

The OTTER Project

Summative External Evaluation Report

Final

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Executive Summary

Conclusions

1. This has been a very well managed and purposefully executed project that has very successfully achieved its aims and objectives although it has been too early in the life of this project to evidence that OERs can contribute to promoting an Institution or the UK HE sector globally to prospective students.
2. The initial sourcing of OERs has tended to rely on a 'supply' model which has worked well for the purposes of this project. However, to ensure OERs are adopted and embedded in curriculum models in the future, a more demand led model is required.
3. Overall the OTTER project has delivered its intended outputs and outcomes and has made a significant contribution to OER development in the UK.
4. The OTTER team has been very active and effective in disseminating the OTTER project to its stakeholders and the wider HE Community. There is evidence to show that there is commitment to continuing dissemination and the sharing of OTTER's experience beyond the end of the project.

Key Messages for University of Leicester

1. Having successfully raised academic staff's awareness of OERs and engagement in the creation of OERs, further work is now needed to ensure that OERs are embedded and used effectively in curriculum delivery models. There is a need for the University to drive this strategically as well as operationally. Work has started to embed the use of OERs into teaching practice using the University's CARPE DIEM process. This should continue. There is a need for the University to produce an **OER Policy**, informed by the draft policy and guidelines already produced by the OTTER team, and establish a **short-life OER working group** to drive this forward strategically too.
2. Given that there is senior management support for sustaining and further promoting OER development across the University, when developing the OER Policy, senior management must also decide how best to resource OER development. Different options have been produced for consideration from the OTTER project.
3. Once there are examples of effective use of OERs in academic departments, these should be **written up as case studies** and shared across the University and with the wider HE Community.
4. The university should consider **making changes to marketing surveys and other marketing tools** to ensure that data can be captured that will evidence if the

availability of OERs contribute to influence a prospective student's choice of university in the future.

5. Future OER development should adopt a more **demand driven approach** where curriculum is designed using OERs. This will ensure that OERS are designed and aligned to future curriculum development and will ensure OERs are embedded and used in curriculum delivery models.
6. Building on the experience of working with the South African Institute for Distance Education (SAIDE), the University should consider **forming international partnerships** for progressing the development of OERs. Consideration should be given especially to third World Countries to enable them to develop knowledge and understanding of using open and freely available educational resources in their curriculum models.

Key Messages for the JISC, HE Academy and the wider HE Community

1. The OTTER Project failed to engage publishers in OER creation despite effort and having funding available. It would appear that a different model for accessing academic content needs to emerge. This might, for example emulate the transformation that has taken place in the music industry over the last few years with the emergence of MP3/4 players, iPhones and download tools such as iTunes. It would appear the realisation of such a model with publisher engagement cannot be achieved at institutional level and needs a national push. JISC and the HE Academy would be well placed to lead and negotiate such a change.
2. The OTTER project has made significant progress and contribution to OER development in a short period of time. However, more work in this important field of development is needed, especially at a time when HE funding is being stretched and economies can be achieved through effective collaboration and sharing. Further development work is needed in a number of key areas including:
 - Embedding OERs in Curriculum Delivery Models
 - Cascading the work and skills developed in this first OER programme throughout the Sector through the formation of effective collaborative partnerships and OER networks.
 - Refining standards and processes for OER production
 - Researching impact of OERs on building a global market for UK HE.

1. Introduction

The OTTER Project (Open, Transferrable, and Technology-enabled Educational Resources) is one of seven institutionally-based Open Educational Resource (OER) projects jointly funded by JISC and the Higher Education Academy¹ between April 2009 until April 2010.

The focus of the project was to pilot and evaluate systems and processes designed to enable individuals, teams and departments to release high quality open educational resources (OERs) for free access, reuse and repurposing by others in perpetuity.

This report provides a summative external evaluation of the project.

2. External Evaluation Focus

The external evaluation of the OTTER project has been structured around three central questions as defined in the JISC six-step evaluation model²:

- What have we done/built/achieved, to what quality, and how efficiently?
- What has been learned or confirmed through development activities?
- How has the learning been acted on or fed back in?

The summative external evaluation report also confirms:

- The extent to which the project aims and objectives have been met.
- The extent to which the project has achieved its intended outcomes and outputs and shared these with project stakeholders and the wider HE community in the UK.
- Key messages for the University, the wider HE community and/or the JISC.

¹ <http://www.jisc.ac.uk/whatwedo/programmes/elearning/oer>

²

<http://www.jisc.ac.uk/media/documents/programmes/reppres/evaluationhandbook.pdf>

3. Methodology

The methodology used to externally evaluate the OTTER project included:

- a. **Communication and Liaison with the Project Team.**
- b. **Literature Review.** The literature review took into account the **project website** (www.le.ac.uk/otter) and **key documents** including:
 - Project Plan
 - Interim Reports for the JISC
 - OTTER Research Report
 - Interim External Evaluation Reports
 - Draft Final Report
 - Steering Group Meeting Minutes
- c. **Project Team.** A set of structured questions were developed and used during external evaluation visits with the project team to capture information about the project to enable the external evaluator to assess the extent to which project work packages were being completed in accordance with the project plan and the extent to which project aims and objectives were being met. Interim reviews were structured around three central evaluation questions:
 - *What has the project done/built/achieved, to what quality and how efficiently?*
 - *What has been learned or confirmed through development activities?*
 - *How has the learning been acted on or fed back in?*
- d. **Interim Reports.** The project's progress was evaluated formatively in July 2009 and January 2010. An interim report was produced at each interim review point. Each report considered the three central evaluation questions and summarised findings to date and made recommendations to the project team intended to inform and shape the project's progress and maximise the project's outcomes and outputs.

4. What has been done/achieved, to what quality and how efficiently?

The primary aim of the OTTER project has been to pilot, analyse and model effective processes for the successful release of highly usable, adaptable, technology-enabled Open Educational Resources (OERs) at the University of Leicester.

This aim has been achieved very successfully and as a result, a number of important developments and outcomes relating to the production of OERs for use in perpetuity have been achieved that are relevant to the University of Leicester and the wider HE community:

- a) **CORRE.** The CORRE Framework (Content, Openness, Reuse and Re-purpose, Evidence)³ provides the University of Leicester and the Sector with a tried and tested model and example of how to effectively manage the workflow processes associated with OER production in an integrated and efficient way that results in the production of high quality, reusable OERS accessible to users in a variety of formats.
- b) **Exemplar OERs.** OTTER originally planned to produce 360 credits worth of OERs. The project has exceeded this target and produced 431.5* credits worth of OERS as follows:-

Subject Disciplines

Archaeology and Ancient History (3 Credits)
Education (17 Credits)
Law (35 Credits)
Politics and International Relations (180 Credits)
Psychology (35 Credits)
Genetics (8 Credits)
Criminology (8 Credits)
Geology (0.5 Credits)
Institute of Lifelong Learning (40 Credits)

Central Support Services/ Research Areas

Beyond Distance Research Alliance (35 Credits)
Staff Development Centre (5 Credits)
Student Support and Development Service (5 Credits)

External Partner

South African Institute for Distance Education (SAIDE) (20 Credits).

³ www.tinyurl.com/otter-corre

**Accurate at the time of writing. Further OERs will continue to be released as a result of the sustainability and embedding plans that have been put in place.*

- c) **A permanent OER Repository.** A permanent OER repository⁴, built using an existing open source content management Web Service (PLONE) has been produced during the project and is now integrated with the University of Leicester's website. The OER Repository has a number of unique features to assist users' access and use OERs. Examples include: Abstract giving a summary description of the OER, advice on the level of study the OER is designed for and RSS feeds to advise users of new OERS.

Potential Impact: *This ground work has provided the Institution with a platform to sustain OER development post-project. This development has also ensured that the OERs produced are open and widely accessible across the Institution and freely available to others.*

- d) **JorumOpen.** The OERs produced have been added to JISC's OER repository JorumOpen.

Potential Impact: *this work will ensure that the OERs produced by the Institution are openly and widely accessible to the wider JISC/HE Academy community.*

- e) **OER File Formats.** An aim of the project was to make OERs widely accessible. This has been achieved effectively by publishing the OERs in different usable formats including PDF, RTF, HTML and e-book format.

Potential Impact: *Although expensive to produce OERs in different formats, this work potentially widens access and use of OERs to a wider group of users and makes them more repurposable.*

- f) **Staff Awareness Raising and Knowledge Development.** The project team have developed resources and used a number of different awareness raising mechanisms to ensure that academic staff are better informed about OERs. Resources produced include FAQs about OERs for potential contributors, guidance on copyright and IPR and the use of the university's Carpe Diem professional development process to assist course teams to explore ways of building OERs into curriculum delivery models.

Potential Impact: *This work will help to improve the quality of source materials submitted for OER development in the future and potentially reduce OER production time. This work could also help to reduce course content development costs by encouraging content sharing between course teams, between subject disciplines and between institutions.*

- g) **Inter-Institutional Collaboration.** The project has successfully demonstrated the potential for OERs to create opportunities for collaborative content development and sharing. This has been evidenced by the collaboration with

⁴ www.le.ac.uk/oer

the South African Institute for Distance Learning (SAIDE) who has contributed 20 credits of OERs to the repository.

Potential Impact: *This work could help to reduce course content development costs by encouraging collaborative 'demand-led' OER developments in the future between partner institutions and inter-institutional content sharing between programme teams.*

5. What has been learned?

There is evidence to show that OTTER has provided the project team and the Institution with valuable insights into the production of OERs which have been captured effectively by the project team and disseminated to inform future OER development work institutionally, nationally and internationally.

Key learning points from the project fall into the following categories:-

Quality of Source Materials. A number of important lessons have been learnt about the quality of source materials submitted for conversion to OERs. Significant flaws were found in source materials including poor structuring, sequencing and pacing, lack of appropriate referencing, broken hyperlinks and variable use of educational terminology in different learning contexts. As a result, a significant amount of time was dedicated to addressing these issues during the project when converting the source material into OERs.

The project team have learnt that if programme teams were trained and encouraged to design course materials from the outset as OERs, many of these problems would be eliminated. This would reduce time taken to convert materials to OERs and it would enhance the quality of materials given to learners. Focusing on OERs at the learning design stage would also create opportunities for the integration of OERs from other sources, thereby potentially saving huge amounts of academics' time and enabling them to focus more on supporting learners through the learning process.

Copyright Clearance and IPR. A number of important lessons have been learnt about academic staffs' lack of knowledge and understanding of copyright clearance and IPR issues when preparing course materials. As a result, significant amounts of time have been dedicated to addressing copyright and ownership issues when producing OERs. In some cases, source materials were rejected when copyright issues could not be resolved, or where materials had been produced by contractors who had not ceded ownership of their intellectual property to the institution (although the departments in question believed they owned these materials).

If staff had a better knowledge and sought appropriate clearance and permission to use copyrighted materials, more source materials would have been available for transforming into OERs and time could be saved in transforming source materials to OERs. Also, if departments had clearer contractual agreements with contract staff, there would be more clarity about ownership of teaching materials produced for use at the institution.

Publisher engagement with OERs. Despite reserving significant budget in the project, the project has learnt that it is virtually impossible to interest and engage

publishers in the production of OERs and convince them to release elements of published texts as open educational resources.

The project team have learnt that publisher engagement and interest in OERs cannot be achieved by a single institution. Engagement at a national level is needed to effect change.

Academic Staff Engagement with OERs. The project has learnt that the majority of academic staff support the open sharing of educational resources and are generally willing to share teaching materials. Some academic staff are keen that the development of OERs is linked with reward and recognition. However, non-financial rewards are preferred to financial ones

Having introduced OERs into the Beyond Distance Research Alliance's (BDRA) Carpe Diem workshops, the project team have learnt that an academic team approach is important to ensuring integration and use of OERs in curriculum delivery models.

Student Engagement with OERs. Student feedback has provided the project with evidence that students are happy with the quality of OERs being produced by the project, but would like to see more topics and subjects covered.

The project team have learnt that students would use OERs as a supplementary resource and would choose to access OERs via the Institutional VLE and OER repositories rather than via social networking sites.

Senior Management Interest with OERs. Senior managers support open sharing of educational resources generally.

The project team have learnt that there is support from Senior Management for OER development and there now needs to be an institutional OER policy and strategic action taken to support ongoing OER development in the Institution.

Sustainability. The extent to which the OER production model developed by OTTER is sustainable in its entirety without additional project funding must now be fully assessed and costed.

The project team have learnt that the creation of high quality OERs using the full CORRE Framework with a dedicated OER team in its current form is costly, and as a result, have provided the Institution with possible options for continuing the OER work beyond the project. These options are being discussed internally.

6. How has the learning been acted on or fed back in?

The project team have been very proactive in sharing its work in the University of Leicester with its key stakeholders and nationally/internationally to the wider HE community. The following evidences this:

- **National Committees.** OTTER's achievements and insights have been fed back with interest at national levels to the HEFCE Online Learning Taskforce via Professor Gilly Salmon.
- **OER JISC Programme Activities.** The OTTER project team have participated actively in JISC OER Programme Meetings and Elluminate monthly online fora where they have been able to liaise effectively with other OER projects, agree common approaches, discuss common issues and challenges and learn and contribute to the development of tools such as JORUMOpen.
- **OTTER Steering Group.** The project team have engaged effectively with the project Steering Group which has been chaired by Christine Fyfe, Pro Vice-Chancellor, Student Experience and University Librarian. This has ensured OTTER achievements and challenges have been understood and supported at senior levels in the University.
- **Dissemination to the Wider HE Community.** The project team have been very proactive in promoting their work as developments took place both via the project's Blog⁵ and Website⁶. The project team also produced an "at a glance" view of the project⁷ to enable stakeholders to track progress.
- **CORRE Framework.** Documentation is available on the OTTER website and blog⁸ to share the OER workflow process developed and refined during the life of the project with the wider HE community. The documentation includes an exemplar checklist illustrating to others how to use the CORRE framework⁹
- **OER Repository.** A permanent site¹⁰ for the OERs developed during the project has been created making them openly accessibly across the institution and to the wider HE community.

⁵ <http://projectotter.wordpress.com/>

⁶ www.le.ac.uk/otter

⁷ <http://tinyurl.com/otter-progress>

⁸ www.tinyurl.com/otter-corre

⁹ <http://projectotter.files.wordpress.com/2009/08/corre-detailed-checklist.pdf>

¹⁰ www.le.ac.uk/oer

- **Carpe Diem Workshops.** The Beyond Distance Research Alliance (BDRA) have expanded their Carpe Diem Workshops to include OER awareness raising to encourage programme teams to explore ways to share course materials and embed the use of openly and freely accessible educational resources into their course delivery models. Details of Carpe Diem have been developed as OERs and are available from the Leicester University OER Repository (www.le.ac.uk/oer).
- **Guidelines and Resources to raise Awareness of OERs.** The OTTER Website has been developed to include a section called “About OERs”¹¹ which includes the following guidelines for academic staff:
 - OER FAQs and Answers
 - A bibliography of OERs
 - A presentation introducing the concept of OERs to academics
 - Quality Matters in OERs – a chart showing the quality criteria being used in the CORRE OER development process.
- **Continuing OER Development.** The project team have successfully raised awareness of OERs with Senior Management in the Institution and as a result, have secured a high level of commitment from Senior Managers
- **Technical Developments to streamline CORRE/OER Production Process.** The project’s technical team have identified ways to develop the OER repository (PLONE) to build-in CORRE workflow processes with signoffs for academic staff. This development would streamline the OER development process and reduce workload.
- **Technical Developments in support of using OERs for Marketing and Promoting the Institution.**
- **Masters Programme.** The Beyond Distance Research Alliance (BDRA) is launching their own Masters programme from October 2010. The programme design will build on lessons learnt from this project and other projects/research that have been led by BDRA and will exemplify use of OERS in its delivery model.
- **Links with other funded Projects.** The OTTER project team have successfully identified and used other funded projects (e.g. DUCKLING funded as part of JISC’s Transforming Curriculum Delivery Programme) as a source for OERs.

¹¹ www.le.ac.uk/otter/about-oers

7. Did the OTTER Project meet its Aims and Objectives?

Overview

The primary aim of the OTTER was to pilot, analyse and model effective processes for the successful release of highly useable, adaptable, technology-enabled OERs at the University of Leicester. In achieving this aim, the project set out to:

- Contribute, through effective models for OER release, towards the marketing and positioning of the University of Leicester and the UK HE Sector among prospective students globally.
- 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.
- Integrate lessons learnt 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.
- Support individuals, teams and departments to release their digital content for free use and repurposing.
- Promote the sharing and reuse of high quality OERS within the university of Leicester and across the Sector.
- Populate, test the affordances of, and inform future versions of JORUMOpen and the University of Leicester's open repository.
- Build capacity and provide evidence, in usable formats, to influence institutional and cross-sector policy in respect of OERs at University of Leicester and elsewhere.
- Widely disseminate OTTER 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 vial Plone, Leicester's institutional repository.

Key Findings

- a) OTTER originally planned to produce 360 credits worth of OERs. The project has exceeded this target and produced 431.5* credits worth of OERS from 9 subject disciplines, three support/research areas and one international partner (South African Institute for Distance Education):

Academic Department	Number of Credits
Archaeology and Ancient History	3
Education	17
Law	35
Politics and International Relations	180
Psychology	35
Genetics	8
Institute of Lifelong learning	40
Media and Communication Studies	
Criminology	8
Geology	0.5

Staff Development	5
Student Support and Development Service	5
Beyond Distance Learning Alliance	35

South African Institute for Distance Education (SAIDE)	20
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**Accurate at the time of writing*

- b) The project has successfully created a skilled and dedicated OER support team who have effectively promoted OERs to academic staff, successfully generated source materials for conversion to OER and worked meticulously to create an effective, quality enhanced framework (CORRE) for updating, enhancing source materials for conversion to OERS and tagging, copyright clearing, and validating for publication of the OER via the University OER repository. As a result, the OERs are freely accessible in a range of different formats for use across the university and across the HE sector.
- c) The project has used previous experience and skills effectively to take OER development forward. This is evidenced by:
- the way in which it has used previous and current projects and established academic team networks to obtain source materials for OERs.
 - Used expertise from previous work to create a support team with the correct skills in copyright clearance, material design and technical developments relating to repository development using Plone.
- d) The Project team have worked with academic staff from 13* different subject disciplines/support or research departments across the University and one

external international partner, the South African Institute for Distance Education (SAIDE) to promote and engage staff in OER development.

- e) The OER team have produced a range of support resources to promote and support OER development in the University and promote and stimulate the future use of OERs in the institution and elsewhere. This includes:
- OER FAQs and Answers
 - A bibliography of OERs
 - A presentation introducing the concept of OERs to academics
 - Quality Matters in OERs – a chart showing the quality criteria being used in the CORRE OER development process.
- f) There is evidence that OERs are being shared between disciplines. For example The Criminology programme contributing to OER development in the project has used the Dissertation Writing OER produced by the Politics and International Relations programme teams and have re-purposed it into dissertation support materials for criminology students.
- g) The Beyond Distance Research Alliance (BDRA) have taken an active role in promoting OERs and their use to academic staff using an expanded version of their CARPE DIEM workshops to promote the use of OERs. Furthermore the new Masters programme in *'Innovative Education and Training'* being launched by BDRA in October 2010 will exemplify the use of OERs in its Programme delivery model.
- h) With the OER repository now established in the University, current and future projects led by BDRA are being encouraged to contribute any resources produced as OERs. For example, Podcasts being produced by the DUCKLING project¹² have been added to the OER repository. A workshop (PANTHER)¹³ run by BDRA in association with the Higher Education Academy in March 2010 to promote the use of podcasts in assessment will generate the presentations made an a video record of the event as OERs. This approach is helping to ensure that OER production is embedded and sustained beyond the life of the OTTER project.
- i) The Project team have actively participated in OER programme meetings and online events and have offered ideas and comments informing the development of JORUMOpen. The OERs produced from the project were uploaded to JORUMOpen at the end of April as well as to the University OER repository¹⁴ which has been created using an Existing Content Management System (PLONE) for effective as the system was already embedded and supported by the University's C&IT Services.

¹² www.le.ac.uk/duckling

¹³ <http://www2.le.ac.uk/departments/beyond-distance-research-alliance/projects/panther>

¹⁴ www.le.ac.uk/oer

- j) The project team have actively disseminated their work. This is evidenced on their project website where all dissemination activities are recorded¹⁵. Furthermore the partnership with the South African Institute for Distance Education (SAIDE) is provided further opportunities to promote OERs internationally.
- k) Given that this project has only run for one year, and most of this time has been used to develop the systems and processes to create OERs and build and populate the repository, it has been too early to provide conclusive evidence from this project that the production and release of OERs can contribute to the marketing and positioning of the University of Leicester and UK HE globally. That said, the project has provided some insights and has identified that in order to begin to capture data to evidence the contribution OERs will have, changes will have to be made to institutional student surveys to ensure they include questions to enable evidence to be gathered in the future to evaluate the impact OERs are having on attracting global interest from prospective students and that there is a need for an institutional OER policy setting out the need for all academic departments to have OERS which are used to promote programmes to global markets in the future.

Conclusion

This has been a very well managed and purposefully executed project that has very successfully achieved its aims and objectives although it has been too early in the life of this project to evidence that OERs can contribute to promoting an Institution or the UK HE sector globally to prospective students.

The initial sourcing of OERs has tended to rely on a 'supply' model which has worked well for the purposes of this project. However, to ensure OERs are adopted and embedded in curriculum models in the future, a more demand led model is required.

¹⁵ <http://www2.le.ac.uk/departments/beyond-distance-research-alliance/projects/otter>

8. Has the OTTER Project achieved its intended outcomes and outputs and shared these across the Institution and with the wider HE Community in the UK?

Overview

The OTTER project plan stated that the project would produce the following outputs and outcomes:

Outputs:

- A Structured and coherent collection of high quality, up-to-date OERs equivalent to at least 360 credits and in appropriate formats, with their relevant metadata from nine academic departments in the University of Leicester, openly available through appropriate channels.
- A sustainable model for the release of existing learning materials as OERs.
- Piloted processes to provide evidence for institutional policy changes and support for the release of open resources, with usable documentation for transferability.
- A set of standards, processes and policies to support the continuation and extend the volume and quality of the release and dissemination of OERs.
- Evidence of use of the OTTER OERs including user cases with feedback.
- Guidance, documentation and check lists to support the release of future OERs.
- A comprehensive OTTER interactive website.
- Reports to the funders
- 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.
- Three OER awareness raising events involving University of Leicester staff and students.
- An end-of-project OER symposium, in co-ordination with the JISC and HE Academy.

Outcomes:

- A piloted model process and criteria that promote and enable extensive adoption of the concept and use of OERs in the future at the University of Leicester.
- Wider, improved institutional understanding of the commitment to the value of OERs for promotion and positioning purposes in a global HE market.
- Departmental and institutional awareness of OERs and associated processes and benefits at Leicester.
- Departmental and institutional workflows for managing content and resources.
- Understanding of the limitations and benefits of different file formats for OERs by technologists at University of Leicester.
- Understanding of the advantages and pitfalls of different platforms for OER sharing to inform future institutional choices.
- Articulation of mechanisms for search engine optimisation and resource discovery such as tagging.

- Enhanced capacity across all subjects involved in the generation and release of high quality OERs.
- Strong evidence-based influence on institutional and sector policy on the future of OERs.
- Improved staff commitment and motivation to engage in the collaborative development of OERs
- Increased satisfaction of future, current and past students through access to OERs.
- A significant contribution to the learning and teaching, innovation, e-learning and widening participation policies and strategies at University of Leicester

Key Findings

Outputs

- A sustainable model for the release of existing learning materials as OERs.
- Piloted processes to provide evidence for institutional policy changes and support for the release of open resources, with usable documentation for transferability.
- A set of standards, processes and policies to support the continuation and extend the volume and quality of the release and dissemination of OERs.

Outcomes

- A piloted model process and criteria that promote and enable extensive adoption of the concept and use of OERs in the future at the University of Leicester.
- Departmental and institutional

The findings in relation to the above outputs and outcomes are:

- a. The development of the CORRE Framework as an output from the project has provided a cohesive and robust model comprising a set of logical processes to support the creation and release of high quality, enhanced OERs from materials sourced from departments across the University of Leicester. The model has been trialled and refined during the project period and would be transferable to other institutions interested in the development and release of OERs.
- b. The CORRE framework has quality enhancement as an integral part of the OER creation and release process. This has required a dedicated team to support the OER creation and release process during the OTTER project which has significant cost implications. Whilst the existence of a dedicated team and rigorous application of the processes defined with the CORRE framework undoubtedly result in enhanced, usable OERs being generated, the project team have questioned the extent to which this could be funded and sustained by the University of Leicester, despite high levels of commitment from Senior Managers. As a result the OTTER project have set out three options for the OTTER Steering Group and Senior Management to consider for continuing OER development post OTTER to ensure continuation of OER development and wider involvement across the University.

- c. The project team have recognised the need for an institutional OER Policy for the University of Leicester

Outputs

- A Structured and coherent collection of high quality, up-to-date OERs equivalent to at least 360 credits and in appropriate formats, with their relevant metadata from nine academic departments in the University of Leicester, openly available through appropriate channels
- Guidance, documentation and check lists to support the release of future OERs.
- A comprehensive OTTER interactive website.
- Three OER awareness raising events involving University of Leicester staff and students.
- 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.
- An end-of-project OER symposium, in co-ordination with the JISC and HE Academy.
- Reports to the funders

Outcomes

- Wider, improved institutional understanding of the commitment to the value of OERs for promotion and positioning purposes in a global HE market.
- Departmental and institutional awareness of OERs and associated processes and benefits at Leicester.
- Enhanced capacity across all subjects involved in the generation and release of high quality OERs.

The findings in relation to the above outputs and outcomes are:

- a. The project has successfully created 431.5 credits of OERs. This work has successfully engaged staff from 13* different subject disciplines/support or research departments across the University and one external international partner, the South African Institute for Distance Education (SAIDE) in the OER creation process.
- b. The dedicated team supporting the OER creation process have proactively engaged and supported staff using a range of techniques and information sources including the creation of a dedicated OER website (www.le.ac.uk/oer), a variety of OER information awareness raising resources and guidance resources <http://www2.le.ac.uk/departments/beyond-distance-research-alliance/projects/otter/about-oers> and checklists <http://www2.le.ac.uk/departments/beyond-distance-research-alliance/projects/otter/about-otter-1/documentation>.

- c. The project team have effectively run awareness raising workshops and seminars for staff at the University of Leicester. For Example OTTER ran an internal seminar for staff in August 2009 to promote OERs and raise issues around copyright <http://www2.le.ac.uk/departments/beyond-distance-research-alliance/projects/otter/otter-dissemination/open-educational-resources-at-leicester-23-september-2009>. In addition, the BDRA have enhanced their CARPE DIEM workshops to include the use of OERs when engaging academic staff in review and action planning for technology enhanced learning.
- d. More generally the project team have disseminated their work effectively in a number of ways for the HE Sector in the UK and abroad. Full details are available from <http://www2.le.ac.uk/departments/beyond-distance-research-alliance/projects/otter/otter-dissemination>. In addition, the project team actively maintained their project blog throughout the life of the project providing helpful updates on work as it progressed www.beyonddistance.wordpress.com and launched a Twitter stream to the OTTER website with the hashtag #otteroeer.
- e. Journal Papers have been prepared and accepted for publication. Chapter 10 of *Transforming Higher Education Through Technology-Enhanced Learning* (HE Academy, 2009, <http://bit.ly/9DhrOj>) contains a section on OTTER. A further paper 'Curriculum, Intellectual Property rights and open educational resources in British Universities- and beyond' is in progress for the Journal of Computing in Higher Education which includes a focus on what was learnt from OTTER and showcase this work internationally.
- f. A full-day long online symposium is scheduled for 5 July 2010 in association with JISC. . Details are available from <http://tinyurl.com/otterprojectsymposium>
- g. The project has met its obligations on reporting to JISC and the HE Academy. Reports are available from <http://www2.le.ac.uk/departments/beyond-distance-research-alliance/projects/otter/about-otter-1/documentation>.

Outcomes

- Understanding of the limitations and benefits of different file formats for OERs by technologists at University of Leicester.
- Understanding of the advantages and pitfalls of different platforms for OER sharing to inform future institutional choices.
- Articulation of mechanisms for search engine optimisation and resource discovery such as tagging.

The findings in relation to the above outcomes are:

- a. The OERs produced are available in a range of different file formats to increase accessibility and usability. This includes PDF, RTF, HTML and e-book formats. Examples can be seen at the University of Leicester's OER repository www.le.ac.uk/oer. Whilst there are many benefits relating to widening use associated with producing the OERs in different formats, this has to be off-set

against the costs and time associated with this which could limit the range of formats used in future OER development.

- b. The project decided to use the University's content management system, PLONE to host its OER repository. The main benefit of this approach was the fact that the system was already supported by the University's C&IT team.
- c. The OER repository has developed effective and efficient tagging mechanisms that enable effective searching. In addition the site has RSS Feeds and a section highlighting when new OERs are published to the site which offer an effective way of keeping users informed when new resources are added.

Outcomes:

- Wider, improved institutional understanding of the commitment to the value of OERs for promotion and positioning purposes in a global HE market.

The finding in relation to the above outcome is:

- a. Given that this project has only run for one year, and most of this time has been used to develop the systems and processes to create OERs and populate the repository, it has been too early to provide conclusive evidence from this project that the production and release of OERs can contribute to the marketing and positioning of the University of Leicester and UK HE globally. That said, the project has provided some insights and has identified that in order to begin to capture data to evidence the contribution OERs will have, changes will have to be made to institutional student surveys to ensure they include questions to enable evidence to be gathered in the future to evaluate the impact OERs are having on attracting global interest from prospective students and that there is a need for an institutional OER policy setting out the need for all academic departments to have OERS which are used to promote programmes to global markets in the future.

Outputs:

- Evidence of use of the OTTER OERs including user cases with feedback.

The findings in relation to the above output are:

- a. Within the time frame of the OTTER project, and with the delays in the launch of Jorum Open, it was not possible to gather case studies of OERs in use. Instead, the OTTER team produced an evidence-based report containing detailed contributions from a variety of stakeholders, including students, academics and senior management, giving their views on OERs in general, and their critical comments on selected OERs. The evidence from this research suggests that:

- Stakeholders support the open sharing of educational resources, despite some views that this is a contested area.
- Academic Staff are generally willing to share teaching materials, but more evidence is needed to make a convincing case about the value and impact of OERs.
- Students view OERs as a supplementary resource that could improve the quality of the learner experience.
- Students would like to see a wider range of topics and subjects covered.
- Students are happy with the quality of OERs produced through OTTER
- 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.

Extract from Samuel Nikoi's Stakeholder Research Study (2010)

www.tinyurl.com/OTTER-ResearchReport

- a. There were some early examples of OER Sharing between academic departments. For example academic staff teaching criminology were planning to use dissertation support materials produced by Politics and International Relations
- b. There was some evidence that OERs were now being embedded into learning and teaching practices at this stage, however CARPE DIEM was being used as a way of encouraging this to happen with academic teams in the University.

Conclusions

Overall the OTTER project has delivered its intended outputs and outcomes and has made a significant contribution to OER development in the UK.

The OTTER has been very active and effective in disseminating the OTTER project to its stakeholders and the wider HE Community. There is evidence to show that there is commitment to continuing dissemination and the sharing of OTTER's experience beyond the end of the project.

9. Key Messages for University of Leicester

1. Having successfully raised academic staff's awareness of OERs and engagement in the creation of OERs, further work is now needed to ensure that OERS are embedded and used effectively in curriculum delivery models. There is a need for the University to drive this strategically as well as operationally. Work has started to embed the use of OERs into teaching practice using the University's CARPE DIEM process. This should continue. There is a need for the University to produce an **OER Policy** and establish a **short-life OER working group** to drive this forward strategically too.
2. Given that there is senior management support for sustaining and further promoting OER development across the University, when developing the OER Policy, senior management must also decide how best to resource OER development. Different options have been produced for consideration from the OTTER project.
3. Once there are examples of effective use of OERs in academic departments, these should be **written up as case studies** and shared across the University and with the wider HE Community.
4. The university should consider **making changes to marketing surveys and other marketing tools** to ensure that data can be captured that will evidence if the availability of OERs contribute to influence a prospective student's choice of university in the future.
5. Future OER development should adopt a more **demand driven approach** where curriculum is designed using OERs. This will ensure that OERS are designed and aligned to future curriculum development and will ensure OERS are embedded and used in curriculum delivery models.
6. Building on the experience of working with the South African Institute for Distance Education (SAIDE), the University should consider **forming international partnerships** for progressing the development of OERs. Consideration should be given especially to third World Countries to enable them to develop knowledge and understanding of using open and freely available educational resources in their curriculum models.

7. Key Messages for the JISC, HE Academy and the wider HE Community

1. The OTTER Project failed to engage publishers in OER creation despite effort and having funding available. It would appear that a different model for accessing academic content needs to emerge. This might, for example emulate the transformation that has taken place in the music industry over the last few years with the emergence of MP3/4 players, iPhones and download tools such as iTunes. It would appear the realisation of such a model with publisher engagement cannot be achieved at institutional level and needs a national push. JISC and the HE Academy would be well placed to lead and negotiate such a change.
2. The OTTER project has made significant progress and contribution to OER development in a short period of time. However, more work in this important field of development is needed, especially at a time when HE funding is being stretched and economies can be achieved through effective collaboration and sharing. Further development work is needed in a number of key areas including:
 - Embedding OERs in Curriculum Delivery Models
 - Cascading the work and skills developed in this first OER programme throughout the Sector through the formation of effective collaborative partnerships and OER networks.
 - Refining standards and processes for OER production
 - Researching impact of OERs on building a global market for UK HE.

Appendix 1

The following people have contributed to the external Evaluation of OTTER:

Individual	Title
Prof. Gilly Salmon	Professor of E-Learning, Beyond Distance Research Alliance
Dr Alejandro Armellini	Senior Learning Designer, Beyond Distance Research Alliance
Gabi Witthaus	Project Co-ordinator
Dr Samuel Nikoi	OER Evaluator
Tania Rowlett	Copyright Administrator
Dr Richard Mobbs,	Project Advisor, OER Technology and Embedding