

ELP for final year students: a guide to e-learning projects

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Final Year Projects: Maximising the Learning

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ELP for final year students

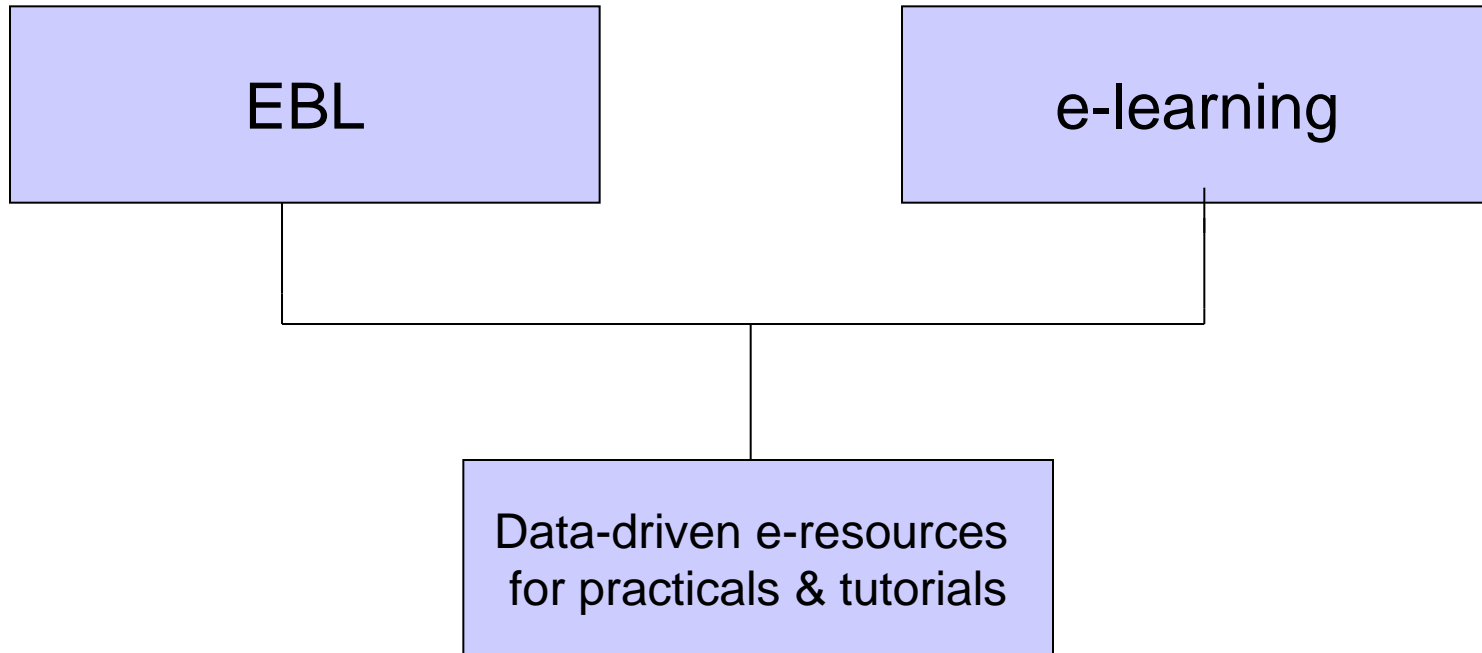
- What are e-learning projects?
- Context for their development
- How we do it: pedagogy + practice
- What are the outcomes?
- A how-to-do-it guide

What are e-learning projects?

- Students plan, design and construct online resources
 - to support T & L
 - Practicals (preparation, assessment, extension)
 - Tutorials
 - Course units
 - MRI
 - Museum activities
 - Local schools - 6th form

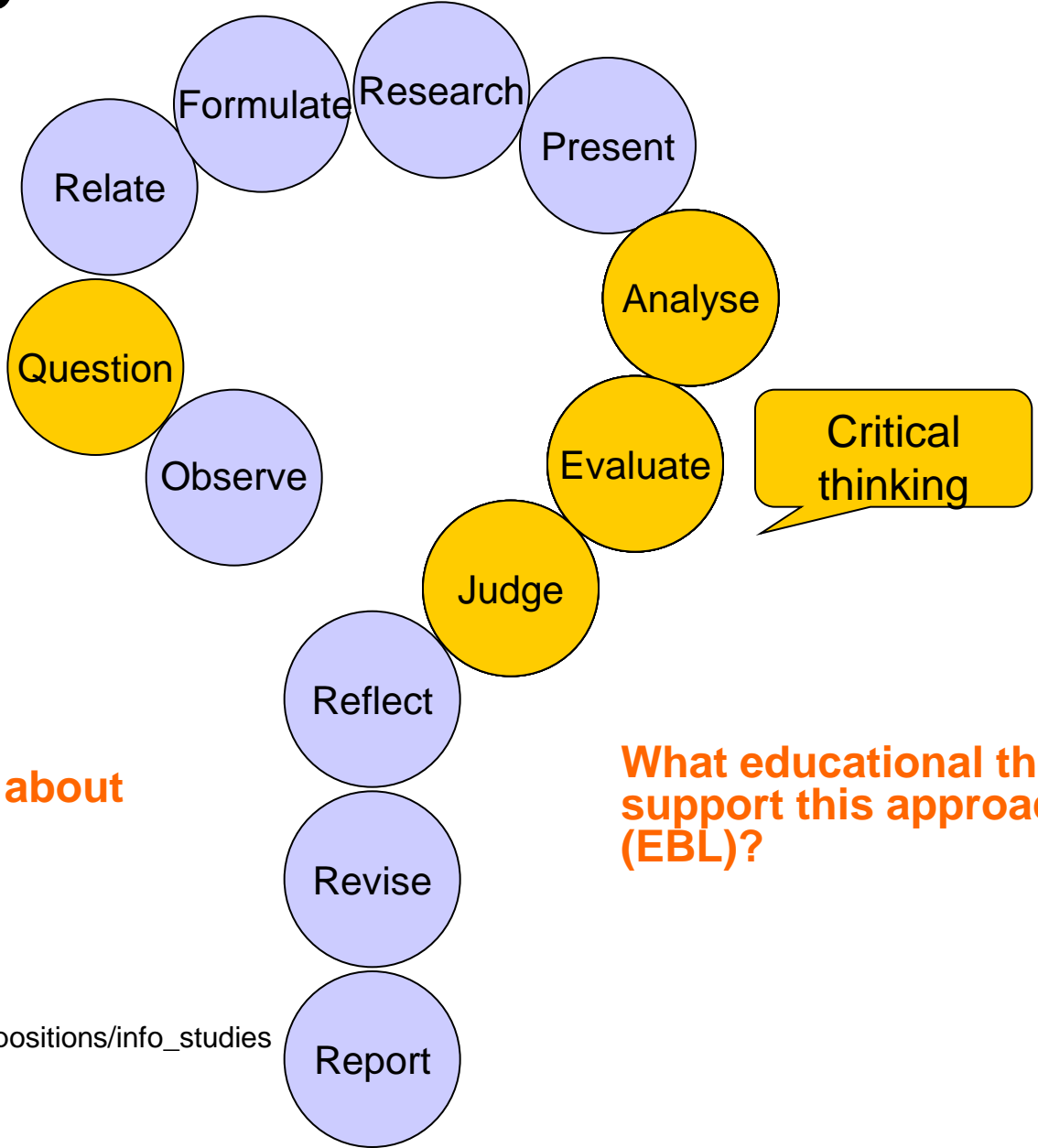
Drivers

1. CEEBL Project



2. Feedback from external examiners....

Enquiry & The Scientific Method



What do we know about learning online?

What educational theories support this approach (EBL)?

Adapted from
http://www.accessola.com/action/positions/info_studies/html/research.html

Challenge

- Project students to engage in enquiry and the scientific method
- Generate e-resources that engage the target group in.....
- Provide project students with an experience equivalent to (but different from) the lab experience

A pedagogy for online enquiry

- **Learning environment**
 - Blended delivery: to engage, motivate, challenge, provide social interaction & scaffolding for support & feedback
- **Learning context**
 - Project work: experiential, active and learner-centred course, draw on prior experience, provide resources & assessment opportunities
- **Learning experiences**
 - **Enquiry**
 - Boud D. & Prosser M. (2002); Justice, C., Warry, W., Cuneo, C. *et al* (2002)
 - **Critical thinking**
 - Garrison D. R., Anderson T. and Archer W. (2000)
 - **Creativity**
 - Creativity sites: http://www.mycoted.com/Category:Creativity_Techniques

ELP course design

- 30 - 40 students per year opt for e-learning projects
- 12 week training course spanning Semesters 5 and 6 (Blackboard)
- Semester 5 for training & Lit Review; Semester 6 for constructing
- 2 x 2h sessions per week – dedicated PC cluster
- Blended delivery: virtual laboratory environment
- e-Lab book for reflection & to record progress & ideas
- Content based on pedagogy and technology delivered in parallel
- Online tasks complemented by online discussion forums – encourage enquiry & creativity (Semester 5)
- Peer review of project materials in online groups (Sem 6) – critical thinking

Course Tools

- Course Content
- eLearning Enquiry**

Your location: [Home Page](#) > **eLearning Projects**



eLearning Projects



[ELP Course sessions](#)
Your course materials week by week



[Notice Board](#)
Messages and announcements



[Software Download](#)
You can download several softwares from this folder, however remember to read the instructions first.



[Semester 2 Groups](#)



[e Lab Book](#)



[Discussion Boards](#)



[Pronto live audio / video](#)



[Resources](#)

Blackboard Learning System - Mozilla Firefox

File Edit View History Bookmarks Tools Help


manchester.ac.uk https://blackboard.manchester.ac.uk/webct/urw/lc5116011.tp0/cobaltMainFrame.dowebct

Most Visited Webmail Images TrainLine ntl Nationwide eBay Hairy Growler Barclays Inis HEA Maps Trains Inis inis oracle neabio BBC NHS











Blackboard Learning System

Course Tools

- Course Content
- eLearning Enquiry



eLearning Projects

| | | |
|--|--|---|
|  Session 1 What is eLearning |  Session 2 Accessing the literature |  Session 3 Target Group, Questionnaire Design and Ethics |
|  Session 4 Software Tools |  Session 5 Creative learning designs |  Session 6 Project Plans |
|  Session 7 Images animation and media |  Session 8 Peer Review and Interview |  Session 9 Building the home page |
|  ELP Semester 2 | | |

Assessment

[subject to change]

10 credit lit review + 30 credit project

- 20% project performance (soon to be 10%)
 - Contributions to peer review & elab book
- 20% e-learning resource
 - Learning design & content
- 60% project report
 - Analysis and evaluation of resource in relation to the literature

What students do

- Attend the course sessions to gain skills - compulsory
- Participate in online discussions
- Complete an e-lab book
- Write lit review & define project aims & outcomes
- Identify a target group
- Undertake a needs analysis
- Formulate a hypothesis & set up experiment
- Submit an ethical approval form
- Plan and storyboard resource content – knowledge & skills (Sem 5)
- Select software toolkit (Sem 5)
- Construct resource components – animations, quizzes... (Sem 6)
- Peer review in groups
- Test hypothesis using online assessments and questionnaires
- Analyse and evaluate feedback data
- Write project report

Tools for creative thinking

| | |
|--|--|
| Visual prompts | To draw on experiences |
| Lateral thinking activities | Encourage creativity |
| Brainstorming, random words etc. (groups) | Generate ideas - <i>inspiration</i> (divergent thinking) |
| Mind-mapping, storyboarding (individual) | Take ideas forward, incubate ideas – <i>distillation, clarification</i> (convergent thinking) |
| Focused questioning (F-2-F) (SCAMPER, attribute listing) | Renew ideas - <i>evolution</i> (divergent thinking) |
| Peer evaluation and review | Reflect, modify and improve – <i>evaluation</i> (convergent thinking) |

EBL e-resources

- Scenario-based resources: case histories (problem-based resources – medical); resources with different roles (e.g. different ethical stances, patients)
- Data-driven resources (data-analysis problems – algorithmic, stats)
- Problem-solving resources (e.g. use decision trees to select experimental methods, virtual experiments, exploration of data banks identify of phyla)
- Individual activities (interactive tools - quizzes, animations, MCQs etc)


Examples

<http://www.ls.manchester.ac.uk/undergraduate/teachingandlearningresources/elearning/elearningprojects>


Getting started

Throughout this resource, you will be presented with a clinical case study. You will be asked to determine a diagnosis based on clinical symptoms and information from research papers.
Once you have completed the case study, you will be taken to a second assessment.


To get started, click on case file number 1



1



2



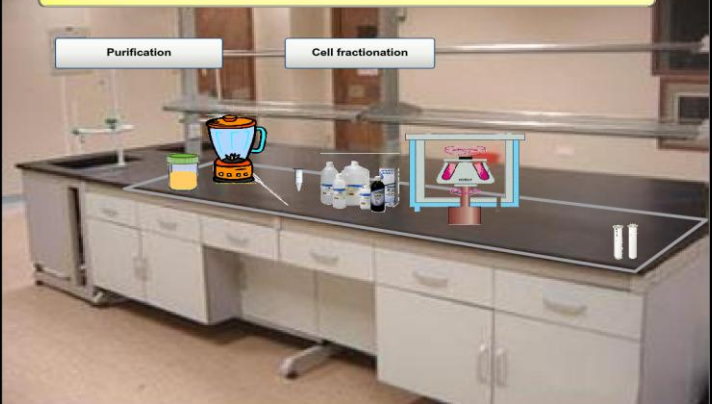
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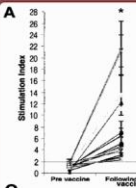
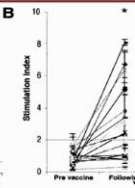
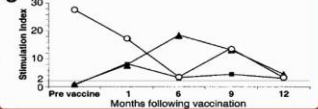
References

Now it's time to get started. Choose the process you wish to begin first. Note that they must be done in sequential order.

Purification

Cell fractionation



This figure is from the same paper as data set C (1). It shows the proliferation of T-cells pre/post treatment. (A) shows the change in proliferation in response to mouse prostatic acid phosphatase (mPAP) while (B) shows the change in proliferation in response to exposure to human prostatic acid phosphatase (hPAP). (C) shows proliferative response serially over 12 months post vaccine compared with pre-vaccine for mPAP, hPAP and influenza, with the hPAP and mPAP values being representative of all the patients values (the mean).


What result can be drawn from this observation?

mPAP is better at stimulating T-cell proliferation

hPAP is better at stimulating T-cell proliferation




We would need to carry out statistical analysis


Shores

Home



There are three types of shore that you will encounter on the Great Isle of Cumbrae (click for diagrams):

1. Exposed Rocky Shore
2. Sheltered Rocky Shore
3. Sandy Shore



On initial observation, the sandy shore seems barren and lacking in life. Due to the small size of the grains of sand, water is retained between the grains in minute spaces, lubricating the grains. Organisms can therefore survive in the sand once the tide has fallen.

Pictures from www.theseashore.org.uk and www.millport.org.uk
Next


Software

- **Web authoring:** Opus, Wimba Create, Dreamweaver.
 - Opus is particularly useful for interactive activities such as drag and drop, mouse-overs and quizzes.
- **Assessments and evaluation:** Surveynet, Blackboard
 - data can be compiled and analysed.
- **Roles:** Webquest
 - create different roles (routes) that the user can adopt
- **Stories:** Scenario-Based Learning interactive (SBLi)
 - designed for branched and multi-path problems (permits the path followed by the user to be tracked)
- **Animations:** Powerpoint and Ispring (to convert to flash movies)
- **Audio and video technology**

Your location: [Home Page](#) > [eLearning Projects](#) > **Resources**

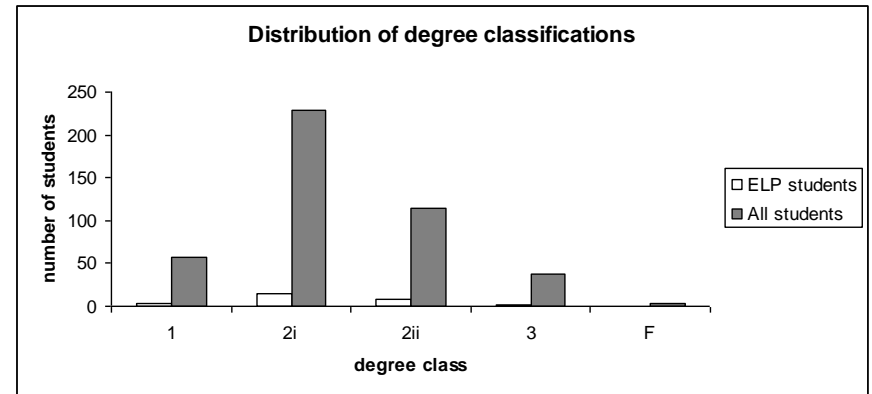
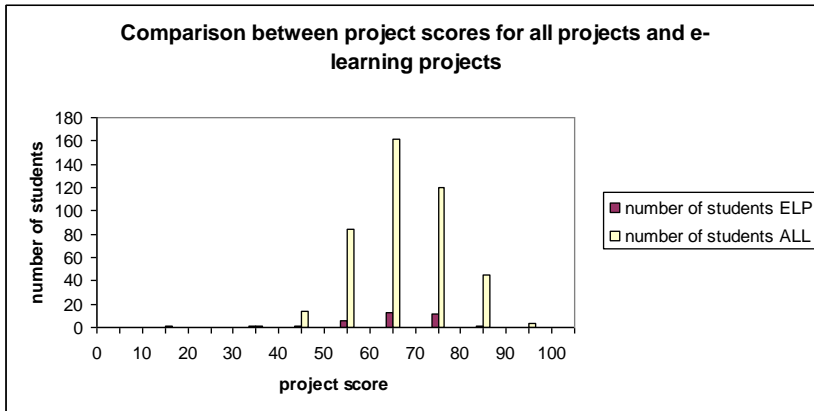
Software Applications

| | | | |
|-------------------------------------|---------------------------------------|--|----------------------------------|
| Office Applications | Wimba Create tutorial | Macromedia Contribute tutorial | Video Convertors |
| Dreamweaver | Opus Pro 6 | Sblinteractive | Movie Maker |
| podcasting | Podcasting tutorial | Flash | Google Sites |
| Adobe Presenter | Ispring | Webinaria | Audacity |
| Raptivity | Softchalk | Wimba Classroom Suite | WavPad |
| Corel Suite | Photoshop | PaintShop Pro | Hot Potatoes |
| Captivate | Camtasia | Mindgenius tutorial | Survey Net |
| Pdrives | Turning Point and PRS | Poll Everywhere | |

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Outcomes

Project scores



Peer review

I really like your use of a button to take you to references.

When you get into the detail with the heart I think the font should be a little bigger (currently looking at the right ventricle, presume the rest is the same).

I don't think the 'next' button works on the Chordae Tendinae page. I just got stuck :(

The magnifying glass on the Left Ventricle page is really hard to pick up, it seems to only be responsive if I take it from a particular part of the glass – don't know why that is but take a look.

On the same page you say "there are 3 areas to do" could that be changed to "3 areas to look at"? Also – when I scroll over the heart I could only find 1 – the Chordae Tendinae.

Peer Support

I think your resource is amazing, the animations are brilliant, and really explain what's going on much better than text would.

I like all the mini assessments you've got throughout the resource, it makes it really interactive and means users have to pay attention!

I couldn't get the crossword to work, but it sounds like that's a microlab problem! but well done, i think its brilliant!

E-Lab book

- Notes – from class
- Record of progress – tasks, meetings
- To-do
- Ideas

Best method to view heart and components. Scenario e.g. need to find the mitral valve, what to look for? choose correct picture? heart cut up into lots of pieces by first year student not paying good attention, and you want to identify each section? Asking male v female?

How to do it guide

- Transparent aims, outcomes and assessment for projects
- Nominate e-learning team – student support
- Get staff on board – supervisors for 1-2-1 support
- Market projects to students - transferable skills
- Timetable training sessions – seminars & workshops
- Make attendance compulsory
- Dedicated microlab space – project environment
- Online materials – presentations, links, IT guides
- Online groups – peer support & peer review (troubleshooting)
- Submit plan and storyboard before software selection
- Limit software options
- Use the resources that students create

Anticipate problems

- Hardware & software issues
- Supervisors need to be on board – what is their incentive?
- Students need a target group for evaluation – the more project students, the more groups are needed!
- Don't let students be over-ambitious
- Verification & hosting of good projects

What next

- More students.....more ELPs
- Develop e-lab book for monitoring progress – NVivo text analysis
- Match learning designs to types of problem or enquiry that students use for a more systematic approach to learning designs
- Populate searchable database of projects
- SBLi used in OER
- Training materials used for staff

A selection of references

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Thank you for your attention

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