ChemistryFM Project Plan

Overview of Project

1. Background

This project will release all educational resources used in Year 1 'Introductory Chemistry for Forensic Science' students (total of 30 credits). The course is designed to cover all the major areas of chemistry (inorganic, organic and physical). In 2008, through internal, competitive bidding, the Centre for Educational Research and Development funded the production of high quality, student-produced videos for this course, which help explain difficult concepts using a mixture of animation and live action. Due to interest from other institutions, the videos are now available under a BY-NC-SA licence. With this present project, we wish to extend this approach to all resources for this course. In addition, by working with Siren FM a campus-based community radio station, we will use their recording and broadcasting expertise to develop additional multimedia resources with students and apply current online broadcasting methods to the creation and delivery of these materials. All resources will be made available through our JISC-funded Institutional Repository, third-party Web 2.0 services and via a dedicated website powered by Siren FM. By employing both students and a campus-based enterprise, we will demonstrate a sustainable and innovative approach to the development and dissemination of OERs.

2. Aims and Objectives

Aims:

We will show how our provision of OER will influence curriculum design and the delivery of the curriculum through the concept of **Teaching in Public**. The notion of Teaching in Public supports and builds on the concept of Open Educational Resources. At the core of Teaching in Public is the issue of progressive curricula design, with students as an academic's 'first public' (Burawoy, 2002). Teaching in Public extends curricula design to include the design of teaching and learning spaces (Temple, 2007), the promotion of teaching as a 'public good' (Deem et al, 2007) and the role of university lecturers as 'public intellectuals' (Fuller, 2005). Teaching in Public promotes a participatory pedagogy through a commitment to the principle of education as a basic 'human right' (UNDHR, article 26, 1948).

Objectives:

The project will seek to demonstrate a sustainable and innovative approach to the development and dissemination of OERs within the above outline framework of Teaching in Public.

Students as 'first public': The Student as Producer: We will provide bursaries to students to enable them to work with teachers, collaborating in the critical development and production of learning resources.

Teaching as Public Space: Learning Landscapes: We will work with community radio to extend the learning landscape into the online broadcasting space, therefore reaching a broader and less traditional audience of HE learners beyond the university.

Teaching as a Public Good: The Lincoln Academic Commons: We will use the Lincoln Academic Commons website, Open Journal Systems and the University of Lincoln Repository to enhance both the discovery and re-use of the OERs. We will extend the

Lincoln Academic commons to third-party web 2.0 services through the use of RSS feeds, widgets and embedded media.

Teachers as Public Intellectuals: We will seek opportunities to present papers and publish on how the development and provision of OERs can be a way for teachers to critically engage with the marketisation of higher education through their teaching practice.

Teaching in Public - Education as basic human right: We will demonstrate the impact of OER through the use of web analytics and online feedback mechanisms. We will report on how an OER module may also be exploited for formal distance learning and accreditation.

By working towards each of these objectives, we will critically assess and report on the challenges and benefits of Open Education within the Teaching in Public framework.

3. Overall Approach

This project has four main strands: 1) The creation of student-produced learning resources; 2) the critical examination and re-design of course materials and their delivery; 3) the methods of packaging and disseminating the educational resources; 4) a critical response to Open Education within the framework of Teaching in Public.

The creation of student-produced learning resources will seek to engage students who are taking or have recently taken the course, in a critical evaluation of the course to highlight weaknesses in the provision of learning materials and the design and methods of delivery of those resources.

Based on student feedback, guidelines for measuring and ensuring the quality of course resources will be produced and the existing course design and design decisions will be documented.

A survey of existing in-house and third-party 'solutions' for the delivery or OERs will be undertaken against agreed criteria, leading to the selection of at least one in-house and one third-party method of course dissemination. Broadcasting methods will also be evaluated with community radio staff and parts of the course delivered in partnership with Siren FM. The technical characteristics of the chosen solutions will feed back into the development of the course resources through choices in metadata and file format standards.

4. Project Outputs

The primary output of the project is the sustained delivery of a complete course that is usefully packaged and licensed for re-use by teachers and learners. This Open Educational Resources will be comprised of the existing seventeen videos made by students, audio recordings of each lecture, presentations which combine video, audio and slides, accompanying notes and a reading list for the course. There will also be information on how the resources are typically used at the University of Lincoln. In addition to the videos, existing resources such as lecture slides and the course handbook, will be reviewed for public use and new studio audio recordings will be made of the lectures themselves. Where appropriate, videos of practical lab sessions will be recorded for open access. Bursaries will be given to students to develop short 'stories' for radio broadcast that contextualise forensic chemistry in real-life historical events. These will be accompanied by online self-assessment tools and linked to lectures and supporting materials. The project team will review and revise all existing teaching and learning resources for the purposes of open education.

The secondary output of the project will be to evaluate and implement the use of the web as a broadcasting medium, including the use of Siren FM, the campus-based community radio. As radio moves away from an exclusively live broadcasting model, are there opportunities for the education sector to employ the technical skills of radio staff, use their understanding of broadcasting to

communicate to learners and exploit existing connections with the local community, including non-traditional learners?

The third output of the project will be a critical reflection on Open Education within the framework of Teaching in Public. This will discuss issues of sustainability of this approach within the institution, but also seek to examine the impact of OERs and Open Education on curricula design, the relationship between teachers and students and the role of university lecturers as 'public intellectuals' delivering a basic human right.

5. Project Outcomes

The success of the project will be measured against how well the project achieves the aims and objectives outlined above. Broadly, there is a *practical* requirement to deliver a complete course, packaged and licensed for re-use by teachers and learners. In addition, there is an *academic* requirement to evaluate the sustainability of producing OERs in our proposed manner and the social benefits and institutional risks this entails. Achieving these two objectives are the critical success factors for our project.

We hope that the project will impact the University of Lincoln by drawing attention to issues surrounding IPR and the creation of learning resources, developing a better awareness of alternative models of attracting revenue than the protection of intellectual property. Put bluntly, we hope to integrate Creative Commons and similar licenses into the legal toolset of the university, highlighting the risks and benefits of 'free culture'.

The project will seek to raise awareness among staff and students of the OER movement and, through the Lincoln Academic Commons website, provide resources for further information on OER and related matters such as Open Education, Open Access and Creative Commons. We also hope to raise awareness, both locally and nationally, that the University is an active and critical participant in the OER and related movements. Led by the progressive agenda of the Centre for Educational Research and Development, we intend to map out for the university a complimentary method of widening participation and reaching learners in an increasingly networked environment.

6. Stakeholder Analysis

Stakeholder	Interest / stake	Importance
Forensic Science staff/students	HIGH	HIGH
Centre for Educational Research & Development (CERD)	HIGH	HIGH
Siren FM	Medium	HIGH
University of Lincoln Snr. Management	Medium	HIGH
National HE community/Subject Centres	Medium	Medium
Public	Low	Medium
Library	Medium	Medium
HEA/JISC	High	High

The primary stakeholders are the clearly Forensic Science staff and students who will be creating and using the resources produced. We do not intend to create one set of resources for 'open' consumption and another set for use by the university. Assuming that the resources satisfy the requirements for teaching and learning at the university, they will be well placed to be offered for re-use by others. CERD leads the research and development of institution-wide learning resources at the university and has a strong interest in the outcome of the project as an example of this new approach to curricula design and delivery. Siren FM is a partner in the project with an interest both in sustaining itself through offering professional services and a remit to be deeply involved with identifiable local communities rather than necessarily achieving a widespread general listening audience.

As this is our first OER project, we feel that the main stakeholders are within the university community. It is important that we deliver a successful project to our colleagues and Snr.

Management in order for the outcomes of the project to receive support and be sustainable in the long-term. Of course, the impact we have with OER on subject centres and the public, is, in the long-term, of great importance but for this initial project, as stakeholders we see them as having relatively lower importance to the success of the project's objectives.

7. Risk Analysis

Risk	Probability (1-5)	Severity (1-5)	Score (P x S)	Action to Prevent/Manage Risk
Staffing	2	2	4	There is no external recruitment and two key staff working in forensic science who are on the Project Team. In the unlikely event of both of them leaving their post, this would impact the project but we would expect support from their Faculty to meet the obligations of the project. We will recruit students to work on the project. It is possible that they may not fulfil our expectations, although our experience in the past has been quite the opposite.
Organisational	1	3	3	We feel this is a low risk area as the institution has committed to fulfilling the aims and objectives of the project, on the understanding that we are working on a single 30 credit course. There is currently no commitment from the institution beyond the delivery of this OER course. Of course we hope to positively affect change at the institutional level through the successful completion of the project.
Technical	2	2	4	There are several areas of risk here, but because we are not reliant on any one vendor or professional service for the delivery of the project, the risks are mitigated. It is an objective of the project to work with Siren FM to evaluate the benefits that the broadcast medium can bring to the delivery of OER. However, should this relationship fall through, the project can still deliver many of its intended objectives.
External suppliers	1	1	1	There are no external suppliers to the project, with the exception of Siren FM which is better understood as a partner to the university. Should SirenFM be unable to work with the project, there are other facilities for the

				recording and production of multimedia resources within the institution. All 30 credits worth of resources will still be delivered, albeit not through the local community radio.
Legal	1	5	5	OERs are legally defined by a license which defines them as 'open' for use and re-use. Objections to this in the long-term would prohibit us from developing the project outcomes any further. However, within the confines of this project's objectives to deliver a 30 credit OER course, there will not be any objections as the Pro-VC has underwritten the project in his letter of support.

8. Standards

Name of standard or specification	Version	Notes
RSS		Used for syndicating course content
Atom		Used for syndicating course content
Simple Dublin Core		Used for describing course content within the IR and in HTML
OPML		Used for exchanging web feeds and creating 'reading lists'
PDF		Used for printable documentation
ODF		Used for printable documentation (ODT) and slide presentations (ODP)
OAI-PMH		Used for harvesting repository metadata
XHTML		Used for web publishing
MPEG-4		Used for video encoding
MP3		Used for audio encoding

9. Technical Development

The project is not developing a new software application or standard. We will use well established and understood applications such as our EPrints institutional repository, Open Journal System, WordPress, YouTube, Open Jorum, and lightweight standards such as Simple Dublin Core, RSS, Atom and OPML. For the technical development of multimedia resources we will employ the professional services of Siren FM under contract.

10. Intellectual Property Rights

The copyright of the OERs will remain with the University of Lincoln. An appropriate Creative Commons license will be chosen to make the OERs available for openly available educational use, reuse and repurposing in perpetuity. The existing videos are already licensed under a CC BY-NC-SA licence.

Project Acronym: Chemistry.FM
Version: 1.0
Contact: Joss Winn
Date: 30th June 2009

Project Resources

11. Project Partners

The campus-based community radio station, Siren FM, will be contracted to develop audio recordings for the project and are represented on the Project Team. We also intend to broadcast course contact in partnership with Siren FM. It is our intention to work with the Physical Sciences Centre (Mark Baron is the university representative) and the Association of Journalism Education, of which we are also a member. We will endeavour to present them with on-going reports of the project and solicit feedback on the development of the project and the use and application of project outcomes.

12. Project Management

The project will be managed by Joss Winn, working in the Centre for Educational Research and Development, allocating 0.1 FTE to the project. Joss will work closely with Mark Baron and Jose Gonzalez-Rodriguez, the Unit Co-ordinator. Joss will report to Mike Neary, the Project Director.

Joss Winn
jwinn@lincoln.ac.uk 01522-886759

Project Manager (0.1 FTE ½ day per week)
Reporting to HEA/JISC and Project Director
Managing budget
Co-ordinating the Project Team
Managing the delivery of work packages

Mark Baron
mbaron@lincoln.ac.uk 01522-886879

Lead individual for the project (0.1 FTE ½ day per week)
Redesign and produce course materials
Co-ordinate project involvement with Physical Sciences subject-centre
Liaise with students
Quality assurance

Jose Gonzalez-Rodriguez
jgonzalezrodriguez@lincoln.ac.uk 01522-886878

Unit co-ordinator and principle course contact (0.1 FTE ½ day per week)
Redesign and produce course materials
Liaise with students
Quality assurance

Gary Stevens
gstevens@lincoln.ac.uk 01522-886339

Editorial role (0.05 FTE ¼ day per week)
Planning and guidance for developing a broadcasting model of dissemination
Quality assurance

Heather Hughes
hhughes@lincoln.ac.uk 01522-886069

Editorial role (0.05 FTE ¼ day per week)

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Quality assurance

Mike Neary
mneary@lincoln.ac.uk 01522-886015

Project Director (0.025 FTE 1/8th day per week)
Quality assurance

Communication around the project will largely take place on the Project blog
http://chemistryfm.blogs.lincoln.ac.uk and wiki http://learninglab.lincoln.ac.uk/wiki/Chemistry.FM

Team meetings will be kept to a minimum, meeting only at key stages in the project (delivery of
Project Plan, delivery of Interim Report, delivery of Final report). Outside of these times, appropriate
team members will meet to work on specific work packages.

13. Programme Support

Support via the mailing list and programme meetings.

14. Budget

See Appendix A

Detailed Project Planning

15. Workpackages

A series of small, iterative work packages delivered over the course of the project is preferred to
larger deliverables. All work package deliverables will be posted on the blog. See Appendix B

16. Evaluation Plan

Timing	Factor to Evaluate	Questions to Address	Method(s)	Measure of Success
30/06/09	Poster, Workshop	Are the project's objectives clear? How will they benefit others?	Workshop attendee survey	Feedback from Symposium
31/10/09	Institutional policy/guidance on the use of Open licenses	Is the guidance clear and accessible? Is it embedded within other institutional policy?	Provide training sessions on the use of Open licenses. Discuss policy with attendees.	Approval of policy/guidance document from Snr. Management. Feedback from training attendees.
31/08/09	Guidelines for measuring and ensuring quality of course resources.	Are the guidelines practical and useful for public use? Are they accessible?	Solicit feedback from CERD colleagues. Post on public blog and announce on mailing list for	Feedback from peers.

			feedback	
30/09/09	Documented redesign of course	Is the course deliverable at the University of Lincoln? Is the course deliverable elsewhere? Do dependencies between course resources prevent re-use and re-mixing?	Post documented redesign of course on blog for comment. Seek opinion from peers outside of Lincoln. Test against use-case scenarios.	Does the course satisfy the use case scenarios? How have comments received changed the original design?
31/12/09	Production and revision of course resources	Are the resources of high enough quality to use at the University of Lincoln? Do the resources cover the entire course? Are they complete? Do they support the objectives of the course?	Review by Editorial Team. Post drafts on blog.	Feedback from Editorial Team. Feedback from public and peers.
31/01/10	Workshop/poster at Learning Landscapes conference	Are the project's objectives clear? How will they benefit others?	Workshop attendee survey	Feedback from Symposium
31/03/10	Acceptance and delivery of all course materials in final formats.	Is the course complete? Are the formats of archival quality? Are they of good enough quality to be repurposed? Is each resource fully documented?	Produce and agree checklist of preferred formats and metadata – use advisory services.	The resources meet advisory services' guidelines.
30/04/10	Completion of Siren FM website and marketing strategy.	Is the website fit-for-purpose? Is there a strategy for marketing the project and OER in general? How will we most effectively reach a local audience through Siren FM?	Solicit feedback on website. Web analytics and radio listener figures.	Feedback from website. Web analytics are good/encouraging. Listener figures are good/encouraging.
30/04/10	Business Case for more OER courses	Is there are Business Case for the approach we've taken?	Feedback from Snr. Management.	Approval of 2nd year Chemistry course being OER.

17. Quality Plan

Output	Institutional policy/guidance on the use of Open licenses				
Timing	Quality criteria	QA method(s)	Evidence of compliance	Quality responsibilities	Quality tools (if applicable)
31/10/09	Conforms to best practice and guidance	Is there evidence that the document takes	References external sources. Evidence-based.	Joss	

	(e.g. JISC)	advice from elsewhere?			
	Accessible	Uses jargon-free English. Available in accessible formats.	Meets Accessibility guidelines, as provided by DART.	Joss	
	Offers practical guidance to staff.	Does the document lead the reader through the necessary steps to decide upon a license?	Evidence of a decision-making process.	Joss, Heather, Jose, Mike, Gary	

Output	Guidelines for measuring and ensuring quality of course resources.				
Timing	**Quality criteria**	**QA method(s)**	**Evidence of compliance**	**Quality responsibilities**	**Quality tools (if applicable)**
31/08/09	Conforms to best practice and guidance (e.g. JISC)	Is there evidence that the document takes advice from elsewhere?	References external sources. Evidence-based.	Joss, Jose, Mark, Heather, Gary, Mike	
	Accessible	Uses jargon-free English. Available in accessible formats.	Meets Accessibility guidelines, as provided by DART (Disability Assistance and Resources Team).	Joss, Jose, Mark, Heather, Gary, Mike	
	Offers practical guidance to staff.	Does the document lead the reader through the necessary steps to ensure quality?	Evidence of a decision-making process.	Joss, Jose, Mark, Heather, Gary, Mike	

Output	Meeting technical standards				
Timing	**Quality criteria**	**QA method(s)**	**Evidence of compliance**	**Quality responsibilities**	**Quality tools (if applicable)**
31/08/09	Methods of dissemination of OERs are fit-for-purpose.	Survey and comparison of platforms and services	Are the dissemination methods sustainable? Are risks spread across a variety of dissemination methods?	Joss, Jose, Mark, Heather, Gary, Mike	
	Metadata standards chosen to describe OERs are fit-for-purpose.	Survey and comparison of metadata standards for describing OERs	Are the metadata standards widespread and interoperable? Is their adoption sustainable? Are	Joss, Jose, Mark, Heather, Gary, Mike	

			they open standards? Are they simple to maintain?		

Output	**Production of course resources**				
Timing	**Quality criteria**	**QA method(s)**	**Evidence of compliance**	**Quality responsibilities**	**Quality tools (if applicable)**
31/12/09	Are the resources of a high enough quality to be used at the University of Lincoln	Evaluation by Editorial Team. Feedback from 'beta' release of resources on Project blog.	Feedback and evaluation is satisfactory.	Joss, Jose, Mark, Heather, Gary, Mike	
	Are the resources of a high enough quality to be re-used by members of the public?	Evaluation by Editorial Team. Feedback from 'beta' release of resources on Project blog.	Feedback and evaluation is satisfactory.	Joss, Jose, Mark, Heather, Gary, Mike	

Output	**Delivering the course**				
Timing	**Quality criteria**	**QA method(s)**	**Evidence of compliance**	**Quality responsibilities**	**Quality tools (if applicable)**
01/01/10	Do the methods of delivery of the OERs offer variety?	Ensure there are at least two methods of delivering the OERs	There are at least two methods of delivering the OERs	Jose, Joss	
	Are the methods of delivery of the OERs sustainable?	Ensure that the risk is spread among more than two methods of delivery.	At least 50% of the methods of delivery are sustainable in the long-term by the university. There is a canonical version of the OERs maintained inhouse	Joss	
	Are the methods of delivery of the OERs accessible?	Consult with DART	At least 50% of the methods of delivery meet DART guidelines.	Jose, Joss	
	Are the methods of delivery of the OERs	The Editorial Team, include students, test the methods of	The methods of delivery pass usability tests	Jose, Mark, Heather, Gary,	

	usable?	delivery during a 'beta' stage.		Mike	
	Compatibility with external services and subject centres requirements	Consult with JORUM and subject centres	The methods meet JORUM's and subject centres' requirements.	Joss Jose	

18. Dissemination Plan

Timing	Dissemination Activity	Audience	Purpose	Key Message
	Page on HEA/JISC website	HEA/JISC community, Public	To share our experiences with other projects.	Project summary
Throughout project	Blog and wiki set up and maintained	HEA/JISC community, Public, University of Lincoln community	To share our experiences with other projects and the university community. To test ideas and solicit feedback at various stages throughout the project. TO provide a transparent method of managing and communicating about the project.	Project information
Throughout project	Project information is shared on The Lincoln Academic Commons website	HEA/JISC community, Public, University of Lincoln community	To inform the public and university community about key stages of the project in the context of the Academic Commons.	Project context
January 2010	Article in CONTACT magazine	Public, University of Lincoln community	To inform the university, local businesses and partner schools and colleges about the project.	Project information
Throughout project	Workshops at all CERD conferences and symposiums	University of Lincoln community	To inform and educate the university community.	Education and critical discussion
Throughout project	Attendance at HEA/JISC conferences and events	HEA/JISC community, HE community	To share our experiences with other projects.	Project networking. Peer-review

Throughout project	Collaboration with Subject Centres (Physical Sciences, Journalism, Art, Design and Media and Escalate)	HE community	To share our experiences with other projects. To work with them and ensure our project objectives and methodology is compatible with other similar efforts.	Project networking. Peer-review
November 2009	'Thinking Aloud' presentation (seminar series)	University of Lincoln community	To inform and educate the university community. To encourage critical debate about Open Education.	Critical discussion.
April 2010	University website and local press via Marketing dept.	Public	To inform the national and local public about the project.	Project and university marketing.
April 2010	Broadcasting with Siren FM	Public, local community	To engage the local public in learning about chemistry for Forensic Science.	OER delivery and feedback
April 2010	Integration of resources into library catalogue and repository.	University of Lincoln community	To integrate the OERs with other learning resources at the university.	OER delivery
Throughout project	Use of third-party web 2.0 services i.e. YouTube, Scribd, Slideshare	Public	To disseminate course resources as widely as possible using popular platforms	OER delivery and feedback

19. Exit and Sustainability Plans

Project Outputs	Action for Take-up & Embedding	Action for Exit
A complete OER course	Available on a variety of online platforms, including JORUM, our IR, Library catalogue and dedicated website.	Maintain a canonical version (probably in the institutional repository)
Evaluation of various methods for delivery of the OER course including radio broadcasting.	Evaluation will form part of the final project report.	Available on HEA/JISC website and Institutional Repository.
A critical evaluation of OER in relation to Teaching in Public.	Evaluation will form part of the final project report. It is likely that we will produce a conference/journal paper from this.	Available on HEA/JISC website and Institutional Repository.

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Project Outputs	Why Sustainable	Scenarios for Taking Forward	Issues to Address
A complete OER course	They will be used to deliver the 1st Year Introduction to Chemistry course at the University of Lincoln and will be reviewed on an annual basis.	Core to the teaching of this course.	Ensuring that staff changes on this course do not disrupt the maintenance of the resources.

Appendixes

Appendix A. Project Budget

Directly Incurred Staff	Apr 2009 – Mar 2010	TOTAL £
N/A	£0.00	£0.00
Total Directly Incurred Staff (A)	**£0.00**	**£0.00**
Non-Staff	**Apr 2009 – Mar 2010**	**TOTAL £**
Travel and expenses*	£800.00	£800.00
Siren FM Studio Costs*	£3000.00	£3000.00
Student Bursaries*	£3000.00	£3000.00
Dissemination and marketing*	£1500.00	£1500.00
HEA/JISC Community events*	£1512.00	£1512.00
Total Directly Incurred Non-Staff (B)	**£9812.00**	**£9812.00**
Directly Incurred Total (C) (A+B=C)	**£9812.00**	**£9812.00**
Directly Allocated	**Apr 2009 – Mar 2010**	**TOTAL £**
Staff *Joss Winn – Project Manager 0.1 FTE** *Mike Neary – Project Director 0.025 FTE*† *Mark Baron – 0.1 FTE*† *Jose Gonzalez-Rodriguez – 0.1 FTE*† *Heather-Hughes – 0.05 FTE*† *Gary Stevens – 0.045 FTE*†	£3936.00 £1896.00 £6164.00 £4,184.00 £2,456.00 £2,211.00	£3936.00 £1896.00 £6164.00 £4,184.00 £2,456.00 £2,211.00
Estates (requested from HEA/JISC) * (institutional contribution) †	£706.50 £2260.80	£706.50 £2260.80
Other	£0	£0
Directly Allocated Total (D)	**£23814.30**	**£23814.30**
Indirect Costs (E) (requested from HEA/JISC) * (institutional contribution) †	**£3466.10 £11091.52**	**£3466.10 £11091.52**
Total Project Cost (C+D+E)	**£48183.92**	**£48183.92**
Amount Requested from HEA/JISC*	**£17920.60**	**£17920.60**

Institutional Contributions[†]	£30263.32		£30263.32
Percentage Contributions over the life of the project	**HEA/JISC 37.19%**	**Lincoln 62.81%**	**Total 100%**