

Open Educational Resources: a user perspective

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Depositing and sharing materials

What is an educational object?

There have been a number of attempts to define and promote reusable learning objects (RLOs) with no clear consensus or definition. Materials produced specifically for reuse by the RLO-CETL is intended to stimulate learning and generally includes self-assessment. Open Educational Resources (OER) range from single files (images, documents), lecture presentations (with and without audio), multimedia and simulations to entire courses from the Open Courseware Consortium (OCW). A pragmatic definition of an OER is: “any object (generally file/files) created by one group that is subsequently included or modified by another group to promote learning”.

There has been limited uptake of third party teaching materials in the UK for a number of reasons: the technology has been awkward to use, daunting all but the most tenacious; finding and identifying resources for a specific teaching need has been difficult and time consuming; even where a resource apparently covers a relevant topic, it may contain elements that would not meet the needs or level of the course. Simply not knowing the extent and utility of what is available let alone how to find and use it is a major barrier to most academics.

There are many reasons why reusing and sharing learning materials are a good idea:

- ❑ We can learn how others have approached a particular topic.
- ❑ Creating quality e-resources is time consuming and expensive and we can avoid reinventing the wheel.
- ❑ Increasingly, institutions are unlikely to have active research units across all disciplines, limiting access to real experimental data.
- ❑ Teaching is not about giving students a collection of resources, however good, to work through; teaching is about helping students to develop understanding and knowledge through structured learning opportunities and feedback

BioOER experience

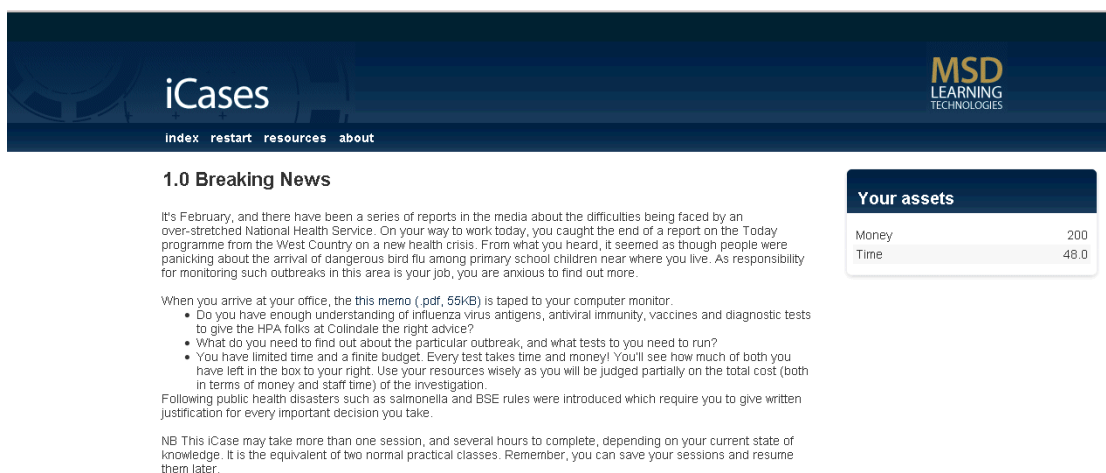
The objectives of the recent JISC and HEA subject centre OER projects were: to identify the processes involved in creating and sharing content; barriers, to identify barriers, what stops people sharing, reusing and releasing existing materials for use by the wider community.

HEA Biosciences (<http://www.bioscience.heacademy.ac.uk/resources/oer/>) had a straightforward approach, they identified a type of teaching: laboratory practical classes, fieldwork and simulations and invited proposals. Medical Science Division Learning Technologies (MSD-LT), University of Oxford had been developing iCases for about eighteen months at the start of the project. The intention was to create an e-learning experience to replace a laboratory practical class that was too expensive to run. The topic was the identification of influenza virus, assays, and techniques. A paper-based version of the practical had been tried but the student feedback was awful. The intention of iCase Influenza Outbreak was to give students a realistic scenario with limited assets (money and time) to arrive at a solution. Using Quandary from Hot Potatoes to create an action maze, James and Young (2010) created iCase “Influenza Outbreak” to teach second year undergraduates. Students are expected to complete a pre-test, demonstrating they have sufficient knowledge of virology, before they can start the case or they are returned to lecture notes and reading list. The scenario:

“You work in a Public Health laboratory. There has been an outbreak of bird flu at a local primary school. You have two days to report to the minister.

- *Do you have enough understanding of influenza virus antigens, antiviral immunity, vaccines and diagnostic tests to give the HPA folks at Colindale the right advice?*
- *What do you need to find out about the particular outbreak, and what tests to you need to run?*
- *You have limited time and a finite budget. Every test takes time and money! You’ll see how much of both you have left in the box to your right. Use your resources wisely as you will be judged partially on the total cost (both in terms of money and staff time) of the investigation.*

Following public health disasters such as salmonella and BSE rules were introduced which require you to give written justification for every important decision you take.”



iCases MSD LEARNING TECHNOLOGIES

index restart resources about

1.0 Breaking News

It's February, and there have been a series of reports in the media about the difficulties being faced by an over-stretched National Health Service. On your way to work today, you caught the end of a report on the Today programme from the West Country on a new health crisis. From what you heard, it seemed as though people were panicking about the arrival of dangerous bird flu among primary school children near where you live. As responsibility for monitoring such outbreaks in this area is your job, you are anxious to find out more.

When you arrive at your office, the this memo (.pdf, 55kB) is taped to your computer monitor.

- Do you have enough understanding of influenza virus antigens, antiviral immunity, vaccines and diagnostic tests to give the HPA folks at Colindale the right advice?
- What do you need to find out about the particular outbreak, and what tests to you need to run?
- You have limited time and a finite budget. Every test takes time and money! You'll see how much of both you have left in the box to your right. Use your resources wisely as you will be judged partially on the total cost (both in terms of money and staff time) of the investigation.

Following public health disasters such as salmonella and BSE rules were introduced which require you to give written justification for every important decision you take.

NB This iCase may take more than one session, and several hours to complete, depending on your current state of knowledge. It is the equivalent of two normal practical classes. Remember, you can save your sessions and resume them later.

Your assets	
Money	200
Time	48.0

Figure 1 iCase Influenza Outbreak (web service)

Initial feedback was positive and the resource was modified in response to comments. This iCase represents ten plus hours of study, students need to be able to leave their case and resume at the point they had left-off and a database was added to track activities. The resource runs from a web server. Accompanying documents are available from JorumOpen.

What would we need to do to make the iCase available to others? Sharing lecture handouts was the first hurdle. Images in PowerPoint presentations used to accompany a lecture have different copyright permissions to those shared via a public repository. Any image that was either of unknown provenance or without copyright permission would need to be removed or replaced. Without audio, the slides were a series of disconnected bullet points of limited use to others as they lacked context. Individual images, originating from active research projects, might be valuable to others. Extracting the images from the presentation was easy but there was no metadata attached. They were returned to the academic who was asked to provide title, description and metadata and the images uploaded to JorumOpen, which was straightforward, but accepting the terms and conditions for individual items became increasingly irritating. Influenza research is a rapidly changing field, the iCase will be updated annually, routine maintenance for teaching and in response to feedback.

We can release several different products; web access to the current iCase with help creating user accounts; or the software and instructions for local installation and creation of new iCases. Downloading a complex resource like Influenza Outbreak itself would rapidly result in obsolete versions. Assets from the iCase can usefully be used as stand-alone resources, for example a short animated PowerPoint with audio, that was converted to Flash with "iSpring" to demonstrate a particular assay (Fig 2 lower right).

There is a crib sheet for non-specialists with the correct answers to the pre-quiz. Students are also encouraged to use JorumOpen; if we make the answers public then the pre-test becomes meaningless. HEA Centre for Biosciences will hold these materials to ensure that they go to academic staff rather than students.

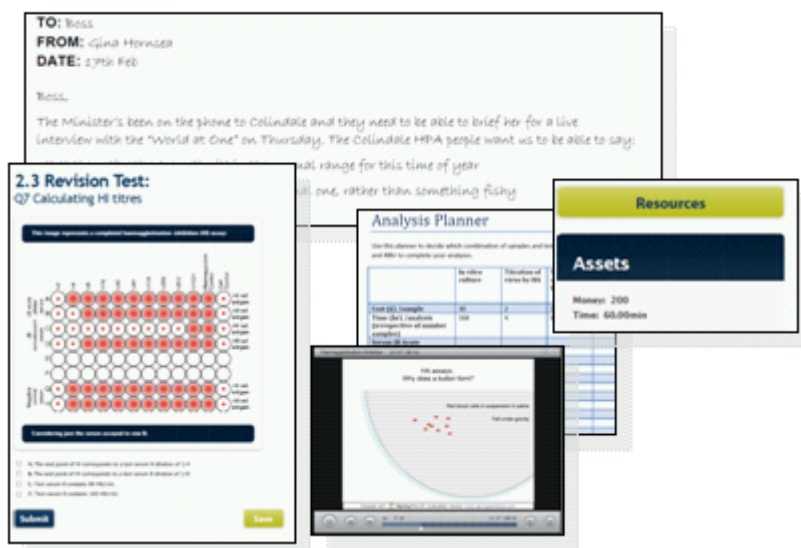


Figure 2 Range of assets available from JorumOpen to support the iCase or for use as stand-alone items

Finding and using resources

I have just moved to a new institution and need to put together a collection of e-learning resources (undergraduate and postgraduate) quickly, for use developing study, numeracy and data interpretation skills. Searching JorumOpen is straightforward, much easier than it was with Jorum; there are a growing collection of materials that can be downloaded without logging in.

Searching

JorumOpen distinguished between objects deposited by FE and HE. Along with the subject area and topic there is other information that would usefully inform selection of a particular object:

- ❑ Intended audience, learning outcomes?
- ❑ Subject content, activities?
- ❑ How the materials were actually used within the course; were they integrated or stand-alone extras?
- ❑ Does the resource contribute to assessment, what is actually assessed and how many marks is it worth, what does it contribute to overall assessment within a module, year, degree? Modules are not the same at different institutions nor do they attract similar credits. Are there security implications if the item is assessed?
- ❑ Has it been evaluated either in terms of academic content or learner experience?
- ❑ Technology used to create the resource, file formats, multimedia, plugins, VLE, customizable?

The screenshot shows the JorumOpen website interface. At the top left is the Jorum logo (a golden chalice) and the text 'Jorum'. To the right is an orange button for 'Depositor Login via UK Federation'. Below the header is a navigation bar with 'JorumOpen Home'. The main content area is divided into several sections: a search bar with a 'Go' button and a link to 'Advanced Search'; a 'Browse' section with a list of categories (All of JorumOpen, Communities & Collections, By Issue Date, Authors, Titles, Keywords); and a 'My Account' section with a 'Depositor Login' link. The central text reads 'JorumOpen' and 'Find and share free learning and teaching resources available to all which have been deposited by UK HE and FE Institutions. All resources within JorumOpen are available under a Creative Commons Licence.' Below this, there is a section titled 'Browse Open Educational Resources' with an RSS icon, showing counts for FE [313] and HE [6456]. The footer contains links for 'Terms of Service', 'Website Help', 'Feedback', 'Policies', and 'Site Map', along with logos for JISC, Creative Commons BY-NC-ND, and EDINA_Mimas.

Figure 3 JorumOpen

JorumOpen Home → HE → HE - Education → View Item

Search JorumOpen

- ☛ Search JorumOpen
- ☐ This Collection
- [Advanced Search](#)

Reading Skills Tutorial

[Show full item record](#)

Share |

Browse

All of JorumOpen

- [Communities & Collections](#)
- [By Issue Date](#)
- [Authors](#)
- [Titles](#)
- [Keywords](#)

This Collection

- [By Issue Date](#)
- [Authors](#)
- [Titles](#)
- [Keywords](#)

Title: Reading Skills Tutorial

Web Resource Address: http://skills.library.leeds.ac.uk/tutorials/reading_tutorial/player.html

Author: Skills@Library, University of Leeds

Description: This interactive tutorial is designed to help students improve their reading skills.

Keywords: Jorumcomp; Reading; Study skills; Academic skills

Persistent Link: <http://open.jorum.ac.uk:80/xmlui/handle/123456789/551>

Date: 2010-01-13

CC Licence Note: This item is licensed under a [Creative Commons](#) licence. By clicking on any of the above buttons(s) you agree to follow the terms of that licence.

My Account

[Depositor Login](#)

Web Link Resource

http://skills.library.leeds.ac.uk/tutorials/reading_tutorial/player.html

Creative Commons Licence

[Attribution 2.0 UK: England & Wales](#)

Figure 4 Item information and download page (JorumOpen)

Downloading and using resources

Exporting a Resource generates an automatic e-mail with a confirmation link to download a zip file. The resource shown in Fig 4 is a link to the Leeds website rather than to files for downloading modification and reuse. Other resources, more usefully, provide source files which can then be modified or re-skinned to match local styles. Although the usability of JorumOpen interface is a significant improvement on Jorum. Differences between “Export Resource” and “Download Original Content Package” are not immediately clear. Similarly “Preview Content Package” can yield a list of files rather than a preview of the resource itself; so you then need to work out which file will start the package (normally index.html).

Materials range from rich websites with multimedia (animations, quizzes), to Word documents, presentations and image files. With all repositories there needs to be a minimum amount of material to make searching worthwhile. The collection has grown significantly over the last six months and is becoming useful. Similarly, the more straightforward it is to download and repurpose materials, the more people will take advantage of what is available and, in turn, contribute to the collection.

Although most of the resources are web based, there is considerable variation in the way they have been created. Some have been exported from applications like “Course Genie”, “eXe.exe” and “Wimba”, xml exports whilst others are long single html pages; many have external style-sheets. Some

include published versions of files; Flash as a .swf file rather than .fla editable format. All come with baffling amounts of meta-data.

My aim is to create a collection of sites that gives students a relatively uniform experience; they should not have to spend time figuring out how to navigate multiple different sites. If you are happy to create indexes, apply style-sheets and other minor modifications this is relatively simple where files are available but it is not possible where a link to an external site is the only option. A further disadvantage of linking to external sites is that they will continue need checking on a regular basis. Some materials are Word files, which are can be converted to web pages and indexed. Most of the materials have the Creative Commons “share and share alike” license. At what point has a resource been changed sufficiently to have diverged from the original for the change to be significant?

References

Creative Commons <http://creativecommons.org/>

HEA UK Centre for Bioscience <http://www.bioscience.heacademy.ac.uk/>

ISpring <http://www.ispringfree.com/>

James, W. and Young, M.D.B. (2010) iCase Influenza Outbreak
<http://open.jorum.ac.uk/xmlui/handle/123456789/5615>

JorumOpen <http://open.jorum.ac.uk/xmlui/>

Open Courseware Consortium <http://www.ocwconsortium.org/>

Quandary <http://www.halfbakedsoftware.com/quandary.php>

RLO-CETL <http://www.rlo-cetl.ac.uk/>

(urls available 5th August 2010)