



Project Document Cover Sheet

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Project Information			
Project Acronym	eBiolabs		
Project Title	eBiolabs - A personalised virtual environment to support laboratory-based bioscience.		
Start Date	1 November 2008	End Date	31 October 2010
Lead Institution	University of Bristol		
Project Director	Gus Cameron		
Project Manager & contact details	Gus Cameron Department of Biochemistry, University of Bristol, BS8 1TD		
Partner Institutions			
Project Web URL	www.bristol.ac.uk/eBiolabs		
Programme Name (and number)	<i>Transforming curriculum delivery through technology 08/08</i>		
Programme Manager	Lisa Gray		

Document Name			
Document Title	<i>Project Plan, Interim Report, etc</i>		
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Author(s) & project role	Gus Cameron		
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Document History		
Version	Date	Comments

Interim Reporting Template

Project Name: eBiolabs. University of Bristol

Report compiled by: Gus Cameron

With contributions from: Dr Andrea Flynn, Learning Science Ltd, Dr Kelly Moule, Professor Leo Brady and Dr Paul Wyatt,

Reporting period: *September 09 – March 10*

Section One: Summary

Our last interim report was written in a state of anticipation as eBiolabs was just about to go live and although we knew we had done a good job, we were not sure how the system would be received by students and staff, or if we would encounter technical difficulties. Half a year later and we can report that eBiolabs has exceeded all expectations. eBiolabs students so significantly outperform their non-eBiolabs peers that staff are clamouring to extend eBiolabs. Next year the number of student benefitting from eBiolabs in Bristol will more than triple in size as the number of courses covered is expanded. And although we have not begun our external dissemination activities in earnest we are in discussion with two HEIs who want to give their students the benefit of eBiolabs.

Section Two: Activities and Progress

Report on activities in support of project objectives for the reporting period. Please refer to the original project objectives and outcomes in your project plans and discuss progress against these, noting any changes.

Provide a full review of progress in terms of your workpackages including technical approaches and developments, pilot activities and project meetings. Briefly explain any changes to the overall approach outlined in the project plan, and note any amendments, for example to the project team, deliverables or milestones. If appropriate, attach an amended copy of the relevant sections of your project plan (see checklist at end of document).

By the end of March 2010 eBiolabs will have finished delivering over **seven thousand contact hours** of laboratory-based learning. This is composed of ten three-hour laboratory sessions, each repeated three times to the forty credit-point first-year 1G Biochemistry unit. With each laboratory session are associated two pieces of student work. This means that the eBiolabs servers and staff have managed the administration, semi-automated marking of and feedback on, nearly **five-thousand student assignments**. Estimated staff time savings are in the order of 40 days per annum and anecdotal feedback suggests student achievement and satisfaction is among eBiolabs students is much higher than the norm.

As well as creating, delivering and supporting the above the eBiolabs team has developed the Moodle-based infrastructure required to deliver the learning design model.

With reference to our workpackages we have met or exceeded the goals of Workpackages 1: Project Management, 2: Baseline Practice, 3: Specifications, 4: Hardware, 5: Prototyping and 6: Trialling.

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During this reporting period we have been concentrating on Workpackages 7: Training, 8: Launch Pilot (but which should be called Launch *and Deliver* Pilot), 9: Develop, 10: Disseminate and 11: Evaluate, Assess and Report.

Workpackage 7: Training. This has been an ongoing process. We now have a core of academics who are capable of using eBiolabs and of developing new learning material to populate courses. Laboratory technicians have taken responsibility for recording attendance on-line using the Marks and Absences Gradebook, and in January we handed the day-to-day administration of the eBiolabs Marks and Absences Gradebook to a Departmental secretary. After a simple two hour training session she is able to integrate eBiolabs data into the Departmental progress data in few a simple clicks and has worked with us to identify areas where we can extend functionality into other areas such as the recording of tutorial attendance and achievement.

Workpackage 8: Launch and Deliver Pilot. By far the most important and time-consuming activity we have been involved in. The laboratory sessions supported by eBiolabs will end by the beginning of April. The rollout of eBiolabs has exceeded all of our expectations, both in terms of technical issues and student and staff acceptance of the workflow changes it has involved, and in the changes staff have observed between those students who have eBiolabs and those who do not.

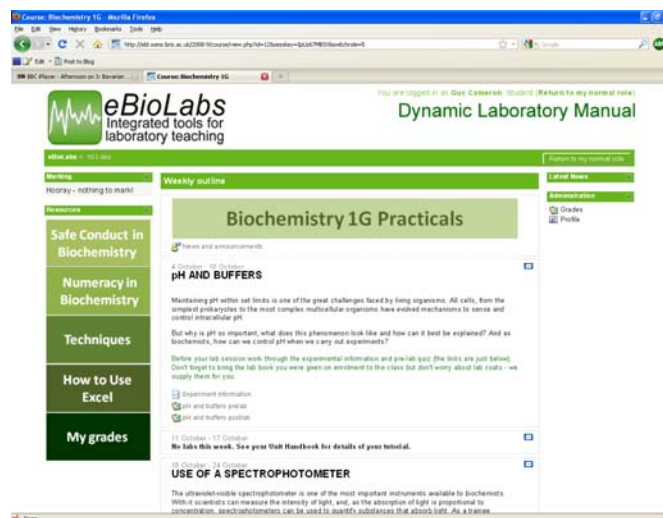


Professor Leo Brady, Head of the Department of Biochemistry said:

“eBiolabs has been in use in the Department of Biochemistry since the start of this academic year delivering practicals to our 250 first year undergraduate biochemists. Although we have only begun to formally evaluate the changes that eBiolabs has produced, all the anecdotal evidence suggests that it has been a huge success. Our students have universally found it intuitive and easy to use. Staff report students are now much better prepared for the laboratory sessions and engage more productively with the material and techniques than previously. Students are more confident using the equipment, have a deeper knowledge of the

theory underpinning the experiments and, crucially, find the mathematical analysis and data handling easier. The automated electronic upload, marking and return of student work has greatly reduced the administrative burden associated with undergraduate laboratory classes, improves student feedback and allows us to efficiently track progress. Following on from the obvious success of this pilot study, **we now intend to roll out eBiolabs to all our taught units as we believe that it enhances student achievement while reducing the staff workload.”**

Workpackage 9: Develop. Our ongoing evaluation activities have taught us much about what works and what doesn't. Much of our future development will be informed by the knowledge that we have acquired about how students and staff interact with the eBiolabs learning design model. We are currently going back and reworking the Marks and Absences Gradebook to speed up processes that currently take too many mouse clicks or to consolidate database views as staff have requested. A full review of the types of assessment that have been used will take place over the next reporting period



The screenshot displays the eBioLabs web interface. At the top, it says "eBioLabs Integrated tools for laboratory teaching" and "Dynamic Laboratory Manual". The main content area is titled "Biochemistry 1G Practicals" and features a section for "pH AND BUFFERS". Below this, there is text explaining the importance of pH in living organisms and a link to "USE OF A SPECTROPHOTOMETER". The interface includes a navigation menu on the left with options like "Safe Conduct in Biochemistry", "Numeracy in Biochemistry", "Techniques", "How to Use Excel", and "My grades".

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pending the outcome of the evaluation work currently taking place.

Much development work took place over the Christmas period as we quickly absorbed lessons from the first term and amended the Spring terms' learning sessions in light of the acquired knowledge.

Workpackage 10: Disseminate. Dissemination has been mainly in-house up to now. As we have been inundated with Unit organisers wanted to be next in line to use eBiolabs on their courses (and as we have been quite occupied delivering eBiolabs) external dissemination opportunities have not been actively sought. Having said that we have had meetings with academics from both the University of Exeter and Trinity College Dublin who want to deploy their own versions of eBiolabs to support their first year bioscience courses.

Internally eBiolabs is rolling out from Biochemistry into Physiology, Pharmacology and Microbiology units and into second year Biochemistry. We expect the number of students who use eBiolabs to more than triple next academic year.

Dr Cameron is giving invited talks at the Spring Meeting of the Society for Microbiology (Edinburgh, March 2010) and at the HEA Bioscience Subject Center OER meeting (London March 2010).

2010ProgBook.pdf (application/pdf Object) - Mozilla Firefox

http://www.sgm.ac.uk/meetings/MTGPAGES/Eicc2010ProgBook.pdf

2010ProgBook.pdf (application/p...

1400 **Innate immunity with a *Drosophila* model**
Petros Ligoxygakis (University of Oxford)

1430 **Immune responses of *Anopheles gambiae* against malaria parasites**
Elena A. Levashina (AVENIR group Inserm, Strasbourg, France)

1500 Refreshments

1530 **HEATLEY-PAYNE TRAVEL AWARD RECIPIENT**
Killing of African trypanosomes by small hydrophobic peptides: the plasma membrane as a potential drug target
John Harrington (University of Georgia)

1600 **Who puts the tubercle in tuberculosis?**
David G. Russell (Cornell University, USA)

1630 Discussion

1645 End of symposium

1730 Poster viewing

The second session will explore the impact of social networking tools, both on our students' learning and on our own teaching practice.

Tuesday 30 March

PROMOTING KEY SKILLS IN MICROBIOLOGY TEACHING
Chair David J. Adams (UK Centre for Bioscience, Leeds)

0830 **A culture of creativity: techniques to foster new ideas**
Carol A. Wakeford (University of Manchester)

0930 **Problem solving: strategies, solutions, success**
Tina L. Overton (Higher Education Academy, Hull)

1030 Refreshments

1100 **Laboratory skills**
Gus Cameron (eBioLabs, University of Bristol)

1200 **FLEMING PRIZE LECTURE**
Pentland Auditorium
Microbial communication and virulence: lessons from evolutionary theory
Steve P. Diggle (University of Nottingham)

1300 Lunch

cont...

36 SGM SPRING MEETING – EDINBURGH – 29 MARCH–1 APRIL 2010

WWW.SGMEICC2010.ORG.UK

37 SGM SPRING MEETING – EDINBURGH – 29 MARCH–1 APRIL 2010

Conventional publicity has been targeted to our home faculty, with eBiolabs movies being shown on large screens in the School of Medical Sciences foyer and posters being displayed on relevant noticeboards.

Extra publicity was generated by Dr Gus Cameron being awarded the University of Bristol E-learning Award for 2009.

Workpackage 11: Evaluate, Assess and Report. Work on this is ongoing and is documented below.

Section Three: Outputs and Deliverables

What outputs are you expecting to arise from the project? Please provide an up-to-date list. This should include a short paragraph summarizing expected technical outputs/system integrations, or any unanticipated outputs.

Please indicate clearly what outputs, if any, have been produced in this reporting period. Include any outputs, including interim and work in progress, that might be of interest to other projects or external audiences. Please describe and provide details of where these can be found, e.g. URLs or attached documents etc. Please note which of these if any have been uploaded to the design studio.

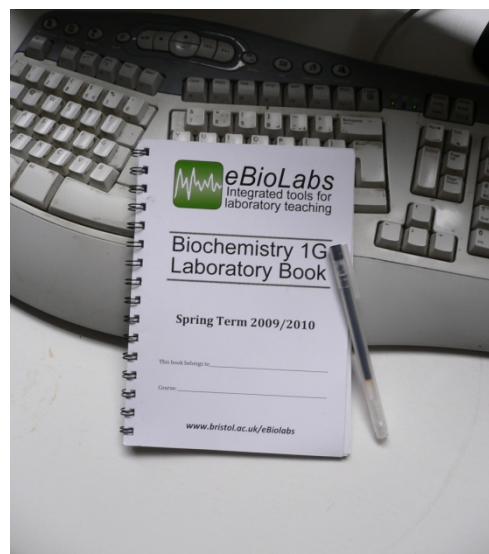
In our original project plan we stated we would deliver a minimum of six laboratory sessions via eBioLabs. In fact during this academic year we delivered ten. From the learners' objective the main output has been ten laboratory-based teaching activities.

The laboratory sessions delivered were:

1. pH and buffers
2. Use of a spectrophotometer
3. Protein purification
4. DNA and protein structure
5. Steady state kinetics of lactate dehydrogenase
6. Red blood cell membranes
7. Protein synthesis in *Escherichia coli*
8. Carbohydrate structure
9. Glycolysis in yeast
10. Mitochondrial respiration

Several types of student-orientated activities and resources were associated with each laboratory session and constitute outputs in their own right. Each laboratory session has associated i) on-line experimental information, ii) pre-session quizzes, iii) post-session assignments and iv) a printed laboratory book used to record experimental data prior to uploading it to eBioLabs.

The experimental information was converted into HTML using Wimba Create (Course Genie) templates designed by the team (these constitute another output). Academics were guided in this process and our experience and knowledge of how to work with both academics and Flash developers to convert traditional laboratory-based teaching sessions into sessions that takes full advantage of learning technology will be synthesised and



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included in our final report. This output will include descriptions of how the eBiolabs team worked with academics to identify what multimedia and interactive components would be of most use. As the year progressed an analysis of the way learners were interacting with the pre-laboratory assets taught us much about how they could be used most effectively. In producing the printed lab book the eBiolabs team worked with academics to learn what types of material needed to be placed on-line and what types needed to be given to the students as a hard-copy. In many instances this was not immediately apparent and our evaluation activities have taught us much about this process.

More technical outputs include new question types that allow students to enter their own experimental data to Moodle. Once the data has been entered it can be automatically marked for quality. We have also developed a question type that allows student data to be graphed and lines of best fit derived which are then used by the students to analyse their data.

1G Labs: Protein purification postlab - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://ebl.soms.bris.ac.uk/2008-9/mod/quiz/review.php?q=27&attempt=2020

1G Labs: Protein purification postlab

Note that the units for the absorbance coefficients of myoglobin and cytochrome C are $\text{m}^{-1}\text{mg}^{-1}\text{cm}^{-1}$ NOT $\text{L}\cdot\text{mol}^{-1}\cdot\text{cm}^{-1}$ as printed in your Lab Book.

1 Plot the data for your total protein assay (Bradford assay) here:

Marks: 1

Series 1	Mass of BSA	Absorbance at 595 nm
Point 1:	0	0.582
Point 2:	80	0.604
Point 3:	160	0.848
Point 4:	240	1.010
Point 5:	320	1.006
Point 6:	400	1.134
Point 7:		
Point 8:		
Point 9:		
Point 10:		

Plotted graph:

Comment

Time

15:56:12 on 18/11/09 by John Eastman

Make comment or override grade

Correct

Marks for this submission: 1/1.

History of Responses:

#	Action	Response	Time	Response	Grade
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Figure 1. An example post-lab assignment showing the new Moodle question type that creates a graph from data collected in the lab.

For situations when the Moodle questions won't fit the assignment, we developed Excel proformas that are downloaded by students and completed as part of their post-lab assignment. These are designed to test and develop their knowledge of the learning that had occurred in

the laboratory, not their knowledge of Excel; consequently we worked hard to produce fool-proof and intuitive spreadsheets. Below is an example of a spreadsheet completed by a student that has been uploaded to eBiolabs for marking.

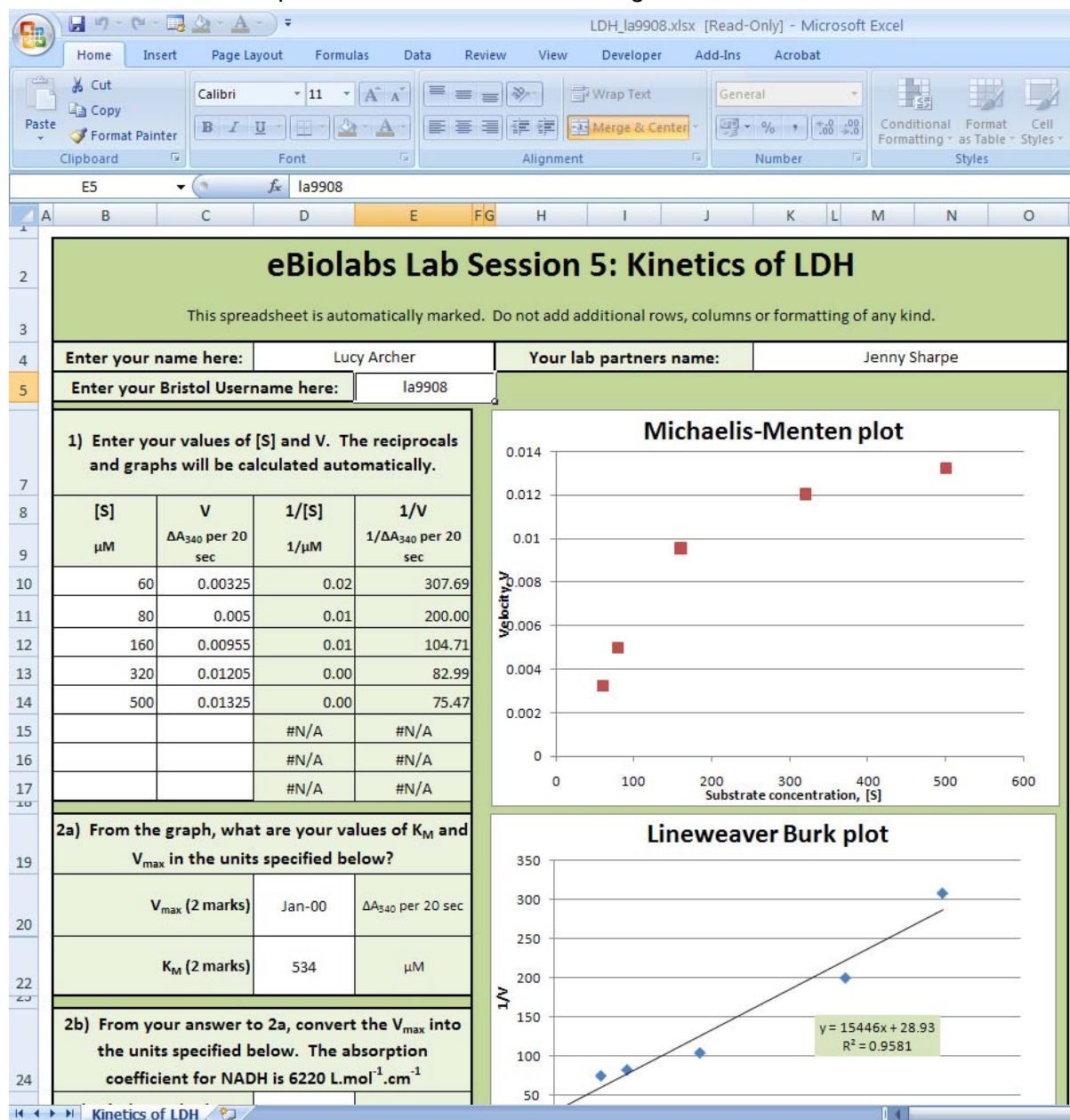


Figure 2. A Excel-based post-lab assignment completed by a 1G Biochemistry student. Note the graphs are plotted and fitted automatically and the values produced used by the student as part of the assignment.

Once these Excel files were uploaded marking was greatly simplified by the use of specially developed macros. We believe that this innovative method will be of wide interest to the sector and telling the people about our experiences in this area will form a major part of our dissemination activities.

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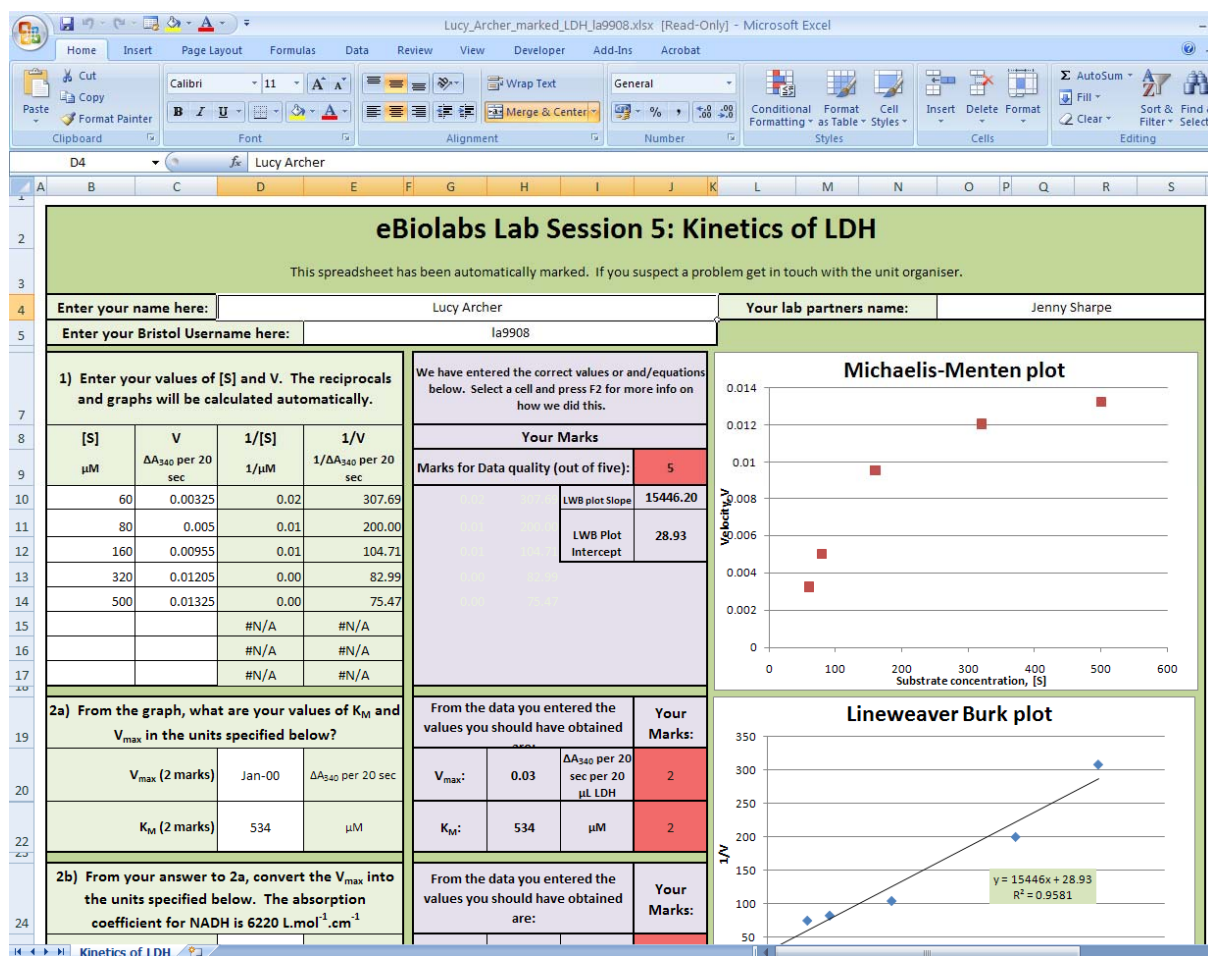


Figure 3. The same Excel file after automated marking had taken place. Note the extra columns inserted into the original file containing marks and feedback to the student.

Section Four: Evaluation

Provide details of progress during this reporting period in terms of the development and implementation of the project evaluation plan. Include what activities you have undertaken (including details of the methods used), what you feel has worked, what has not, and any aspects you have changed. Please provide links to any relevant materials (e.g. evaluation reports, tools, blog posts, team reflections, etc)

Please give details of the key evaluation activities you will undertake in the next 6 month period. Please tell us the rationale/purpose for activity, planned method, participants, and timing.

Please note that we expect these evaluation activities to produce lessons and outcomes for reporting under section 5 of future interim reports and for your final report or final evaluation report.

Evaluation. We have, as stated in our plan, surveyed the entire student cohort about their attitude to laboratory-based learning. These surveys were paper based and the same as those completed by last years' cohort as part of our baseline activities. We have also begun to run student focus groups to obtain more fine-grained insights. The results of these activities will be presented in our final report and used in our dissemination activities (see Section Six). One-on-one and group interviews with academic, technical and administration staff are ongoing activities and will be included in our final report.

Figure 4. The paper questionnaire completed by the eBiolabs students.

Section Five: Outcomes and Lessons Learned

Outline any emerging outcomes or lessons that have been learned during this reporting period through your research, evaluation and piloting activities which could be of interest to others outside of your institution, and identify any emerging themes. Please be aware that these reports will be made available publically, so please indicate clearly any lessons that you wish NOT to share more widely. Also outline any new ideas or opportunities that have emerged.

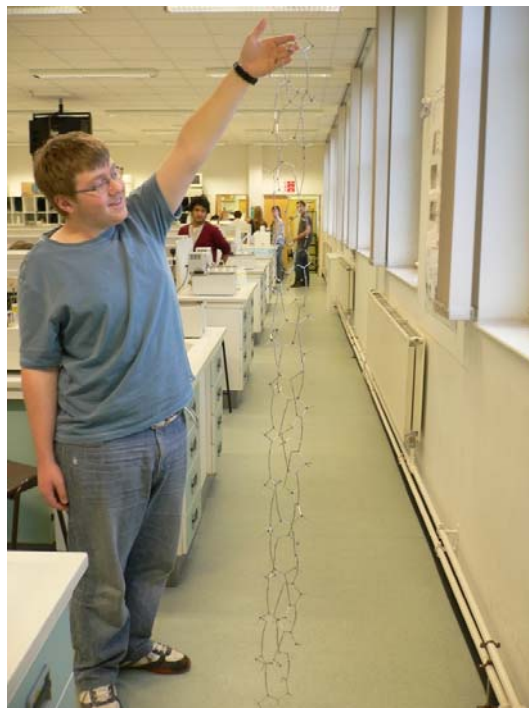
When thinking about outcomes and lessons you might: (a) revisit your original challenge and identify anything you have learned that is helping your institution to address this challenge; (b) revisit any mindmaps or other representations you have of the problem space in which you are working and identify any changes; (c) revisit your original research or evaluation questions and identify any areas in which your understanding has changed, or been enriched, qualified, or confirmed.

The core of our original challenge was to increase student achievement in practical laboratory bioscience by increasing student preparedness for the sessions. At present we think the best possible outcome is evidenced by the number of departments and units both within and without the University of Bristol who wish to follow our lead. As stated above eBiolabs is rolling out from Biochemistry into Physiology, Pharmacology and Microbiology and into second year Biochemistry. We expect the number of students who use eBiolabs to more than triple next academic year. Talks with both the University of Exeter and Trinity College Dublin are ongoing.

We are slowly developing the eBiolabs credo; our philosophy, principles and guidelines:

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- 1) Never lose sight of the core mission: the primary purpose of laboratory sessions is to teach skills that cannot be taught elsewhere.
- 2) Prepared learners are successful learners, "to fail to prepare is to prepare to fail".
- 3) All the knowledge needed to succeed in the laboratory must be contained within (or referenced from) the on-line experimental information.
- 4) Professional material inspires confidence. The vast majority of students have no problem working on-line provided the material is of a high quality.
- 5) Concentrate effort on the learning sessions running at the start of the course. It sets the tone and lets students know the importance you attach to the learning activity.
- 6) The sole purpose of pre-laboratory quizzes is to ensure learners have the knowledge needed to succeed in the laboratory. It follows that the quiz-setters must possess the clarity of purpose needed to test the students.
- 7) Some learners are strategic to the point of self-defeat. They will look at the prelab quiz first and then at the experimental information (or ask a friend) to obtain the answers. This attitude can to some extent be mitigated by well designed questions and by question banking where every student sees a different set of questions. But simply increasing the number of questions to cover every aspect of the learning session results in unhappy and resentful learners.
- 8) Students are the best quality controllers. Give them every opportunity to feedback and report where improvements can be made.
- 9) It is not necessary to fill the laboratory with computers for eBiolabs to succeed. In many cases students do not need access to pre-lab material in the laboratory.
- 10) The amount of information to include in the printed lab book is difficult to assess and close attention should be paid to student feedback here. Too much and they may not value the pre-session learning, too little and they can may need extra support in lab.



- 11) The correct balance between background theory and technical knowledge needed to succeed is not always easy to achieve. We have found that it is easy to err too far in favour of the former. eBiolabs is most valuable when used to teach the technical aspects of practical science.
- 12) Learners appreciate the effort put into the quality of the materials and report that being able to refer back to the high-quality and professional on-line materials is one of the most useful aspects of eBiolabs.
- 13) Not all students are digital natives. Although we had complaints about the Excel proformas, discussions with the students revealed that their difficulties were actually with basic computer operations such as saving and retrieving a file.
- 14) Many students find maths and data handling one of the most challenging aspects of laboratory work. We need to develop even more high quality materials to support the weaker students.

Section Six: Communication and Dissemination Activities

Provide details of any activities or events which have involved liaison or collaboration outside the project consortium, including key project stakeholders. Attach or provide URLs for any appropriate dissemination or presentation materials.

Please also provide an update on your communication methods, including project blogs, twitter, YouTube etc. and discuss their effectiveness.

Discuss any strategies you have found useful for engaging stakeholders at this stage of the project.

Outline any publicity the project received during the reporting period.

Dissemination activities have inevitably taken a back-seat over the last six months as we have delivered the lessons to students and staff. Despite this word has spread on the academic grapevine both within and without the home institution. (The latter mainly via academics visiting other institutions to deliver seminars or act as external evaluators). As a result of this we have almost inadvertently recruited individuals from other departments and universities who are now acting as champions for eBiolabs and who are taking the lead in their own institutions.

We have found that project blogs/wikis/twitter are not particularly effective dissemination tools for eBiolabs. Perhaps this is because eBiolabs is so discipline based: the people we need to recruit are academic scientists not learning technologists. Whatever the reason we have found that traditional dissemination routes such as talks and publications in subject-specific journals are more in tune with our key stakeholders. Apropos of this we are giving invited talks at the Spring Meeting of the Society for Microbiology (Edinburgh, March) and at the HEA Bioscience Subject Center OER meeting (London March). We anticipate that these talks will generate much interest from our colleagues.

Conventional publicity has been targeted to our home faculty, with eBiolabs movies being shown on large screens in the School of Medical Sciences foyer and posters being displayed on relevant noticeboards.

Extra publicity was generated by Dr Gus Cameron being awarded the University of Bristol E-learning Award for 2009.

Section Seven: Issues, Challenges and Opportunities

Review your original risk analysis and comment on any changes to the risk profile and how you are managing this. If any risks have become live issues affecting the project explain how you are dealing with them. Report on any other issues that did not stem from identified risks and explain how you are tackling them. For all identified issues or challenges detail what impact any issues may have on the achievement of project targets.

Report on any unexpected opportunities, positive outcomes and successes arising from changes to the plan and new opportunities.

In our project plan we identified the following risks:

Risk analysis

Risk	Probability (1-5)	Severity (1-5)	Score (P x S)	Action to prevent and/or mitigate risk
Staffing issues	2	3	6	Most key staff are already in post. Expertise is widespread and replacements are available if necessary.
Technical aspects too complex.	1	4	4	Technology being used is well-understood and similar to previous work. We will seek appropriate and pragmatic solutions.
Partnership fails to work effectively.	2	4	8	Effective project management techniques will be used to ensure difficulties are resolved and targets are met in a timely manner. IPR issues need to be properly met in partnership agreements. We will be using contracts developed under the guidance of our legal team.
Timescales	2	4	8	The project will follow an iterative model to ensure any problems are addressed at the earliest opportunity. User functionality will be the priority. However, the team's track record of meeting deadlines is excellent.
Low learner engagement	2	5	10	Effective consultancy at all stages of the project. Close monitoring of material delivery and staff training programme.
Low stakeholder (non-learner) engagement	2	5	10	Effective consultation throughout the project lifespan coupled to the resolute and professional dissemination of a shared vision.
Over ambition	3	2	6	This project will only tackle a limited and defined area of the curriculum. The management group will need to be aware of the potential for scope creep.
Solution becomes	2	5	10	Stakeholders from other subject areas and institutions will be included on the

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subject or institution specific				management team and consulted throughout.
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We can now report that:

1. Staffing issues. Staffing has not been a major issue. As stated core staff were in place from the beginning of the project so we were able to hit the ground running and make good progress immediately. The loss of Suzi Wells – our university elearning professional – to maternity leave was thankfully at a later stage of the project where our goals and methods were clearly defined and others were able to pick up the reins. Interestingly the importance of recruiting staff with appropriate subject-specific knowledge has been proven time and time again throughout the project and will be discussed more in further reports.
2. Technical aspects. Our use of standard, proven technologies has been validated. The eBiolabs installation – running on our own hardware – has proven to be robust, fast and 100 % reliable. Learners and staff have reported excellent usability and content creation using Wimba Create (Course Genie) has been shown to be the correct choice for sustainability.
3. Partnership. We have an excellent working relationship with our colleagues across departments, faculties and with our technology partners, Learning Science. As the partners had collaborated on previous projects this is perhaps not surprising. It is worth mentioning that Learning Science have a long-term interest in seeing eBiolabs succeed and have given service above and beyond that stated or implied in our contract (previously submitted).
4. Timescale. In teaching, there is never enough time! Although we sometimes ran close to the wire every activity went ahead as scheduled and we actually delivered far more activities than originally envisaged (ten sessions instead of six, see above).
5. Low learner engagement. Anecdotal evidence, focus groups and staff interviews suggest our learners are now more engaged with practical science. The professionalism of eBiolabs inspires confidence and students now believe that laboratory sessions are an important part of their learning.
6. Over ambition. Thankfully this has not been the case, but see 4 above! One of our lessons is that it is far better to develop a small part of the curriculum to the best of ones ability and let peer pressure and user feedback determine the future direction of the project.
7. Subject or institution specific. eBiolabs is now rolling out from Biochemistry into Physiology, Pharmacology and Microbiology, and we are in discussion with the University of Exeter and Trinity College Dublin. In 18 months we have shown that eBiolabs is not restricted by subject, institution or even country!

Our major “challenge” is how to manage the number of courses and institutions that have seen the benefits that eBiolabs can bring. There is a great opportunity to link in to the OER movement and use our experience to develop shared resources for laboratory teaching. In a time of diminishing resources the timeliness of this project can scarcely be overstated, and neither can our need for further funding!

Section Eight: Collaboration and Support

Briefly summarise contact with the programme manager, critical friends and support team, formal or informal links with other projects, programme-related activities, and ways in which you have been able to influence the development of the programme.

Do you have any specific needs, requests or suggestions for support?

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How have you found the process of working with your critical friend and Cluster? Please highlight what has worked well and what hasn't worked as well, and any recommendations for how to improve the process.

Our cluster meetings have always been enjoyable and useful, as have our interactions with the programme manager and support team. Our recent discussions about eBiolabs with the University of Exeter came directly through our CAMEL cluster. As our project is such a focussed, subject specific, practitioner-led one some of the higher-level considerations and pedagogical expertise that the support team bring is perhaps of less direct relevance to eBiolabs than other more wide-ranging and ambitious projects.

Our major need now is for more funding to employ people with the appropriate mix of subject knowledge, implicit ("insider"?) academic knowledge and technical ability to allow us to expand eBiolabs into the courses that are requesting it.

Section Nine: Financial Statement

Total Grant	199,439	Duration of project	24 mths
Reporting Period	Oct 09 to March 10		

Budget Headings	Total budget allocated	Expenditure this reporting period	Total expenditure to	Further information
Estate and indirect costs	47008	109364	32091	
Materials: consumables, hardware and software	6992	253	6476	
Travel, subsistence, dissemination, training and evaluation	6935	987	4481	
Consultancy	41412	2752	41412	

Checklist:

Before you return this report:

- Ensure that your project webpage on the JISC site is up to date and contains the correct information. Attach details of any required amendments to this report. Project webpages can be found from: www.jisc.ac.uk/curriculumdelivery
- If there have been any changes to the original project plan and/or work packages, ensure that amended copies of the relevant sections of your project plan are attached to this report.
- Identify and name any areas within this report that you'd like removed before the report is made public (*see below)

***Please note** the interim reports will be made available on the JISC website and on the Circle site with the budgetary information removed. We recognise that projects may occasionally address very sensitive issues. We would like you to present as full a picture in this report as you can as the lessons you learn are valuable to us. We assure you that any issues you identify as confidential are removed before the report is made public. Where such issues do represent valuable lessons for the community we will involve you in further discussion as to how they could be passed on without identifying institutions or individuals.

Please redact references to the University of Exeter and Trinity College Dublin as they may not wish their plans to be made publically available at this sensitive stage of our discussions.