JISC

Project Document Cover Sheet

Project Information			
Project Acronym	Open Exeter		
Project Title	Developing Open Educational Resources for the University of Exeter		
Start Date	1/5/2009	**End Date**	30/4/2010
Lead Institution	University of Exeter		
Project Director	Tom Browne – Main contact for JISC		
Project Manager & contact details	Tom Browne, Email: t.j.browne@exeter.ac.uk Tel: 01392 72 3232		
Partner Institutions	N/A		
Project Web URL	http://as.exeter.ac.uk/support/educationenhancementprojects/openexeter/		
Programme Name (and number)	Grant 14/08: HEFCE/Academy/JISC Open Educational Resources Programme		
Programme Manager	Heather Williamson		

Document Name			
Document Title	Final Report - DRAFT		
Reporting Period	Submission by 26/4/2010		
Author(s) & project role	Tom Browne Project Manager and Principal Investigator		
Date	26/4/2010	**Filename**	Oer-final-report-exeter.doc
URL			
Access	☐ Project and JISC internal	√	General dissemination

Document History		
Version	**Date**	**Comments**
1.0	5/3/2010	Much still very much as draft.
2.0	13-23 /4/2010	Internal circulation for comment
3.0	26/4/2010	Final version sent to JISC

JISC

Final Report

Open Exeter

Tom Browne; tel: 01392 72 3232; email: t.j.browne@exeter.ac.uk

April 2010

Table of Contents

1 Acknowledgements

The University of Exeter wishes to express its appreciation for the funding provided under the Institutional Strand of Grant 14/08: HEFCE/Academy/JISC Open Educational Resources Programme.

Thanks are also extended to:

- JISC, especially Heather Williamson our programme manager and also David Kernohan, who has overarching oversight for the JISC/HEA OER programme.

- Staff at JiscLegal for their patience and responsiveness.

- Staff at CETIS for their supportive metadata advice.

- All University of Exeter project colleagues: http://as.exeter.ac.uk/support/educationenhancementprojects/openexeter/projectmembers/

- Although it is invariably invidious to highlight particular individuals the following deserve special mention:
  - Matt Newcombe, primary co-collaborator, technical expert and a great support in all respects.
  - Ahmed Abu-Zayed for his forensic and internationally renowned metadata experise.
  - Kevin Evans for developing our repository.
  - Rachael Morgan, IPR Manager and Claire Turner, Head of Legal Services for their expertise, active engagement and timely advice.
  - Richard Holding and Anna Howells, who, as educational technologists, were 50% seconded to the project throughout, and similarly to Ian Wellaway and James Peard, both of whom shared six months each of the project.
  - The members of the internal OER Steering Group, for their insightful and timely guidance and advice.

- Staff at the Open University, particularly Grainne Conole, Giota Alevizou and Rebecca Galley for their engagement with several staff development initiatives.

- The many academics who so willingly contributed resources.

- The wider communities of practice, particularly colleagues involved in the other institutional projects.

2 Executive Summary

This project explored, in an Exeter context, the potential benefits and challenges of giving worldwide access to high quality and research-informed learning and teaching resources. Our project has provided a testbed for the challenges involved in making course materials available. Open Educational Resources (OER) do not present a departure from our existing plans; our Education and Technology Enhanced Learning (TEL) strategies both focus on the flexible and open availability of learning resources. More broadly, OER addresses our other key strategies that further promote Exeter as a top research intensive university of international excellence.

The business case is identified by leveraging OER to inform and support:

- raising our profile to prospective, particularly international students in both the quality of the learning at Exeter and the stature of our staff;

- our alignment with top-10 UK research intensive universities;

- improving the level of student satisfaction with respect to the quality of learning materials;

- promoting active, independent, student focused learning which can 'range' across disciplinary boundaries;

- research-informed learning and teaching, including design and delivery, to encourage sharing and reusing, allied to an array of social networking tools;

- a change of focus from regarding resources as the 'crown jewels', highly prized and highly protected to one where the material is regarded primarily as the precursor to learning.

Within the constrained perspective of addressing our project aims and objectives and delivering core outputs and addressing key outcomes, the project has been effective.   We have in fact been running two parallel projects – a) to deliver the tangible deliverables (primarily a minimum of 360 credit equivalents of material and a repository) and b) to 'tell the story' of how we set about creating a technical, organisational and staff infrastructure. Working within a larger project community of institutional projects has also enabled us to contribute to a very effective community of practice. Also, within the institution, our project has engaged and generated synergies between a very wide range of committed stakeholders – legal, IPR, insurance, library, IT, databases, education, TEL plus many academics from a wide variety of disciplines.   Throughout, sustainability, in all its dimensions has been central to our thinking.

Very important challenges now lie ahead after the project funding ceases – to obtain long term and meaningful commitment from University senior management that the OER agenda will be acknowledged as having a central place within its strategies and policies. Our staff development programmes which have focused on the 'demand-side' have been an effective entrée into exploring OERs. On the 'supply-side', providing our own OER that reflect our research strengths, thereby giving Exeter 'marketing visibility' internationally is convergent with our core ambitions. However, embedding OER as part of the educational transformation of our design and delivery working practices implies a greater impact upon academics and support staff because of the significant scaling up of all the processes. We will soon be working through a HEFCE-funded Open University Fellowship awarded to one of the project team to address further the staff development challenges.   But of particular significance is that at a meeting on 19th April 2010, a suite of proposals for continuation funding was approved in principle, although the exact means of financing is still under discussion.   The paper containing the proposals recognised that the marketing potential of OER resonates most strongly with the University's mission of being an internationally renowned, research intensive institution.

3   Background

Exeter already had some prior engagement in JISC-funded OER-related activities:

- *CHARTER*
  *(*http://www.jisc.ac.uk/media/documents/programmes/digitisation/charterfinal.pdf) Much experience has been acquired in creating a high quality infrastructure around our special collections repository.

- *POCKET* *(*http://www.jisc.ac.uk/whatwedo/programmes/reppres/sue/pocket.aspx) As a partner to this project, Exeter has gained some preliminary experience in contributing a small amount of material for OER.

- *Integrative technologies*
  (http://www.jisc.ac.uk/whatwedo/programmes/elearningcapital/curriculumdelivery/fundedprojects.aspx) Using technology supported communities, this project, which ends in October 2010 aims to foster students' abilities to integrate learning between academic extra curricular, community and personal life within a particular School. OER frames some of those communities.

- In addition to the above, our OER project was closely aligned to an internal project that is migrating course material from WebCT to a new service based upon Moodle.   This process is giving us the opportunity to talk individually to every academic and to introduce them to the affordances offered by OER.

We therefore proposed to advance the OER agenda by pursuing the opportunities itemised within the 'business case' in the Executive Summary. We tendered for the JISC-funded institutional strand and called our project Open Exeter, which also doubled up as the name for our OER repository. Implicit within the broad thrust of these itemised opportunities was a recognition that the marketing potential resonates most strongly with our stakeholders, all of whom, regardless of their context within the University identified Exeter's research intensive focus as the agenda that permeates all our deliberations.

4   Aims and Objectives

For this section, JISC requested that the text that was submitted as part of the Project Plan was included verbatim here. The full Project Plan, dated 29/5/2009 is available from: http://www.jisc.ac.uk/whatwedo/programmes/elearning/oer/openexeter.aspx.

4.1   Aims

A research-intensive University, Exeter has revised its Education Strategy, placing greater emphasis on designing student experiences, supported by the use of appropriate new technologies and contextually located within a rich array of learning materials. We are also promoting active learning in which students and staff can 'range' across disciplinary boundaries. In addition, we are increasing our international intake and the availability of OER will be key to marketing Exeter's education 'brand'. This enhanced educational focus will impact upon the character of the developmental support that staff will require in order to promote appropriate student engagement. Exeter is committed to encouraging open educational practice and believes that Open Exeter will inform and support widespread transformations in learning and teaching. We embrace the ambition of creating a virtuous circle whereby staff and students, through sharing and reusing, will leverage a more communicative, active and independent learning style appropriate to our mission of developing a teaching research nexus. OER will thereby become an integral component of curriculum design and delivery. Open Exeter will provide a testbed for the challenges involved and enable others to draw on the project's experiences.

4.2 Objectives

1) Make available via a Creative Commons licence, a minimum of the equivalent of 360 credits of learning resources, from a range of subjects and a wide variety of mediums.

2) Make the resources available via JorumOpen and also Exeter's institutional repository.

3) Create a suite of protocols and templates that will facilitate the workflow from identifying resources to making them accessible such that future resources can be released under the same sustainable conditions.

4) Create an effective metadata schema so that resources can be readily found be end users.

5) Create an environment within which resources can be effectively evaluated, used and repurposed as part of e.g. student / staff collaboration course design and delivery.

In addition, the project will:

a) Develop a suite of case studies drawing upon challenges encountered and solutions identified.

a) Evaluate and disseminate the experiences and the outputs of the project.

b) With respect to outcomes, facilitate changes in curricula design, impacting upon student staff relationships and the teaching-research nexus.

c) Identify staff development requirements and propose curricula that could be included within e.g. HEA institutionally accredited programmes.

4.3 Taking the aims and objectives forward

Each aim and objective has been satisfactorily addressed and each with its own accompanying story. These will be described within Section 6.

5 General approach

Prior to tendering, we obtained active support from our DVC for Education. We then identified three diverse departments (physical geography, economics, lifelong learning) which between them were able to contribute the requisite volume of material, which in turn, offered a variety of different types of resources. We obtained written guarantees of support from these departments, which were submitted with our bid. We then contacted all the Heads of Schools to inform them of our project and have subsequently, obtained material from other departments, but the initial assured buy-in was essential to enable us to get off to a flying start.

Our initial focus was in securing the supply side, i.e. identifying depositors and in reality we have yet to undertake much testing of the usefulness of our own material on Open Exeter. We have created a completely new technical, procedural and developmental infrastructure from scratch in just one year. But that extremely demanding timetable has not yet fully allowed meaningful time to evaluate how Open Exeter will be used. These aspirations form the core of proposals that are being considered by University senior management.

We seconded educational technologists from elsewhere within the University at the equivalent of a total of 1.5FTE for the duration of the project. These staff were at the front line in engaging and liaising with academics. To facilitate such engagement, we established 'academic champions' within our three primary departments. This model proved to be particularly effective. In terms of power relationships, it was difficult for our educational technologists to continually press academics for material and responses to follow-up queries. Working through a very cooperative academic champion has regularly opened doors.

As a mark of the importance the University placed on this project, we formed a Steering Group chaired by a senior Professor who is an active advocate for OER. This group was central to the processes of decision-making about ways of working, evaluation and dissemination and formal meetings were timetabled on a regular basis. We have also, at their request (which

we interpreted as encouraging!), submitted papers to our University Senior Management Group (June 2009) and the Vice-Chancellor's Executive Group (November 2009). Accompanying the latter request was an expectation that we would later submit a costed proposal to maintain the momentum initiated by this project.

A full time role of project manager / principle investigator was created to drive the project. These twin roles invested within one person ensured that the that the project was not driven in a semi-detached mechanical way, rather, it ensured that the proper management of the project was undertaken in a manner that was sympathetic to the realities of engaging with a diverse community and with colleagues throughout the institution who had many other pressures on their time.   Much time has been spent in conversing closely with these colleagues to ensure that identifiable coherence was developed in what could potentially have taken off in many tangential directions. The value and impact of this 'human touch' cannot be underestimated.

6   Implementation

Core to our sustainability aspirations was to embed the implementation of new processes into current working practices.   As identified on our project webpages, our project was implemented through multiple strands, or workpackages, (see: http://as.exeter.ac.uk/support/educationenhancementprojects/openexeter/workpackages/). There was also much overlap in terms of timing and connection between them.   Each required individual attention whilst at the same time ensuring that the work flow fitted into the bigger picture. Some of our workflows were informed by e.g. the JISC-funded Web2Rights project (see: http://www.web2rights.org.uk/). The following summary cuts across the workpackage headings:

6.1   Review of current practices

We initially planned to undertake a fast-track appraisal of existing practices that would need to be adapted or modified. On reflection, we determined that such awareness was best acquired as part of the change process itself because a mature picture would only become available near the end of the project.   For much of the duration of the project, we had a blog, which doubled up as a public diary. It can be viewed at: http://blogs.exeter.ac.uk/oer/. However, for some academics, this blog was *too* public and so we established an internal blog where they could express themselves more freely!

6.2   Determining the quality of resources

We had initially couched our conversations in relation to quality in terms of 'assurance'. However, we then changed the language to 'enhancement', recognising that any evaluation of quality must be understood within a particular context.   We have also considered procedural options ranging from a more formal peer review approach to a more community led approach. However, as our project developed, it became clear that the 'brand' of the University was always an important consideration, regardless of the context and so quality will always need to be 'high' in adding value to the University's reputation.

6.3   Licencing and Clearing

Undoubtedly this aspect of our project consumed much of our time and involved many agencies. We drew upon the goodwill and expertise from our IPR Manager, Head of Legal Services and Head of Insurance   We also asked JiscLegal many questions and they were very responsive and helpful in their replies, but always with the caveat that they were not offering formal legal advice.   In October 2009, Jackie Milne from JISCLegal came to Exeter on 22/10/2009 to record an interview with one of our Educational Technologists regarding our experiences with IPR issues.   Excerpts from the interview were broadcast on 5/11/09 in a JISCLegal webcast called 'OER - Legal Matters'.   See: http://www.jisclegal.ac.uk/ManageContent/ViewDetail/tabid/243/ID/1150/OER--Legal-Matters--

Webcast--051109.aspx (and note *OER in practice - An interview with Anna Howell, Educational Technologist at the University of Exeter).*

 It did seem as if every IPR problem had to be dealt with on a case by case basis, and invariably the response to any question was an 'it all depends'.   We had the foresight in our budget to set aside a considerable sum in order to obtain advice from the firm of solicitors that the University uses.   Their advice, which was very sobering, and very risk-averse, ultimately determined the path we would take regarding copyright clearance.   We found ourselves working to strictures that attempted to limit the management of identifying risk such that it would be negligible. Part of the reason is that the University is not insured for copyright infringement, considering it too expensive to do so. The objective would be to direct the claim again 'negligence', for which the University is insured. 'Due diligence' therefore took on a very constraining connotation. This had a profoundly negative effect on our productivity in clearing resources and in our negotiations with contributors. Also, and of considerable concern, we had to jettison complete courses we had previously planned to include.   This aspect of the project was unambiguously the most frustrating and time consuming.

We clearly therefore needed to adjust our approach to acquiring the requisite 360 credits equivalent of material. We had begun our clearing process by taking a 'proportionate' view on the number of credits we could claim for the amount of material we had cleared.   We decided to employ a more mainstream approach whereby we 'claimed' the credits so long as the volume of material cleared was sufficiently representative of the course as a whole and quality and coherence were not impaired.   This approach fits in more with the 'for the teacher' model, a scaffold of resources that are made available but are not necessarily for self-paced, independent learning.   Indirectly, it has also addressed the concerns of some academics who were concerned about giving away their 'crown jewels' but are willing to deposit a 'taster' proportion in order to promote their courses. Latterly, we have also obtained what could be described as 'learning designs', which are not material-rich at all.

Our University lawyers prepared our 'licence-in' document, (the licence contributors sign when giving material to the University to be turned into OER) see:
http://as.exeter.ac.uk/support/educationenhancementprojects/openexeter/workpackages/licencingandclearing/. Determining our 'licence-out' (Creative Commons) approach initially proved problematic because our lawyers wanted to develop an Exeter variant.   They were concerned about not being able to identify people and that they cannot insist that downloaders stop using material for any reason, e.g. a copyright infringement has subsequently been identified..   This was an unanticipated and unwelcome delay and prevented us from uploading material until quite late into the project.   This proved to be an interesting exercise in changing institutional mindsets from 'all rights reserved' to 'some rights reserved'!

We had begun to develop a visual IPR FAQ but because we were latterly drawing upon the advice from our University lawyers, which was given to us 'commercial in confidence', we have yet to identify a satisfactory way in which we can release this guidance more widely. A screen shot of early ideas can be viewed at:
http://blogs.exeter.ac.uk/oer/files/2009/07/compendiumscreenshot2.jpg

Part of the dialogue with academics was to ask them to mark up their material, indicating what was their own, what was third party (and any indication of permissions currently in place) and any material they were uncertain about.   This was an essential first step but could not be relied upon as being very accurate, as often revealed when passing any textual material through plagiarism detector software!

6.4   Repositories

We were required to set up our own repository and also make our material available via JorumOpen. Unlike some other projects, we had to create our repository from scratch, though we had some expertise because we already had two related repositories (collections [see Charter in section 3] and research publications.) From the beginning we decided to embed

our new OER repository, called Open Exeter into this wider infrastructure. The University is now developing another repository for research data. All four repositories are based upon DSpace and so sustainability is factored into them collectively.

Gaining access to relevant personnel in a timely manner, combined with the complexities of developing a repository is such a short period of time, inevitably led to delays in its completion. Also, the requirement to address two repositories, namely our own and JorumOpen contributed to some ambiguity and confusion regarding whether we had to deposit the same material in Open Exeter *and* JorumOpen. Self evidently, this would be very poor database practice. We also wished to build a 'pedagogical wrapper' (see Section 6.5) around our material and this would only be available with Open Exeter. Commonsense finally prevailed and we are now *linking* from JorumOpen *to* Open Exeter. Ideally, we want JorumOpen to be able to harvest our metadata but this option is still under development by Jorum.

Exeter was selected to test the development of JorumOpen prior to its formal release in January 2010. We had hoped to be able to influence those developments but ultimately we were merely required to confirm or otherwise the success of JorumOpen in addressing its previously declared ambitions.

In reality, given that the 'branding' aspect of OER is of considerable relevance to the University, having our own repository, despite the capital and maintenance implications, is pivotal to such marketing.

6.5 Creating communities of practice

Built into our plans, and in close co-operation with the Open University, we explored the efficacy of using Cloudworks as a 'pedagogical wrapper'. This is a software tool created by the OU as 'a place to share, find and discuss learning' as a means of creating communities of practice around resources. In effect, we would like to know 'why' and 'how' our material is being used. The OU had received some funding within which they made the U/Exeter their case study. They will produce their evaluation report in due course. We held a workshop in November exploring these issues and learned valuable lessons. However, it has not been possible to explore this agenda in as much detail as we had planned. The complexities of developing our repository from scratch and the licencing imponderables discussed in section 6.3 meant that there was insufficient meaningful capacity at the end of the project to generate communities of practice around our deposits. In any case, this will take time to develop, as we in parallel make our materials more discoverable.

6.6 Dissemination

- A vital part component of our dissemination has been our website (see: (http://as.exeter.ac.uk/support/educationenhancementprojects/openexeter/), and our public blog (see: http://blogs.exeter.ac.uk/oer/). From its instigation, the blog was intended to function as a diary, in addition to the conversations it also generated.

- Dissemination of the project has also taken place through two peer reviewed outputs, with presentations in Auckland (New Zealand) and Cambridge. See section 11 for further details.

- Five detailed progress reports were produced and they are all available from: http://as.exeter.ac.uk/support/educationenhancementprojects/openexeter/workpackages/projectmanagement/.

6.7 Staff Development

We have built up much staff capacity and skills within our professional support staff and for many of them these skills are now embedded within their working practices. Our academic champions continue to be effective advocates. Many other academic staff have already acquired an awareness of the opportunities and challenges that OER bring.

However, for the OER agenda to scale up and also be sustainable we envisaged from the beginning that raising staff awareness was essential. But it has proved very challenging to instigate a fully rounded staff development programme at the same time as many of the essential infrastructural underpinnings were being developed!   Nevertheless, we held a well-attended workshop in November 2009 in conjunction with colleagues from the Open University, who already had experience of running such courses, see: http://cloudworks.ac.uk/index.php/cloudscape/view/1921. As well as introducing OER we are attempting to explore the usefulness of Cloudworks. It was clear by the end of the day that we had set ourselves too demanding a task, as evidenced from an analysis of the questionnaire returns, which are available at: Workshop Questionnaire Report. It was salutary how few delegates had any coherent understanding of OER.   We also gave too much focus to the supply side, with all its associated issues such as copyright, motivation etc. and insufficient on the demand side. Subsequently, in January 2010 we held two workshops within our HEA accredited staff development programmes. The focus was on the demand side and it elicited comments such as:

'I have found some very useful courses which are relevant to my teaching'.

In our opinion, such an approach has proved to be a very successful entrée into OER. The Open University Fellowship noted in Section 8.1 will build upon these successes.

6.8   Ongoing and Final Evaluation

We have evaluated our work as we have gone along. We have recognized evaluation as being important both in terms of dissemination and also as being vital to the processes of evidence-led change.   Our external facing blog (see Section 6.1) has proved to be an effective reflective diary.   We also had an 'internal' blog, which was requested by some academics who were reluctant to comment more publicly. Our Steering Group has engaged with issues as they have arisen, as evidenced in the minutes from our Steering Group meetings (see Section 6.6).

We also conducted a detailed in-house evaluation.   As well as drawing upon an array of documented sources, many professional support staff and academics who had engaged with the project were interviewed.   The summaries of all those engagements are captured in a report available from: http://as.exeter.ac.uk/support/educationenhancementprojects/openexeter/workpackages/ongoingandfinalevaluation/ and it makes a substantial contribution to our 'review of current practices' workpackage. The other primary contribution is Browne *et al,* (2010), itemized in the References in Section 11.   Both these sources have a wealth of verbatim quotes. Two examples are given here, identifying the diversity of opinion, ranging from the very positive:

> *'All I'm really interested in as a contributor is making my resources more freely available to other educators to use as they see fit - I think there is some value in my resources that I'm happy to see others take advantage of if they wish'*

to the much more circumspect:

> *'Making this material available as OER is the equivalent of giving away research that would otherwise be patented (and hence could earn income) and would not be in the best interests of either the staff or the University'.*

Additional evaluative observations are summaried below:

- There was a great deal to do in just one year!

- In a University aspiring to be amongst the research elite internationally, other than for the hard core of enthusiasts, it was sometimes difficult to extract meaningful time from academics. Even where enthusiasm was initially gained, the practical realities of needing to engage regularly with the contributors was often a protracted and dispiriting experience.

- Embedding OER into our educational practices will have a significant impact upon academics and support staff because of the substantial scaling up of all the processes.   It

will not be welcomed by many unless it is seen to connect with their research and there is discernable recognition (i.e. career rewards) for doing so.

- The different workpackages often engaged entirely different personnel within the University. The challenge was to retain coherence between as well as within each workpackage.

- Though not factored into our Plan, we had anticipated having a collaborative relationship with the GEES and Economics Subject Centres, both of which have Exeter material as part of their consortia. Disappointingly, this has not happened. Self-interestedly, we would like to host the Exeter material from each consortia, but currently we have little idea regarding the level rigour that has been applied to e.g. copyright clearance or e.g. the nature of the metadata employed.

- Unequal power relationships in dialogues between academics and educational technologists made the role of the academic champions through whom we worked absolutely vital.

7   Outputs and Results

7.1   Open Educational Resources released

Our three primary Schools which were submitted as part of our bid were The University of Exeter Business School (primarily Economics), School of Education (primarily department of lifelong learning [DLL]) and the School of Geography.   The DLL material covered a very wide spectrum of subjects.   Between them we offered over 800 credits.   This figure was incrementally and savagely reduced as the full implications of IPR took their toll.   The material is mostly at undergraduate level and it has been released under the Creative Commons licence as attribution, non-commercial, share alike and derivatives are permitted.   The URL for our repository is: https://open.exeter.ac.uk/repository. In addition we have made available some *Co-curricular material.* This material is used by many academics as part of their supportive armory within their credit bearing courses. Rich in multi-media, titles include: Presenting with confidence; Essay writing; Dissertation management; Teamworking; Time management and Avoiding plagiarism. This material also contributes to *the Exeter Award*, which is an achievement award designed to enhance students' employability. However, this skills material is not readily disaggregated so it will be released with the 'no derivatives' option.

7.2   Technical developments

We have developed a systematic approach to metadata and opted to map from Dublin Core terms (DSpace uses Qualified Dublin Cores by default), to UK LOM, which we considered to be more suitable for our purposes.   This will ultimately allow harvesting and transferring of learning object Metadata across platforms, (though JorumOpen cannot yet harvest from other repositories).

DSpace repositories are split into *Communities* which hold *Collections* of *Objects*. By having a specific repository for the project we were able to make full use of all three levels in the DSpace hierarchy (instead of having to name the Collection 'Open Exeter' if the repository was shared with another project). We adopted the internationally agreed Joint Academic Classification of Subjects (JACS) schema to provide our communities and collections.

Dublin Core has its own headings for describing learning objects. However, LOM is specifically created with Learning Objects in mind. This presented the problem of choosing the relevant fields from the LOM schema and ensuring that they can could mapped; we also defined very few mandatory fields in our schema to try and create parity with Open Jorum's very simple metadata requirements. The mapping we adopted is available from: (http://as.exeter.ac.uk/support/educationenhancementprojects/openexeter/workpackages/metadata/)

This mapping, which was not a trivial undertaking, has been well regarded by the wider community - see the link to external 'hits' from: http://as.exeter.ac.uk/support/educationenhancementprojects/openexeter/workpackages/metadata/.

To package our learning objects as IMS content packages, we used the RELOAD editor, an outcome from an earlier JISC project.   We also made the material available as standard zip packages containing an HTML version of the materials.

Throughout the project we adopted a standards approach this has been recorded by CETIS and is available at: http://prod.cetis.ac.uk/projects/open%20exeter.

Within our Exeter infrastructure, rather than have our OER eccentric to our integrated central infrastructure, we aimed to embed it as a core service. This necessarily implied that hardware and software expenditure could not be targeted exclusively to OER, but is apportioned within a much wider university provision of related resources and services. In more detail, we obtained two virtual servers (1 production, 1 test/development) with 20Gb filespace and 6TB (mirrored) SAN storage including backup.

7.3   Innovations in practices/ processes around OER

Many current initiatives and strategies at Exeter are contributing to transforming educational practice and OER are contributing to that agenda. This OER project has involved harnessing many strategic relationships within the University creating synergies between many disparate teams, each with their specialist knowledge, including numerous academics from many departments and also professional support staff. Regarding the latter, it has engaged University colleagues in our IPR, Legal and Insurance teams, Business Improvements and Systems Support, Information and Computing Systems, the Library and Research Support and well as many colleagues engaged with generic skills, TEL and staff development within Education Enhancement.   Apart from bring together so many teams around a common objective, there has been a discernable growth in awareness regarding the much broader 'open' culture of which OER can be regarded as just one component.

7.4   Guidance on OER release and associated issues and processes

A suite of processes was developed to streamline as much as possible the engagement between the educational technologists and academics. These are available from our project website.

8   Outcomes and Impact

The following are currently 'aspirational' but were detailed in our Project Plan. It will take a much longer period of time before it will be possible to ascertain whether these aspirations are being met and their *impact* evaluated. In that sense, a one-year project, in which so much ground-setting had to be undertaken, cannot do justice to this value-added agenda. Nevertheless, progress has been made in all of them and can justifiably, albeit as 'work in progress' be regarded as *outcomes*. They are retained here in the future tense:

- Raising the quality of learning and teaching materials and thereby improving student satisfaction.

- Growing awareness that resources are not the 'crown jewels' but should be shared with the community to enable re-use and re-purposing for everyone's benefit.

- Contribution to the teaching-research nexus, where staff and students can co-create resources within an active, co-dependent and interactive curriculum.

- Individual academics will have the opportunity to enhance their reputation.

- The University will enhance its marketing potential, particularly to international students

- There should be less 're-invention of the wheel' with respect to producing learning and teaching resources.
- The University, in part in recognition of its charitable status, is able to contribute to the well-being of the wider society.
- University resources, by being exposed to the rigour of the outlined processes, will become much 'cleaner' with respect to IPR and related issues.

Another measure of impact can be gauged by the positive response from the VCEG to our paper submitted on 19th April 2010 and their agreement to support our proposals for continuation activity and for which we anticipate some funding, although the exact details have yet to be finalised. (see Section 9.1)

8.1   Impact regarding how Open Exeter has facilitated subsequent initiatives:
- We have built up a wealth of expertise within the University.
- Because the project has been institutionally oriented and has involves many institutional partners, its presence has been felt throughout the University.
- Tom Browne, (project manager / principal investigator) has:
  - o been invited to become a member of a new Jorum Steering Group. Its first meeting will be in June 2010.
  - o obtained a SCORE Fellowship, with a focus on OER staff development, with the material produced available for repurposing by e.g. any HEI that wishes to include a relevant module within their HEA-accredited courses.

8.2   Critical success factors for achieving the impact we have achieved
- We needed to 'engage' with the OER agenda ourselves and external funding gave us the means to do so.   We could not have made such progress merely by reading up on activity elsewhere.
- We needed and unambiguously had dedicated staff (both in terms of commitment and in contractual obligation).
- We greatly benefited from support from the JISC, a suite of online community support sessions, interactions with the wider community of institutionally funded projects and several face to face workshops.   The ability to meet the wider community physically added value to when we met virtually.

8.3   Critical barriers to achieving impact
Without academic buy-in, the OER agenda will not progress. There is a demanding challenge in making it pertinent to a research-intensive culture and for career rewards to be visible. Issues of e.g. copyright clearance, though extremely tedious, and though they contribute to the perceptions around how much time needs to be committed, are secondary to the core issue of whether the University regards OER as a valuable form of engagement for its academics.

9   Conclusions & Recommendations
- The JISC funding enabled us to cover the capital costs of establishing a technical infrastructure and establish many key processes and in e.g. obtaining essential legal advice.
- The JISC model of converting existing materials is not sustainable / scalable. It is feasible when courses are being newly designed and created or substantially revised.
- Build appropriate OER staff development as part of scholarly endeavour in learning design / delivery.   For early career staff, this could be within the institutionally-accredited HEA

programmes. For more mature staff, it could form part of their regular Continuing Professional Development.

- Attempting to calculate the cost of OER in monetary terms is notoriously difficult to do. It would be useful to have Full Economic Costing estimates regarding the cost of e.g. producing digital material for our institutional VLE. If this is unavailable, it is somewhat meaningless to attempt to calculate what the marginal cost would be on an unknown base cost.   A more promising strategy is to focusing on the 'benefits' and ensure that the OER agenda is tightly coupled with how the University views itself, i.e. its core values and mission.

- Argue the case of the cost of not engaging! It is unlikely that any costing model will really swing an argument, though they may be used by those who already have made up their minds.

- Build upon a hub and spoke organisational model, in order to both bind in departmental commitment together with central organisational oversight.

- Ensure that your repository is embedded within a much large supportive infrastructure.

- If would take the focus off the 'costs' of OER if copyright clearance was regarded as a necessary stage before material can be uploaded to an authenticated VLE.   Whilst it would not address all copyright issues, it would address many, and also highlight the importance of this agenda.

- The sort of quality assurance / enhancement (if any) you wish to pursue will be heavily influenced by the extent to which the marketing agenda permeates all considerations.

- Reward and recognition must be present in policy, and observable in practice.

9.1   Exeter's recommendations to University Senior Management

As previously noted, a suite of costed proposals was submitted to the VCEG on 19th April 2010. They have been accepted in principle. The following is a summary of those proposals. The full paper, with accompanying timescales and resource implications will be made available from:
http://as.exeter.ac.uk/support/educationenhancementprojects/openexeter/workpackages/trainingmaterialsdissemination/ when the means of financing this continuation activity have been finalised.

1. Awareness of other repositories and how they may assist staff in the design and delivery of their own courses, thus potentially saving time.
2. Creating a limited volume of high quality OER resources based upon the University's primary research themes, as a means to market the institution to potential e.g. international students.
3. Making available a small sample of high quality OER course material as part of each programme specification, again to improve their marketing visibility.
4. Identify OER as integral to our educational scholarly practices, embedded within our design and delivery of research-informed courses.

10 Implications for the future

The implications for the future cannot be fully known at this stage. Despite the increasing number of repositories internationally, there is not yet a body of evidence that suggests that they are being fully and effectively exploited.   Arguably, the agenda has been overly focussed on the supply side, though this has been understandable in order to obtain a critical mass of creditable resources.   Attention should now be focussed on the demand side, to draw value from these resources.   To repeat, it is too early in our Exeter experience to evaluate the worth of the resources in Open Exeter or indeed our use of resources available elsewhere. This

challenge can be pursued around the successful internal proposals noted in Section 9.1 and it also forms part of the agenda for the Open University Fellowship noted in Section 8.1.

What is not in doubt however is that we now have built capacity in terms of a sound infrastructure, technically, organisationally and with an array of embedded skills.

11 References

- See list on website at:
  http://as.exeter.ac.uk/support/educationenhancementprojects/openexeter/links/

- See references in: Browne, T.J.& Newcombe, M. (2009). Open educational resources: A new creative space. In *Same places, different spaces. Proceedings ascilite Auckland 2009*. http://www.ascilite.org.au/conferences/auckland09/procs/browne.pdf

- See references in: Browne, T, Howell, A., Rodway-Dyer, S. and Holding, R. (2010). The challenge of OER to academic practice. *Presentation given at the OER10 conference, 22/3/2010 Clare College, Cambridge*. http://www.ucel.ac.uk/oer10/abstracts/1018.html. Also written a paper for the Journal of Interactive Media in Education, which will be submitted by 28/4/2010.