for OERs: teachers, learners, formal campus-based, informal/non-formal students, UK-based learners, potential international students, alumni, or others? All of the above?
- iii. What reward and recognition framework should be put in place to encourage OER development by academic staff?
- iv. What are the key quality features of OERs – 'back of the envelope' quality for quick and effective release or high-end showcase quality?
- v. How can the development of OERs be made more sustainable?
- vi. What are the most effective mechanisms for tracking and gathering evidence of OER use, reuse and repurposing?

Appendix F – Plone Screenshots



A view of a departmental OER repository showing published and private OER folders. Private folders contain information waiting for final approval by OER owner before being made public. OER folders store the OER content that is available for downloading via the OER Web page.

Project Acronym: OTTER
 Version: 2.1
 Contact: Gabi Witthaus
 Date: 27 Apr 2010



Some of the Plone native tools for the creation of Web pages, OER folders and the uploading of individual OER files. Multiple files can also be loaded in to the repository via the Enfold desktop tool available via the user desktop.

Appendix G: Mapping of OTTER Outcomes and Impact against JISC Synthesis and Evaluation Framework

JISC Evaluation and Synthesis Focus Area	OTTER Aims (See 6.1)	Achievements/ Impact	Critical success factors	Critical barriers to achieving impact
1. Developing, managing and sharing OERs	- Modernise, update, tag, categorise and release at least 360 credits' worth of digital materials from seven academic departments, from Staff Development and from Student Support Services, for open use and repurposing.	- OTTER has produced over 400 credits' worth of digital materials from 11 academic departments, from Staff Development and from Student Support Services, and from one international partner, for open use and repurposing.	- The CORRE workflow framework (described in Section 8) has been critical in enabling a seamless flow of work through the various stages from collection to release of OERs	- None
2. OER release process	- Populate, test the affordances of, and inform future versions of JorumOpen and UoL's open repository.	- OTTER has successfully released all its OERs to both UoL's open repository (Plone) and to JorumOpen. OTTER also participated in an early trial of JorumOpen at the end of 2009, and provided feedback to help inform the development of the repository.	- The use of a familiar, existing technology within the institution (Plone) was a critical factor in achieving continuity and sustainability of the OER initiative	- The late launch of JorumOpen has allowed very little time at the end of the project for ongoing dialogue about possible improvements to the platform.
3. Guidance and support mechanisms	- Support individuals, teams and departments to release their digital content for free use and repurposing.	- OTTER has produced and disseminated a list of FAQs about OERs for partners and potential contributors - More academic staff are becoming involved in developing OERs through the Alliance's Carpe Diem workshops, as well as through participating in the Alliance seminars/conferences where presentations are made available in the public domain. (See 9.3g)	- OTTER has found that academics have responded positively to the promise of receiving their materials back in enhanced format, and that this could be a significant factor in motivating individuals to contribute materials for publication as OERs.	- Lack of an established culture of openness in terms of teaching materials within the university made it difficult to spread awareness of the OER initiative on a large scale.

<p>4. Business cases and benefits realisation</p>	<ul style="list-style-type: none"> - Contribute, through effective models for OER release, towards the marketing and positioning of UoL and the UK HE sector among prospective students globally - Widely disseminate OTTER's outcomes locally, nationally and globally, well beyond the duration of the project, through University of Leicester's high-profile presence at international conferences, communities of practice, publications and via Plone, Leicester's institutional OER repository. 	<ul style="list-style-type: none"> - Data gathered from interviews with stakeholders shows that the OTTER OERs are perceived to be of high quality and to portray a positive image of the university. - OTTER team members have disseminated the project outcomes widely at conferences in Nottingham, Berlin, Cambridge and online (Learning Futures Festival '10), and through a published paper⁸. - International partnership with the South African Institute for Distance Education (SAIDE) has enabled a more 'demand-driven' approach where an audience for certain OERs has been identified. 	<ul style="list-style-type: none"> - JorumOpen is likely to be a critical success factor in enabling dissemination of the OTTER OERs to a wide audience. - The University of Leicester's upcoming contract with iTunes U is expected to be a critical factor in achieving impact here, as iTunes U will enable us to disseminate the OERs to a massive, global audience. 	<ul style="list-style-type: none"> - We have been unable to gather substantial evidence of impact of the OTTER OERs within the short timeframe of OTTER.
<p>5. Institutional issues – strategy, policy, practice</p>	<ul style="list-style-type: none"> - Promote the sharing and reuse of high quality OERs within University of Leicester and across the sector. - Build capacity and provide evidence, in usable formats, to influence future institutional and cross-sector policy in respect of OERs at University of Leicester and elsewhere. 	<ul style="list-style-type: none"> - OTTER has developed a draft OER policy and draft procedures for put-up and take-down of OERs (URLs to be provided in final report) to enable continuity and sustainability of the OER initiative. 	<ul style="list-style-type: none"> - OTTER has had the support of top management from the start of the project, and has benefited from the guidance of Steering Group members holding key management positions in the institution. 	<ul style="list-style-type: none"> - OER issues are still new to many senior managers. This lack of awareness may delay OER development.

⁸ Armellini, A., Salmon, G., & Hawkrige, D. (2009). The Carpe Diem journey: designing for learning transformation. In Mayes, T., D. Morrison, H. Mellar, P, Bullen & M. Oliver (Eds.) *Transforming Higher Education through Technology-Enhanced Learning*. York: The Higher Education Academy.

<p>6. Legal issues</p>	<p>- Integrate lessons learned from previous OER experiences to identify the key challenges associated with the clearance of rights, licensing and release of existing resources for free open access and repurposing.</p>	<p>- All OTTER OERs have been rigorously checked for third-party copyright infringement. Where applicable, permission has been sought or copyrighted content removed.</p> <p>- Presentation on copyright/ IPR at internal dissemination event (video available – see 9.4b)</p>	<p>- Having a dedicated copyright administrator was critical to enabling OTTER to guarantee that all OERs could be published under an open licence.</p>	<p>- Several OERs had sections removed, and in one case an entire OER was not usable because permission was not obtained to use third-party copyright materials.</p>
<p>7. Technical and hosting issues</p>		<p>- As far as possible, the OERs are in formats that do not require users to be online to access them (e.g. standalone videos that can be downloaded onto handheld devices).</p> <p>- All print materials have been produced in both printable (e.g. MS Word, PDF) and html formats, as well as rtf for easy repurposing.</p> <p>- OTTER has created models and templates for using the institution's Plone platform for the release of OERs. (See Appendix F.)</p>	<p>- iTunes U will also enable users to access the audio and video OERs on handheld devices.</p>	<p>- The publication of OERs in multiple formats enables a substantial amount of flexibility for users; however, the time-consuming nature of the production process is likely to be a barrier to maintaining this practice beyond the lifespan of OTTER.</p> <p>- Limited storage space for multimedia OERs and associated cost</p>
<p>8. Quality issues</p>		<p>- The CORRE process includes internal validation by OTTER team (proof-reading, testing links etc.), validation by contributing authors, reality check by students and feedback data gathered from users who fill in questionnaires.</p>	<p>- Hosting the OERs on the institution's own Plone site and only placing links in the JorumOpen repository enables us to make revisions to OERs as necessary, thereby maintaining control over quality.</p>	<p>- Due to time constraints and work pressures, a few partners chose to allow OTTER to release their materials without carrying out the final validation.</p>

9. Pedagogy/ end-use issues (not a prime focus of evaluation)		- The OTTER OERs have been produced in repurposable formats as far as possible, to enable end users to modify them for different contexts and different pedagogical aims.	- Having two, highly skilled, dedicated learning technologists enabled this.	See 10.7.
10. Learner and stakeholder involvement		- Interviews and surveys with learners, academic staff and management have raised awareness about OERs	- Most stakeholders interviewed were in favour of the OER initiative and wanted it to continue.	- Learners do not seem to appreciate the 'openness' factor of OERs. The majority of learners surveyed wanted OERs to be made available on the institution's VLE.
11. Programme and project management issues		- The development of the CORRE workflow framework (described in section 8) was a key achievement for OTTER.	- Project management tools such as the CORRE Workflow Checklist (see 9.3b) and the Project Schedule Monitoring Sheet (see 9.3c), along with the online review mechanism using Adobe Pro, have enabled OTTER to keep to schedule and identify any potential bottlenecks in the workflow.	- There were occasional delays in the workflow due to partners deciding to update their materials before submitting them, or publishers not responding timeously to requests for permission.
12. Cultural issues		- OTTER's partnership with SAIDE via ELKS has enabled engagement around OERs with colleagues in developing countries, where the creation of OERs is more demand-driven.	- This partnership provides a potentially useful opportunity for data gathering about the use and impact of OERs in different cultural contexts in the future.	- Further 'acculturation' needed involving all stakeholders, from students to senior managers – OERs are still a new concept.