Design for Learning Programme

# Phoebe Pedagogy Planning Tool
# Project Completion Report

## Project Details

### Phoebe


Project website: http://phoebe-project.conted.ox.ac.uk
Phoebe tool: http://phoebe-app.conted.ox.ac.uk/

University of Oxford:
Technology-Assisted Lifelong Learning, Department for Continuing Education
Learning Technologies Group, Oxford University Computing Services

| | | |
|---|---|---|
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Keywords: design for learning, effective practice, learning design, pedagogy planning, planning tools, Phoebe

### Project description

The Phoebe project has designed, implemented and evaluated a Web-based pedagogy planner tool: that is, a purpose-built application that guides teachers through the construction of designs for courses (modules) and/or individual learning sessions. The tool was developed as a response to the challenge for teachers and lecturers to make use of digital technologies in a way that both promotes active, motivating and productive learning on the part of students and affords positive teaching experiences for themselves. In facing this challenge, many teachers have found that introducing technology has ramifications for the whole of their practice, even obliging them to re-plan from scratch classes which they have taught successfully for years.

Intended for practitioners working in FE, HE and ACL, the Phoebe tool brings together the key components of a learning design (or lesson plan), prompts teachers' thinking, allows them to record ideas and requirements, and makes it easy to cross-reference components as they design the activities that make up a learning experience. It offers both flexible and guided paths through the planning process, and provides access to a wide range of models, case studies and examples of innovative learning designs.

As well as developing the tool itself, the Phoebe project team has participated fully in the Design for Learning programme, both at programme-level meetings and through contacts with individual projects. In this way we have contributed to the advances in the community's understanding of design for learning in general, and tools for pedagogy planning in particular.

## Acknowledgements

The Phoebe project was funded and supported by the JISC Design for Learning programme. Special thanks are due to the Programme Manager, Sarah Knight, for her guidance and encouragement.

The Phoebe project would also like to thank:

- Helen Beetham (e-learning consultant to JISC)
- Veronica Adamson and Jane Plenderleith (Glenaffric Ltd: Design for Learning programme evaluation team)
- Lisa Corley and Sheila McNeill (CETIS Support Project)
- Diana Laurillard, Jonathan San-Diego, Kevin Walker and other members of the London Pedagogy Planner (LPP) project team
- Alison Littlejohn and Isobel Falconer (Glasgow Caledonian University: Mod4L project)
- Simon Walker (University of Greenwich: eLIDA CAMEL project)
- Kate Pearce, Priscilla Dawson, Rob Newton, and Penny Palmer (Swansea College: ALeD project)
- Our practitioner-informants and evaluators

  For the most part these people have to remain anonymous, but we are able to name and thank the following for enabling us to incorporate evaluations of Phoebe into their own staff development events: Richard Francis and Greg Benfield (Oxford Brookes University), and staff at Brighton University.
- Paul Bailey (Acting Programme Manager Autumn 2006-Spring 2007)

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## Appendices

# Executive Summary


## Aims and objectives

The broad aim of the Phoebe project was to help practitioners in post-compulsory learning to design motivating and productive learning experiences that made effective use of technology where appropriate. To realise this aim, the following objectives were set:

1. Develop a prototype online planning tool.
2. User-test the planning tool for functionality and usability.
3. Investigate the feasibility of further development and the integration of the planning tool into pedagogic practice by:
   a) Linking the functionality to appropriate support material;
   b) Embedding use of the tool in specific contexts for piloting and evaluation
4. Disseminate knowledge of the tool, and hence its use, in the wider community.

## Overall approach

The project unfolded through two principal phases, corresponding to the two tranches of funding received. Phase 1 began with an initial research and investigation phase, which fed into the software development stage. The evaluation at the end of Phase 1 effectively constituted the requirements gathering phase for Phase 2. This second phase saw a radical revision of the tool and a more extensive evaluation involving a wide range of practitioners.

## Findings

In producing a usable pedagogical planner, Phoebe has facilitated understanding of how planning actually works when mediated by tools. This has enabled us to specify future requirements for tools that support the process of learning design and to define the wider areas that need to be addressed in tandem.

Our work has also underscored the challenges to future development, including the complexity of the activities being supported, continuing negative cultural attitudes vis-à-vis the sharing of resources, and fit with the general ecology of tools within post-compulsory educational practice. However, we are now in a strong position to address these issues and move forward to design and develop full-featured production versions of the tools that exploit their potential to promote genuine innovation in teaching and learning.

## Achievements

The principal achievement of the project has been the development of a usable and useful pedagogy planner tool, which is freely available at http://phoebe-app.conted.ox.ac.uk/. This is matched by the contribution made to the increased understanding of the issues and opportunities associated both with pedagogy planning tools in particular, and with learning design in general.

## Conclusions

It is clear that pedagogy planning tools have much to offer the education sector. Teachers need greater assistance, both to innovate in their teaching approach and to engage with digital technologies, and planning tools have the potential to make a substantial contribution to the integrated support that would benefit their users the most. However, to achieve the desired impact, these tools need continued support and development in the wider context of changes in post-compulsory education.

# Project Outputs

## Documents, software and websites

The Phoebe project has produced many outputs, listed below. As the D4L programme progressed, and with this our understanding of requirements, there were several additions to the original list of outputs specified. All project outputs are available in our wiki at http://phoebe-project.conted.ox.ac.uk.These include:

- The prototype pedagogy planner tool http://phoebe-app.conted.ox.ac.uk/
- Phoebe briefing document http://phoebe-project.conted.ox.ac.uk/cgi-bin/trac.cgi/wiki/BriefingDocument
- Links to resources created by other Design for Learning projects: e.g. practice models, learning designs, case studies. Where available and appropriate these have been linked to in the Phoebe guidance http://phoebe-app.conted.ox.ac.uk/browseGuidance.php
- Evaluation plans for Phases 1 and 2, evaluation report for Phase 1 and overall project evaluation report: http://phoebe-project.conted.ox.ac.uk/cgi-bin/trac.cgi/wiki/PractitionerInvolvement
- Report of interviews with nine practitioner informants from Phase 1: http://phoebe-project.conted.ox.ac.uk/cgi-bin/trac.cgi/wiki/PractitionerInformants. Note that the following documents relating to the interviews are not available online, although they can be provided on request:
  - Interview transcripts
  - Eight scenarios of practice, developed from the transcripts in order to build an understanding of *representative* contexts in which the tool might be used.
- Requirements specification: http://phoebe-project.conted.ox.ac.uk/cgi-bin/trac.cgi/wiki/RequirementsSpec
- Functional specification: http://phoebe-project.conted.ox.ac.uk/cgi-bin/trac.cgi/wiki/FunctionalSpec
- Source code and technical documentation http://phoebe-project.conted.ox.ac.uk/cgi-bin/trac.cgi/wiki/PhoebeDownloads
- Roadmap generated from the issue tracking system http://phoebe-project.conted.ox.ac.uk/cgi-bin/trac.cgi/roadmap
- Getting started with Phoebe guides http://phoebe-app.conted.ox.ac.uk/help/
- Implementation scenarios http://phoebe-project.conted.ox.ac.uk/cgi-bin/trac.cgi/attachment/wiki/UploadedFiles/Phoebe%20Scenarios%20030508.doc?format=raw
- A development map, outlining Phoebe's current, short term, and long term development options. http://phoebe-project.conted.ox.ac.uk/cgi-bin/trac.cgi/attachment/wiki/UploadedFiles/Development%20Map%20080503.doc?format=raw
- Presentations, delivered throughout the project http://phoebe-project.conted.ox.ac.uk/cgi-bin/trac.cgi/wiki/ProjectPresentations
- Reports and other documentation as required by JISC
- A social bookmark site on del.ici.ous: http://del.icio.us/oxphoebe. Here we are collecting examples of learning designs, information tools and other resources on which we have drawn for the content of Phoebe, as well as relevant research literature on learning design and design for learning. This site is also accessible within the Phoebe tool itself.

**Note:** All the documentary outputs of the project (i.e. the Phoebe guidance and project site) are currently made available through a Creative Commons Attribution-Noncommercial-Share Alike 3.0 licence.[1] The project team is closely monitoring the work of the JISC funded Web2Rights project[2] and may review this decision if it becomes apparent that an alternative licence is more appropriate.

All original code output of the project (i.e. the Phoebe application) is released under the GNU General Public License (GPL), version 2. Code from third-party open source projects is provided/available under the terms of those projects.

## Intangible outputs

The project has also resulted in the following intangible outputs:

- Pedagogical processes:
  - Enhanced understanding of the process of design for learning as practised "in the wild" (i.e. as opposed to how it is described or theorised about by practitioners, or how it is prescribed by practitioner trainers)
  - Greater clarity regarding the similarities and differences across the sectors and their requirements for planning.
  - A clearer picture of the forces, both personal and institutional, which impact on the process of design for learning.
  - Greater understanding of the ways in which introducing new technological artefacts may have an impact on practitioners' underlying pedagogical approach
- Design of pedagogy planning tools:
  - Greater awareness of the levels at which design operates (granularity) and, hence, what the implications for the design of planning tools.
  - A better picture of the existing systems, processes and tools that might interact with planning tools and thus impact their development.
  - A greater understanding of other developments in the HE sector which might impact on visions of future planners, including repositories, the e-Framework for Education and Research, attitudes towards IPR.
  - A clearer picture of the extent to which current standards such as IMS LD match real practice of learning design by practitioners and what the implications might be for future developments in this space.
  - A better understanding of the next issues to be addressed in the development of any future planning tools.
- Research and evaluation:
  - Broadened experience of evaluating tools to support design for learning (building on experience gained in evaluation of the LAMS Practitioner Trial and Learning Design Tools project).
  - A greater understanding of the possibilities for representing learning designs and the affordances and constraints of different representational forms.
- Software development processes
  - Increased awareness of the issues involved in redeploying and extending existing open source software.

[1] See http://phoebe-guidance.conted.ox.ac.uk/cgi-bin/trac.cgi/wiki/CopyrightLicensing for more information.

[2] http://www.web2rights.org.uk/

## Project Outcomes

The project outcomes stated in the original Phoebe project plan were:

- Greater understanding, and hence more effective use, of technology by practitioners to mediate their students' learning experiences
- Empowerment of the practitioner community through access to knowledge that was previously difficult or impossible to obtain.
- Expansion of the research literature on design for learning.

These outcomes, in particular the first, were predicated on the widespread adoption of a functional planner tool by the end of the project, something that was never perceived as feasible after the extension of its lifetime. However having taken the project forward through a second phase, we can identify a number of substantial outcomes, including:

- Greater engagement among those practitioners in the teaching and learning community who have been involved in the project with the opportunities and issues associated with design for learning.

  Specifically, a number of evaluators who were not participants in the Design for Learning programme spontaneously commented on how their use of Phoebe had made them more aware of the importance of planning. Whether this is carried through into their long-term practice has yet to be ascertained and, in any case, lies currently outside the scope of the Phoebe project.
- The creation of usable tools that can act as an artefact to mediate our emergent understanding of the potential impact of technology on the practice of designing for learning (even if the resultant learning experiences do not involve technology)
- A general advancement of the understanding of the design for learning "space" and the challenges and opportunities therein.

  Specifically, the contribution of the Phoebe project has been recognised in a) an invitation to write a chapter for an edited volume on learning design and b) citation of our work by other researchers.
- A successful collaborative proposal with the Institute of Education (LPP project), London Metropolitan University, London School of Economics and the Royal Veterinary College for a project to research and develop a learning design support environment (LDSE), funded under the ESRC/EPSRC TLRP TEL2 call.

## Project Team Members

Marion Manton will remain employed as an eLearning Research Project Manager at TALL and will continue her responsibility for the learning design of courses produced by the team and her work on research projects.

Liz Masterman will continue to work as a Senior Researcher at OUCS, as well as collaborating with TALL on future research projects including the possible continuation of Phoebe.

David Balch will remain employed as a Senior Web Developer at TALL, working on development and research projects.

## Dissemination Activities

The high level of interest generated in Phoebe within JISC and its associated communities has made dissemination a straightforward process, with a number of invitations to demonstrate the project, in addition to successful submissions for conference presentations. During the life of the projects the following papers have been delivered or published:

- Design for Learning: a new paradigm? (Symposium), Marion Manton, Isobel Faulkner, Jane Plenderleith. ALT-C, Edinburgh, September 2006.

- A Practitioner-Focused Environment to Support Design for Learning, Marion Manton and Liz Masterman. JISC Pedagogy Experts' Forum, October 2006.
- Disrupt or co-opt? The role of a pedagogy planning tool in promoting effective design for learning, Liz Masterman. Part of a symposium on design for learning at CAL '07, Dublin, March 2007.
- Phoebe Planner, Marion Manton and David Balch. Pedagogy Forum and Educational Content SIG, Liverpool Hope University, April 2007.
- Pedagogy planning Tools and Design for Learning, Liz Masterman. World ORT 8th Wingate *Seminar Strategies in e-learning and teaching*, May 2007.
- Phoebe: A Pedagogy planner, Marion Manton. University of Greenwich E-learning conference, July 2007.
- Phoebe: The role of a pedagogy planning tool in promoting effective Design for Learning, Liz Masterman. European LAMS Conference, University of Greenwich. July 2007
- Phoebe: a wiki-based pedagogy planner to promote innovative practice in Design for Learning (demonstration), Liz Masterman, Marion Manton. ALT-C, Nottingham, September 2007.
- Phoebe: Web 2.0 technology to support innovation and collaboration among teachers (poster), Liz Masterman and Marion Manton. ALT-C Conference, Nottingham, September 2007.
- Talk on Phoebe by Liz Masterman to the Learning Technologies Group, OUCS, April 2008.
- Masterman, E. (2008). Activity Theory and the Design of Pedagogic Planning Tools. In L. Lockyer, S. Bennett, S. Agostinho, & B. Harper (Eds.), *Handbook of Research on Learning Design and Learning Objects: Issues, Applications and Technologies*. IGI Global.

Another productive dissemination route has been participation in meetings that were not necessarily intended to publicise the project. These have included many of the evaluation events of recent months which have served as *de facto* dissemination opportunities for the project. In addition to this have been the numerous events organised by JISC, such as the Learning and Teaching Practice Experts' Group, Design for Learning programme meetings and the Pedagogy Planning Tools review meeting in March 2008. Collectively, these events have enabled Phoebe to reach impressive numbers of practitioners from all the post-16 sectors.

The project wiki[3] has acted as a portal for the project since the start, with detailed information on most aspects of our work. For just over a year the project has also used the TALL Blog[4] to disseminate news and reflect on the issues raised by the project. Phoebe-related posts can be found at http://tallblog.conted.ox.ac.uk/index.php/category/phoebe/.

Because the Phoebe tool is freely available on the Web for use by anyone, it has also acted as a very powerful dissemination tool in its own right. A number of individuals have stumbled upon Phoebe during the course of their own researchers, and as a result we have been contacted by interested parties worldwide, including the USA, Brazil and the Dominican Republic. There is even evidence that our work has been permeated as far east as Mongolia. We hope that the continued availability of Phoebe sustains this trend.

More specifically, the Project team is also committed to disseminating Phoebe beyond the currently funded life of the project. To this end we have:

- Submitted a proposal to ALT-C 2008 with Helen Beetham and other Design for Learning programme participants.

[3] http://phoebe-project.conted.ox.ac.uk

[4] http://tallblog.conted.ox.ac.uk/

- Entered Phoebe for the annual OxTALENT (Oxford Teaching and Learning Enhanced by New Technology) awards, June 2008.
- Agreed to present a talk for Digital Projects in Oxford http://www.oucs.ox.ac.uk/ltg/events/index.xml.ID=Talks
- Agreed to exhibit Phoebe at the JISC RSC South West Summer Conference http://www.rsc-south-west.ac.uk/index.php?page_id=49&id=580 .
- Agreed to participate in the European LAMS conference, http://lams2008.lamsfoundation.org/ , presenting at the Pedagogy planners day.
- Instigated a dialogue with interested groups within the University of Oxford about potential future collaboration and development, including the Department of Education and the Oxford Learning Institute, including its CETL, Preparing for Academic Practice.
- Planned to publish two papers.

## Synergies

The Phoebe project has benefited great from the community which has evolved under the aegis of the Design for Learning programme. In particular, discussions and joint meetings with the Mod4L and LPP projects have proved invaluable in shaping our thinking as our own project progressed.

Events throughout the programme provided opportunities a) benchmark our developments with a community of interested and engaged practitioners and b) to make productive connections with projects such as ALeD, which hosted a Phoebe evaluation workshop at in Swansea College, and eLIDA CAMEL, which enabled us to explore the challenges to producing case studies and example learning designs for the general community which are meaningful even when divorced from the context in which they were produced (a key factor in the provision of effective support within a tool such as Phoebe). Liz Masterman also served on the advisory group of the DeSILA and was the evaluator for the Constructing2Learn project.

The JISC Learning and Teaching Practice Experts Group has also been extremely useful, by offering us an opportunity for dissemination and acting as source of rich information, principally during the consultation activity (October 2006) which proved so helpful in shaping our ideas for the design of Phase 1.

Thanks to the Support Project we also benefited from our connections with the CETIS SIGs, which gave us opportunities to disseminate our work to an interested community. We are also indebted to TechDis, whose members have been extremely supportive in discussing future directions for Phoebe.

The Pedagogy Planning Tools "round table" organised by James Dalziel in July 2007 made it possible for us to forge connections with projects outside the Design for Learning programme. As a result of this event the Phoebe team has continued discussions Jeff Earp of the ReMath project and the Compendium LD team at the Open University.[5] We are hoping that the Pedagogy Planning Tools workshop in Cadiz in June 2008 will prove as fruitful.

Phoebe is also being used by some of the ReProduce projects and others interested in learning design, as listed in the Sustainability section below.

Finally, we note that the team that submitted the successful LDSE bid came together primarily through the synergies afforded by the Design for Learning programme.

[5] http://remath.itd.cnr.it/ and http://e4innovation.com/?p=153 respectively.

# Sustainability

## Hosting

TALL has committed to hosting the Phoebe tool and website in their current form for a minimum of three years after the project is completed (i.e. to May 2011). However, given the extensive interest in future adoption of Phoebe, we are hopeful that development will continue.

TechDis has also indicated a willingness to host the Phoebe tool should TALL no longer be able to do so.

## Interested users

Groups known to be currently using Phoebe or to have firm plans to do so are:

- Staffordshire University: Best Practice Models for E-learning Project
- Excel High School, USA: online school
- University of Greenwich: personalised approaches to learning, NTFS stage 2 bid (outcome pending)
- JISC RePRODUCE projects including Mosaic, Research Methods Common Spine, PSYCHE

In addition, a number of other practitioners – either on their own initiative or on behalf of their institutions – have expressed an interest in using Phoebe in the future (provided that the relevant issues identified in the Development Map are addressed) or indeed participating in its continued development through contributing requirements or hosting pilot implementations. It is clear that Phoebe is viewed by many as a catalyst in their own institutional drive towards effective practice and technology-mediated learning.

## Community dimensions

The evaluations have repeatedly underscored that Phoebe is, above all, a tool for community use, whether the members of a given community are working on their learning designs individually or collaboratively. These communities may be intra- or extra-institutional, but what is clear is that their relationship with Phoebe will be central to its sustainability. This relationship is symbiotic in that Phoebe must genuinely be useful to a community in terms of functionality, guidance, output and interoperability with neighbouring pedagogic and administrative systems (hence the importance of customisable, if not locally hosted, versions) if that community is to continue to use it, yet Phoebe will be dependent on those communities to expand the content of its guidance system and maintain its currency.

## Future development

While the funding provisionally secured for the LDSE represents a valuable contribution to future research into pedagogy planning tools, it is essentially a long-term commitment to blue-skies research in this area. Moreover, the remit of that project has been narrowed to the HE sector.

In contrast, in Phoebe we have produced a tool that is usable, useful and above all *used* in the here and now to add value to teachers' practice and to set them on the path to the design of effective learning experiences in *all* sectors of post-compulsory education. Indeed, some of our most enthusiastic supporters work in FE colleges. However, within this overall glowing picture we must draw attention to those who have expressed hesitation about throwing their weight behind Phoebe without assurances of its continued existence and enhancement.

True, in its current incarnation Phoebe does need additional development in order to fulfil its short-term as well as its long-term potential. However, we cannot emphasise enough the crucial importance of continuing investment in research, development and evaluation in order to capitalise further on the substantial advances that have been made in the past two years, to provide an ongoing service to an emergent loyal user base, and to maintain

Phoebe as a vehicle for debate and change. To this end, we have compiled (in response to a request by JISC) a Development Map that lays out the immediate, medium-term and long-term enhancements, the desirability of which has emerged from our evaluations (see appendix).

## Key Messages

The Phoebe project, together with the LPP and other projects that have explored the areas of design for learning/learning design, effective practice and pedagogy planning in recent years, has clearly identified a genuine need for usable and useful tools to support the process of designing for learning in the post-compulsory sector. Although there are instances of good practice, many teachers' engagement with technology is inadequately scaffolded, and so pedagogy planning tools could be a significant contribution to the integrated support that is needed. This is a complicated area, however, and so we have grouped our key messages under representative headings.

### Requirements for future planning tools

Our evaluations have helped to clarify specific requirements for future pedagogy planning tools, especially in relation to the following:

- Customisation. Users want information and functionality that is directly relevant to them, in terms of guidance, examples, tools, and templates.
- Output. Pedagogy planning tools are most useful when they output designs in representations that meet current requirements, but can also be adapted for future needs.
- Community. Planning tools are most valuable to users when they make it possible to see what other practitioners are doing and thinking, and to connect with examples and fellow practitioners from their institution and/or discipline.
- Sustainability. It is essential to protect users' investment in terms of time. Long-term adoption of these tools depends on a clear strategy and resources for funding and maintaining them.
- Standards. A large gap remains between standards and practice in this area, and this needs to be addressed for large-scale uptake to be viable.

Fundamentally, such tools must be easy to use and offer immediate, clear, benefits in order to be accepted by their intended users. It is now generally agreed that no one single tool can address all of users' requirements; rather, we should think in terms of a suite of interoperable tools. Our evaluations of the Phoebe prototype tool have demonstrated that, even as a proof-of-concept prototype with incomplete functionality, it is capable of forming a useful (and usable) addition to such a suite.

### The challenges of planning

Phoebe has played a major role in uncovering the conceptual and technical challenges in the development of pedagogy planning tools as identified by Helen Beetham in her talk at the strategic review meeting on 4th March. These challenges can be summarised as:

- Complexity and non-linearity of education design process
- Diversity of existing approaches to design
- Diversity of education activities and tools
- Range of the institutional (and extra-institutional) systems, standards and procedures that are potentially involved in design
- Importance of exploring collaborative opportunities

We were aware at the start of the Design for Learning programme that the challenges applied to learning design generally as well as pedagogy planning tools in particular.

However pedagogical planning has proved to be both more complicated and more important than was realised when the Phoebe and LPP projects were conceived.

## The potential for Phoebe

Designing a pedagogy planning tool poses considerable challenges. However, by rooting the design of Phoebe in field-based research, and by deliberately focusing on a limited set of functions that tap into the current working practices of many teachers, we have developed in Phoebe a tool that can already be used to promote effective practice in learning design. Moreover, through evaluating Phoebe in the field, we have been able to track real-world learning design practice and thus use it as a proving ground for future, more sophisticated, tools.

We have identified staff development and initial teacher-training as two key activities in which Phoebe has the potential to offer significant benefits, and have made valuable contact with a number of teams who are interested in continuing this work. However, it is also clear experienced practitioners can also profit from using the tool.

## Planners and wider issues in post-compulsory education

Pedagogy planning tools are part of a broader set of developments across the entire field of post-compulsory education, including the general ecology of tools and processes which JISC supports. This ecology includes specifically learning-focused tools such as VLEs, Web 2.0 and other Web-based tools (whether intended for learning or not), e-portfolios, and repositories which can not only act as resource banks for the learning content used by learning designs, but also provide storage for the actual learning designs themselves. Administrative and infrastructural systems have a major role too, and certainly the place of planning tools within the e-Framework for Education and Research will need to be considered in the future. For planning tools to achieve their greatest potential impact, they will therefore need to develop in the context of this wider picture.

Another aspect that will be central to the success of change in this area is the management of attitudes among individual practitioners, communities and institutions, both towards the role of planning in their practice, and towards the value of collaborative design and the sharing and re-use of learning designs.

Of course, these are not issues unique to planning tools, but consideration of them will need to form a key part of future developments.

## Conclusion

As a result of the Design for Learning programme, our understanding of tools to support planning has progressed to the point where we can start to build actual solutions that have the potential to make a real impact on the process of planning and curriculum design in post-compulsory education. However for their potential to be fully realised, this new phase must take place in the context of broader developments in technology and institutional cultures, and recognise the symbiotic relationship between the tools and the academic communities on which their sustainability depends.

## Financial Statement

The closing financial statement for the Phoebe project is laid out below.

| | | | |
|---|---|---|---|
| **Total Grant** | **£88,539 from JISC (£120,700 total budget)** | **Duration of project:** | **12 months (+ 2 month ext.)** |
| **Reporting Period** | **01 March 2007 – 06 May 2008** | | |

| **Budget Headings** | **Total budget allocated** | **Actual Expenditure** | **Variance** |
|---|---|---|---|
| Directly incurred staff | £20,693 | £20,693 | £0 |
| **Total Directly Incurred Staff (A)** | **£20,693** | **£20,693** | **£0** |
| | | | |
| **Non-staff** | | | |
| Travel and subsistence | £1,572 | £2,574 | -£1,002 |
| Consultancy fees | £2,621 | £2,400 | £221 |
| Dissemination (inc. conference fees and publications) | £1,803 | £498 | £1,305 |
| Evaluation workshops | £1,591 | £286 | £1,305 |
| Other (consumables) | £209 | £147 | £62 |
| **Total Directly Incurred Non-Staff (B)** | **£7,796** | **£5,905** | **£1,891** |
| | | | |
| **Directly Incurred Total (A+B=C) (C)** | **£28,489** | **£26,598** | **£1,891** |
| | | | |
| **Directly Allocated** | | | |
| Directly allocated staff (inc. estates) | £44,325 | £44,325 | £0 |
| **Directly Allocated Total (D)** | **£44,325** | **£44,325** | **£0** |
| | | | |
| **Indirect Costs (E)** | **£47,886** | **£47,886** | **£0** |
| | | | |
| **Total Project Cost (C+D+E)** | **£120,700** | **£118,809** | **£1,891** |
| | | | |
| **JISC Contribution** | **£88,539** | **£88,539** | **£0** |
| **Institutional Contribution** | **£32,161** | **£32,161** | **£0** |

## Notes

The budget for Phase II of the Phoebe project was set using Full Economic Cost (FEC) principles and the FEC costing guidelines, provided at the time by JISC. In line with this guidance; research staff employed by TALL were included in the project budget as Directly Allocated, rather than Directly Incurred costs (JISC guidance on this has since been revised). It is therefore worth noting that, although in this financial statement the staff costs appear to exactly match the budget, the core project team, based at TALL, actually spent slightly more time on the project than budgeted.

Other things to note are:

- As a result of agreed changes to the requirements of the project, Dr Liz Masterman reduced her time spent on the project from 0.5 FTE to 0.4 FTE. The remaining 0.1 FTE was used instead for additional technical development work carried out by David Balch.
- In the original budget the travel and subsistence costs associated with evaluation and dissemination events were included under the "Evaluation" and "Dissemination" headings respectively. However, in this final financial statement all travel and subsistence costs have been included under the "Travel and subsistence" heading, accounting for the increased costs in that area and partly explaining the reduced costs for evaluation and dissemination.
- The main variance between the budget and actual costs are a result of delivering the evaluation workshops for far less cost than anticipated. One of the evaluation events was held in Oxford, where the institution supported the costs of room hire etc., and the other two events were held in association with other groups and therefore resulted in very few direct costs to the project. The discrepancy between most other headings results from minor changes to predicted spending, such as the slightly reduced numbers of consultants recruited.
- There has been a lot of interest in the Phoebe project and the team has received a number of invitations to attend events to demonstrate the Phoebe tool. The project team therefore intends to use the remaining project funds (£1,881) to continue dissemination activities beyond the end of the project. These are expected to include participation in ALT-C 2008, as well as several smaller UK-based events, such as the South West RSC meeting taking place in June 2008. The team proposes to spend the remaining funds by 31st July 2008 on conference fees, printing publicity materials, and travel and subsistence costs incurred in dissemination.

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# Phoebe Development Map

## Introduction

Phoebe is a prototype, proof of concept tool. Although broadly functional, it is therefore not as robust it would need to be for wide-scale uptake. However, with minor improvements to correct known faults and to extend functionality in certain key areas, Phoebe will be able to provide realistic opportunities for targeted implementation and wider piloting. In this way, it will be possible to conduct real-world investigations to extend our understanding of the further potential of planner tools.

Certainly, while both Phoebe and the LPP have been evaluated with real practitioners in a range of settings, the relative brevity of both projects has made it impossible to gauge their applicability to general practice. Real pedagogical planning can involve many people and take place over many months, and so evaluations conducted over longer time frames will almost certainly uncover usability issues and requirements that cannot be identified in a workshop lasting two hours or less.

With some additional development, therefore, we believe that it would be possible to conduct more meaningful pilots extending over longer periods. These would generate a more robust set of requirements on which to specify future systems, whether these build on Phoebe and/or the LPP or are designed afresh.

## 1. Current functionality

The current composition and functionality of Phoebe can be summarised as:

1.1 A self registration system

1.2 A library of shared learning designs

1.3 A set of guidance notes on learning design, and links to examples, covering:

- 1.3.1 Context-specific help on areas of a learning design
- 1.3.2 Introductory information about learning activities and sequences
- 1.3.3 A mapping of activities to technologies
- 1.3.4 Tools for e-learning
- 1.3.5 Teaching approaches and techniques

1.4 A learning design creation and management interface providing the ability to:

- 1.4.1 Create a new design from a specified template
- 1.4.2 Create a new design from another design (“cloning”)
- 1.4.3 Edit one’s own designs

1.5 A template creation and management interface providing the ability to:

- 1.5.1 Create a template from another template
- 1.5.2 Edit a template
- 1.5.3 Create a design based on a template

1.6 A learning design authoring environment, including:

- 1.6.1 The ability to fill in a learning design
- 1.6.2 Access context-specific help and other guidance

1.7 A template authoring environment allowing

- 1.7.1 The creation of new fields
- 1.7.2 Changing of the links to context specific guidance

1.7.3 The reordering of fields

1.7.4 The authoring of default information

1.8 A learning design output environment providing the ability to:

1.8.1 View a design in tabular format

1.8.2 View a design in hierarchical format (as an indented outline)

1.8.3 Export a design as XML code

1.8.4 Print a design

1.9 Extensive user guidance about Phoebe

## 2. Improvements for immediate implementation

Although the current (beta) version of Phoebe can be (and is) used successfully, users' interactions are constrained by the need to work around a number of faults. Rectifying these, and making minor enhancements to functionality, would significantly improve users' experience in the short term (i.e. 3-6 months), pending the kinds of development envisaged in section 3 of this appendix.

These "immediate" improvements are:

2.1 General

2.1.1 Ensure robustness in browsers other than Firefox

2.1.2 Redesign saving across course areas to make consistent and logical for users

2.1.3 Implement a search across shared designs

2.1.4 Enable output of design in RTF format for easy editing

2.1.5 Ensure robustness of the view design screen

2.1.6 Ensure that terminology is consistent and meaningful to users: e.g. change "clone" to "copy" or "duplicate;" change "field" to something else.

2.2 Editing designs

2.2.1 Allow formatted content to be pasted from MS Word

2.2.2 Allow HTML codes to be included in the information entered in a design

2.2.3 Make it possible to copy and rearrange certain fields in a design

2.2.4 Keep hidden items hidden between sessions

2.3 Editing templates

2.3.1 Allow the adjustment of a text entry box size in template

2.3.2 Fix general usability bugs in template interface

2.4 Content

2.4.1 Complete the current content

2.5 Features to explore in pilots:

We are aware of a number of new features which, if added to Phoebe, would significantly increase the value of any medium-term pilots and help identify requirements for the subsequent development phase. These features vary in complexity and in their implications for development. Some are dependent on collaborations with particular partners or user groups, but we believe all are fruitful areas for exploration. However, we suggest that the overhead incurred by implementing them (even in a tool which is likely to be redeveloped) will be rewarded by rich evaluation data to feed into the next tranche of requirements for development.

2.5.1 Provision for managing a) different roles for individual users and b) different groups of users

2.5.2 Development of the community/sharing interface, which could operate both with guidance and with the learning designs produced by users

2.5.3 Streamlining the consumption of JISC and other outputs, through RSS feeds or other means[1]

2.5.4 Creating customisable output

2.5.5 Developing customised content

2.5.6 Implementing a search for the guidance and the "Shared Designs" page

2.5.7 Exploration of the use of keywords or tagging for learning designs using, e.g., the LearnDirect taxonomy, free user tagging or folksonomies

2.5.8 Implementing interoperability with other systems as appropriate

2.5.9 Exploration of new content areas

2.5.10 Alternative means for mapping activities to tools

## 3. Wider development possibilities for future planner tool

The developments listed below have all been suggested by practitioners who have evaluated Phoebe or experimented with it. They are listed in no particular order, and we would expect that their desirability and priority will change in the light of experience with pilot installations and other evaluation activities.

3.1 Interoperability with other learning design tools through mappings between the Phoebe design structure and the structure used in the target tool.

It is likely that we will need to create an export facility which guides the user through the process, using their input to ensure that the data exported will result in a coherent design in the target learning design tool.

**Note:** The current design view/export mechanism has been designed to allow the addition of more export targets.

3.2 Interoperability with wider institutional and extra-institutional systems and tools that interface with the areas covered by Phoebe

3.3 Aggregating designs into a module or course, or in other ways determined by users

3.4 Ensuring full compliance with accessibility standards

3.5 Exploring other forms of representation for learning designs: e.g. concept maps (possibly through integration with Compendium LD)

3.6 Establishing a Phoebe guidance service as a long-term community project, separate from the actual tool

3.7 Integration with virtual learning environments such as Moodle or Sakai

3.8 Putting in place a stronger development discipline and process before the re-build, including the ability to run software project build systems, unit testing and continuous integration

3.9 Redesigning the software architecture around a code core and programming interfaces which can then implemented by others, allowing the Phoebe team to focus on the core tool, and others to extend it

3.10 Redesigning the software architecture in accordance with standard or in-house XSD schemas as a design foundation, enabling database schemas, object models, and

[1] Our initial implementation of a feed consumer in the Phoebe guidance used a plug-in for the Trac platform which, although its basic operation worked, did not support many feeds. In particular, feeds using non-ASCII character sets were not displayed correctly. Moreover, security features in Trac prevented the use of javascript-based feed systems which would offer better feed support. To enable fully-functional feeds will require either further development on Trac, or the use of a platform on which this feature more readily available, such as MediaWiki (see 3.11).

Web Services interfaces etc. to be derived from a single foundation. This would result in more options for flexibility, interoperability and integration

3.11 Migrate Phoebe guidance from Trac to a more suitable platform. Trac is more orientated to software development projects, so has many features that are not useful for the guidance and, conversely, lacks some that would be desirable.

Initial investigation suggests MediaWiki[2] as a good replacement. Notable MediaWiki features include:

- An Application Programming Interface (API) which should allow easy access to Phoebe guidance for other tools (learning design or otherwise), and also provide more scope for context-sensitive help in designs.
- Discussion pages, to enable community in-context discussion of guidance.
- A large developer community, which has produced several feed embedding extensions.[3]

3.12 Open the Phoebe guidance as a community project, allowing other institutions to insert their own help pages; and/or the development of standard help page modules that can be shared among several institutions.

3.13 Exploring the option to associate groups of sessions: e.g. to enable export of the type "Export all my session planning documents for Maths 101 Course for Term 3 to MS Word."

3.14 Developing and testing installation packages for institutions to host Phoebe locally and customise it accordingly.

3.15 Developing outputs from Phoebe that conform to standards such as IMS LD and others yet to be identified.

[2] http://www.mediawiki.org/

[3] e.g. http://www.mediawiki.org/wiki/Extension:FeedImport

# An Introduction to Phoebe

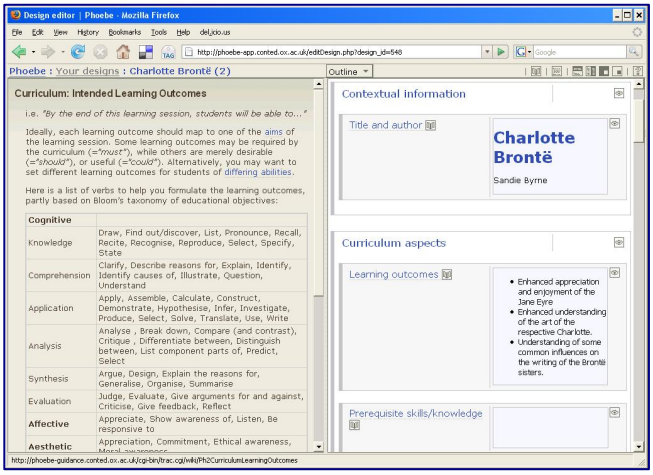
## What is Phoebe?

Phoebe is a Web-based *pedagogic planner tool*: that is, a purpose-built application that guides teachers through the construction of designs for courses (modules) and/or individual learning sessions. Intended initially for practitioners working in FE, HE and ACL, Phoebe brings together the key components of a learning design (or lesson plan), prompts teachers' thinking, allows them to record ideas and requirements, and makes it easy to cross-reference components as they design the activities that make up a learning experience. It offers both flexible and guided paths through the planning process, and provides access to a wide range of models, case studies and examples of innovative learning designs.

Phoebe has been developed by a team from the Technology-Assisted Lifelong Learning Unit at Oxford University and Oxford University Computing Services, with funding from the JISC Design for Learning programme.[1]

## How does Phoebe work?

Phoebe provides a simple authoring environment which allows the user to create learning designs from pre-defined templates. As the user works through a design they are supported by access to context-specific help, wider guidance and resources.

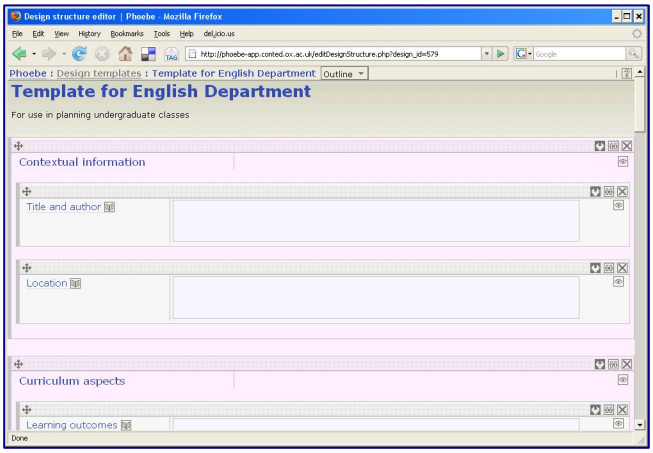



All learning designs created in Phoebe can be either kept private or shared with other users, and can provide the basis of, or inspiration for, other designs.

Currently, Phoebe outputs designs either in tabular format or as simple XML code that can be easily modified for a number of purposes.

## Customisation in Phoebe

Recognising that both individuals and organisations differ in their requirements and preferences, we have designed Phoebe to be customisable in two ways: through the creation of bespoke templates and the ability to easily adapt or replace the supporting materials.




**Templates** give users complete freedom to define the structure they require for their learning designs, whether to meet institutional requirements or to suit personal preferences. Phoebe includes three "built-in" templates, from which users can create their own.

Phoebe's **guidance and support materials** are maintained in a wiki which is independent of the planning interface. They can easily be replaced by alternative materials for specific groups of users, created either as additional pages in the Phoebe wiki or as an entirely separate set of Web pages.

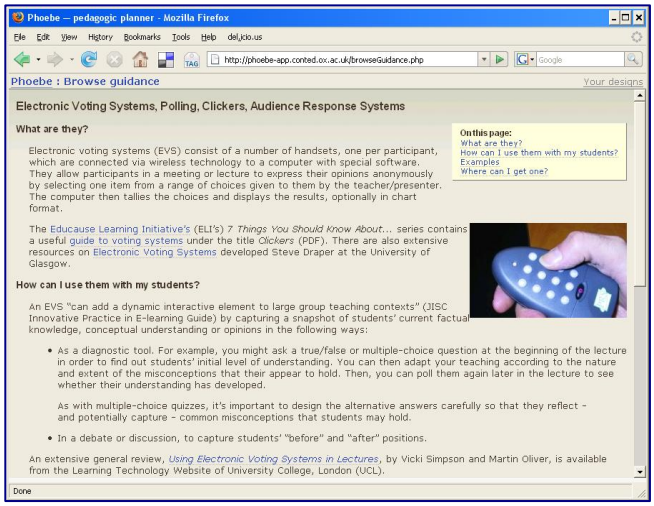
[1] http://www.jisc.ac.uk/elp_designlearn.html

## Towards a community of learning designers

Through its customisation features, and by providing access to a wide pool of shared designs, Phoebe has the potential to act as a focus for a "community" of learning designers. Since the tool does not yet contain the functionality needed to support such a community, key areas for investigation in this respect will include a more sophisticated "search" feature and richer forms of social ("Web 2.0") interaction, such as tagging and recommendations.

## What people are saying about Phoebe

Since Autumn 2007 we have introduced Phoebe to a broad range of practitioners at workshops on staff-development and teacher-training programmes. Here are some of their comments:




- "It's the first planning tool of its kind that I can actually imagine using myself and recommending to colleagues."
- "I think this is very much the future of teaching and it makes lesson planning easier in the long term."
- "Having so much information in one place is an invaluable resource, especially to those who are not IT aware."
- "Guidance notes were particularly useful for enforcing theory behind each field in the planner."
- "It makes me think about lesson planning in a more structured way and could be used to give more guidance to other tutors teaching the same module on different sites. It also acts as a reminder of exactly what I did, while the reflections section offers a reminder to note what worked well and what needs revision."

## Scenarios of use

Discussions with our evaluators have yielded a number of possible scenarios in which Phoebe might be used, including:

- An institution customises Phoebe in order to output plans in its in-house format, and to adapt the guidance so that users know exactly which tools they can use and the named individuals who can assist them.
- A subject centre customises Phoebe to support learning design within that particular domain: for example, to provide access to example learning designs for specific topics.
- A course team uses Phoebe in order to co-design, with students, a module of a Master's course in which students set their own learning objectives.

## Phoebe in the present and future

Designing a pedagogic planner tool poses considerable challenges. However, by rooting our design in field-based research, and by deliberately focusing on a limited set of functions that tap into the current working practices of many teachers, we have developed in Phoebe a tool that can be used now to promote effective practice in learning design. Moreover, through evaluating Phoebe in the field, we are able to track real-world learning design practice and thus use it as a proving ground for future, more sophisticated, tools.

## Further information

You can access the Phoebe tool at http://phoebe-app.conted.ox.ac.uk/.
For information about development, visit http://phoebe-project.conted.ox.ac.uk.
For all other enquiries, please contact phoebe@conted.ox.ac.uk.

# Scenarios of Use

## Introduction

In this document we explore a number of different settings in which Phoebe might be implemented, as well as the ways in which the tool might assist teachers (or students) as they tackle specific design challenges or seek innovative techniques and tools to use with their students. Generally, these aspects of use are supported by the current functionality in the tool; however, some look ahead to potential developments, both in Phoebe itself and in other, related, technologies that support teachers and students communities in post-compulsory learning. Some of these developments are envisaged in our Phoebe Development Roadmap.

The scenarios are derived from situations which we have uncovered during the research and evaluation activities of the Phoebe project; however, the characters themselves are fictitious.

## 1. Phoebe as an institutional tool

A team from a university's Geography department is designing a new undergraduate degree. The university has a mature approach to technology and curriculum design, with a student records system, automated room-booking service, VLE, an institutional repository containing examples of previous courses (including exemplar learning designs) and a locally hosted version of the Phoebe pedagogy planner tool. It has re-created its original paper-based templates for design at the course and module levels within Phoebe. Custom help is provided in each template to guide practitioners as through the design process at these top two levels. However, individual teams and lecturers are free to design their own templates for the actual learning sessions in the manner most appropriate to the subject and to their preferred teaching approach.

The course team starts by using the course-level template in Phoebe to create the documentation which is required for accreditation. As they work through this template they refer to the help, and also to examples of previous courses in the institutional repository. A direct link between Phoebe and the repository means that staff can search the repository without having to log into it separately. The contents of the repository can be searched not only by subject and level, but also by other institutionally meaningful categories that allow lecturers to easily identify examples of practice which may prove useful for them. Since the repository contains an increasing number of exemplar modules and sessions created in Phoebe, inexperienced practitioners are more easily able to understand how design relates to actual practice.

Once the course-level documentation has been approved, it is used to generate designs at the module level, laid out in the institutionally mandated module template. Essential data entered into the course design (e.g. course code, module codes and titles) are automatically propagated to these templates. The specification for each module can then be fleshed out, again using support and guidance within Phoebe and examples from the repository.

The next stage is to develop a template for the planning the individual sessions (lectures, seminars, practical work etc.). For this, the members of the course team decide to use one they already have in Phoebe for another course, so they simply clone that template and edit a few aspects of the context-sensitive help. Once they are happy with the template, Phoebe can generate a "skeleton" learning design for each session, using the codes, titles etc. that were specified in the module design and seeding each session plan with these and other information which is common to all sessions. These learning designs can then be completed as needed.

When the team has finished a complete set of module and session plans, these can be used to automatically generate course handbooks and feed into administrative systems such as the room-booking software.

***Commentary***

*This is an ambitious scenario, but one which is loosely based on a real institution. It will require three key developments:*

- *Support within Phoebe for design at multiple levels - in this scenario, three - and automatically propagate data entered into a design at one level upwards or downwards to the next level.*
- *The ability within Phoebe to produce a range of outputs: not just the learning design, but also course handbooks and, ideally, a skeleton implementation within the VLE. In addition, some evaluators have suggested that Phoebe might generate the formal documentation required for quality audits.*
- *Interoperability between Phoebe and other institutional systems, which has obvious implications for technical standards.*

## 2. Supporting subject-specialists

Elizabeth, a new lecturer in a university English Department, has been asked to redevelop a basic Linguistics module for a first-year undergraduate course. The task is particularly challenging as she has been told that students criticised the previous version of the module as "dull" and "difficult" – which may have accounted for their generally poor performance in the examination. Elizabeth therefore wonders whether there may be teaching approaches that would help her to offer them a more enjoyable and productive learning experience. She has been told that she must give at least two lectures during the ten-week module, but the remaining sessions can be taught in any way she wants.

Although Elizabeth knows the material well and has mapped out the topics that she needs to cover, she is unconfident about how to design the learning activities themselves. Fortunately, her HEA subject centre hosts a version of Phoebe which has been specially populated with exemplar learning designs. These have been created by lecturers for use with their own students and subsequently made available for general use. She types the subject of the first topic in the module into the "Search" box, which takes her to a page with several learning designs for individual sessions, together with their authors' reflections on how the sessions actually went. Browsing through the designs, she realises that one seems particularly suitable for her first-years, although a few changes might be necessary as her class will be slightly larger. She decides to use this design as a basis for her own, and so clones it.

Elizabeth also takes a look at the "Teaching approaches and techniques" section of Phoebe's guidance system for further ideas. She discovers that it includes some suggestions for making lectures more interactive. One of these is the use of voting to elicit students' understanding of a particular concept early in the lecture, so that the lecturer can, if necessary, modify her delivery "on the fly" to address any misconceptions that are exposed by the vote. Inspired by an illustrative case study on the same page, she then clicks a link to the associated guidance on voting tools and is delighted to discover some voting software that can be used with students' mobile phones. This technique could have great potential, but she needs to find out its feasibility from the technological perspective, and to gauge the level of interest among other lecturers. In the meantime, therefore, she will make do with voting by show of hands. Nevertheless, she bookmarks the page and makes a note to consult the departmental IT support staff and her colleagues.

Elizabeth then goes back to the design that she has cloned, and works through it, referring to the context-sensitive help as she goes along. This helps her to ensure that she has thought about everything she needs, from mapping activities to their associated learning outcomes, to making sure that there will be a data projector in the teaching

room. She has created her first learning design by adapting ideas from another person's design, and this has given her both a structure for her subsequent sessions and the confidence to create them on her own. She has also been inspired by a promising low-cost technology to maintain students' interest in lectures, which she can disseminate to her colleagues.

***Commentary***

*While one the major initial attractions of learning design was the ideal of "generic" learning designs (or practice models), it is clear that most practitioners gain the most from learning designs and guidance within their subject area, or one closely aligned to it. Working with a pre-existing subject group such as an HEA subject centre[1] could provide an ideal test-bed for investigating this dimension of Phoebe. Key questions would be:*

- *To what extent can the existing "generic" guidance apply to different subject domains, or is each domain too idiosyncratic?*
- *Do some teaching approaches (hence, Phoebe templates) lend themselves more naturally to certain domains and not to others?*
- *How do we identify, and assess the quality of, the exemplar learning designs to be included in the tool?*
- *To what extent does uptake (i.e. looking at designs for inspiration and/or repurposing them) justify the effort involved in sourcing and maintaining the collection?*

## 3. Promoting models of "best practice"

Westwick College runs a "Best Practice Models for E-learning" scheme that creates practice models (decontextualised learning designs) to help lecturers develop simple, effective e-learning modules for different groups of learners. One of the college lecturers, Richard, is responsible for providing a tool in which they can create learning designs from these models. He has been told that the tool must a) be available for staff to use at home as well as in the college, b) be low-cost, and c) provide a structured format in which to build the learning designs. Hitherto lecturers have created their plans in pre-defined tables in a word-processing document, and indeed this approach would meet the stated requirements. However, Richard has heard about Phoebe, which not only meets these three requirements, but can "add value" through its advice and guidance system.

To demonstrate that Phoebe is suited to the college's needs, Richard obtains permission to install it on a server at the college and creates a pilot model of practice for the college's postgraduate online learning courses. To do this, he creates a special template for the practice model in Phoebe by cloning one of the three built-in templates. He deletes the components he doesn't need and, where the college uses different terms from Phoebe, changes the titles of some other components. This takes care of the structured format, so the next stage is to adapt the advice and guidance system. There are two tasks here:

i) Log into the wiki which contains the default help and guidance, and edit these so that they contain information that will be relevant to all of the practice models that will eventually be created.

ii) Create new wiki pages for the context-sensitive help specific to the practice model for the PG online learning courses, and specify the URLs in the template. Then, when a lecturer clicks the "help" icon beside a particular component, she will receive advice directly relevant to that model.

Richard recruits some volunteers to evaluate the adapted tool by creating learning designs from this template, using the new customised guidance to assist them.

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[1] http://www.heacademy.ac.uk/ourwork/networks/subjectcentres

Participants' feedback is so enthusiastic that he is able to make a successful case for creating practice models for the other groups of learners.

***Commentary***

*One of the "hot topics" of discussion about design for learning has been the viability of models of practice: "common, but decontextualised, learning designs that are represented in a way that is usable by practitioners (teachers, managers etc.)."[2] This is an example of how Phoebe might support such models in a localised way.*

## 4. Providing a scaffold for trainee teachers

Guy is training to teach Business Studies at FE level. He has been asked to create a learning design for the first teaching session of his forthcoming internship, which he is to bring to the next class meeting, where students will critique each other's designs. The cohort has received some tuition in lesson planning, including an introduction to the Phoebe pedagogy planner tool. The tutor has asked them to use the "basic" template provided with Phoebe, which has an optional "wizard" overlaying it. The wizard consists of a sequence of questions about aims, objectives, learning outcomes, activities and other components of a learning design to guide students through the essential components in a structured manner. In addition, the tutor has asked students to make their designs available within Phoebe to the rest of the group so they can look at each other's work before the meeting itself.

Guy missed some of the lesson-planning sessions, including the introduction to Phoebe, through illness. He is therefore unsure what is expected of him. However, there are two ways in which Phoebe can help him. First, he can go to the "Shared Designs" page and have a look, not only at what his peers have done so far, but also at learning designs created by the previous year's Business Studies cohort. Second, he can use the "wizard" to get started with Phoebe and simultaneously create his learning design. Once he has the basic elements in place, he exits from the wizard and uses the context-sensitive guidance to flesh out the design. Guy thus successfully produces a complete design, and is confident that he can justify the decisions he has made about his teaching approach and activities to his tutor and fellow students.

***Commentary***

*Evaluations of Phoebe have suggested that the tool would be especially valuable for trainee teachers, both to support the general task of lesson planning (irrespective of whether technology is used in the actual learning session), and as a tool to encourage trainees to engage with e-learning in particular. However, trainee teachers will need more of a guiding hand as they work through Phoebe, which could be provided through a tutorial or, as envisage here, a "wizard" that would overlay the normal functionality but not impede the freedom of navigation currently enjoyed by expert users.*

## 5. Supporting continuing professional development

Annie is an Information and Learning Technologies (ILT) adviser with a major task on her hands: to encourage more of her teaching colleagues to embrace e-learning in their classroom teaching following feedback from an inspection. The complaints are familiar: lack of time to re-plan the lessons which they feel they have taught successfully for years, and few ideas how to use technology in their teaching other than by uploading resources to the college's underused VLE and illustrating their lectures with PowerPoint slides. However, the students in their turn have been voicing their own criticisms: they find the teaching uninspiring, and the phrase "death by PowerPoint" has been heard more than once.

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[2] Falconer, I., & Littlejohn, A. (2006). *Mod4L Report on Case Studies, Exemplars and Learning Designs*. http://mod4l.com/tiki-download_file.php?fileId=2 (accessed 2nd May 2008).

Annie realises that the problem is twofold: unimaginative approaches to teaching and reluctance to engage with technology. She racks her brains for a solution until she learns of Phoebe, a tool designed to address precisely these problems, but which crucially puts teaching first and technology second. It's also very easy to use, and therefore likely to be unthreatening to those lecturers who find computers difficult. As she writes in a position paper to the college's director of studies, "A teacher who is creating their first learning design in Phoebe is doing similar things to students when they are learning on the computer. When the teacher is looking up the guidance in Phoebe and then linking to examples in other parts of the Web, it is similar to the process that the students go through when they are searching for information for an assignment."

The director of studies agrees to Annie's proposal for a pilot CPD workshop in e-learning. The teachers who attend are sceptical at first, but gain confidence as they work through their first learning design and, by browsing through the "What can I do with?" pages, see how effective even the simplest online activities can be.

***Commentary***

*Annie's words are a paraphrase of an observation made by a Phoebe evaluator. CPD has been singled out as fertile ground for Phoebe, particularly through its emphasis on pedagogy before technology.*

## 6. Mediating collaborative design in small groups

An FE lecturer in Computing, Chester coordinates a large programme taught by five other lecturers as well as himself. He has been asked to redesign the course as the curriculum has changed to incorporate several new topics. To work out how they should fit into the current programme, Chester reviews all the learning designs for the programme in Phoebe.

As he reads through the post-session reflections in which tutors have recorded their current experiences of teaching these sessions, he realises that, in redesigning the course to accommodate the new content, they also need to review their whole approach to teaching the course. Chester therefore emails his colleagues to explain the situation and organise a face-to-face meeting to discuss the possible changes to content and approach.

During the meeting the tutors use the learning designs in Phoebe, projected onto the interactive whiteboard, as a focus for their discussions, and consult the guidance on teaching approaches in order to think about new ways to interact with their students. They also use the whiteboard software to map out a new structure for the programme that accommodates the new content, and also to brainstorm the teaching approaches and techniques that are likely to prove effective with their students. On the basis of this brainstorm, they draft a new learning design template for the programme session, which captures some of the pedagogical and structural norms they want to use in their programme in the future. They agree to go away and work individually on specific plans for individual learning sessions, share them through Phoebe and then confirm the programme changes in a follow up meeting.

They also agree to review the updated programme in two months' time to ensure that the new curriculum has been satisfactorily integrated and that the new teaching approaches and techniques are successfully addressing the problems they had identified.

***Commentary***

*Research in both the Phoebe project and its predecessor, the Learning Design Tools project, suggests that at least half of practitioners plan together with others, often by blending face-to-face meetings with electronic communication during which successive versions of the emergent plan are exchanged. We have noticed a movement over the past year or so towards the use of collaborative word processors such as Google Docs. It would therefore be advantageous for Phoebe to support group collaboration and the editing of learning designs by multiple authors.*

## 7. Supporting the lone practitioner

Frances is about to teach a new course in bookbinding as part of an adult and community learning (ACL) programme which is spread through a rural county in the west of England. The programme is administered in an FE college in the county town, but Frances' classes are held in a school in one of the outlying towns and she rarely goes into the college. Although a skilled bookbinder, Frances has had no formal training in teaching, but the nature of the subject means that she instinctively adopts an activity-oriented approach. She also knows that she must adhere to certain procedures, including RARPA,[3] and that she should be making use of digital technologies – although this is rather pointless, she thinks, given that bookbinding is a manual craft.

The teacher who was originally recruited to run the course pulled out at short notice, leaving the design of the ten-week course incomplete. So, despite her inexperience, Frances has to finish the lesson plans herself. All in all, she needs help urgently – but she will have to wait several months before the next induction workshop for new teachers at the college.

Fortunately, all the college's new courses are now planned in the Phoebe pedagogy planner tool. This means that Frances not only has a structure in which to work, but also guidance on the different aspects of her teaching either within Phoebe itself or through links to other online resources. For example, the help for "assessment" section of a learning design directs her to a Website where the mysteries of RARPA are revealed. She also notices a "Health and safety" section in the learning design, which explicitly prompts her of the need to conduct a risk assessment. As students will be using sharp instruments, Frances is grateful for the reminder.

However, Frances is still unsure how she can incorporate digital technology into her classes. She runs her eye down the list of tools on Phoebe's "What can I do with…" and alights on "digital cameras," which is one piece of technology she does know about. Intrigued to see how she might use it in her teaching, she clicks to the page on digital cameras and, under the heading "How can I use them with my students?", finds the suggestion that students photograph their work each week to record their progress, which they can write up either in Word or as a blog. This strikes Frances as a simple, yet effective solution to her dilemma, and she incorporates it into her learning activities. She can now face her first class with confidence.

***Commentary***

*Evaluators of Phoebe have been divided over whether a pedagogy planner tool can support lone practitioners like Frances, or whether it is best deployed as part of a structured training programme. Frances' case might be a little exaggerated in that most lone practitioners will probably already have teaching experience. Nevertheless, this is an aspect of use which we would like to explore further with our colleagues in the ACL community.*

## 8. Helping students to design their own learning programmes

The Master's course in Social Work at Midlands University includes a module "by learning objectives," in which students design their own learning plan in negotiation with the module leader, Hannah. This requires them to identify their learning objectives and map out the strategies by which they will achieve these objectives in terms of a) resources (people, places, equipment, literature, expenses) and b) activities (placement visits, conference attendance, practical skills, interviews, research). Each student then agrees the assessment method with the module leader (e.g. weighting, number of words, timings). The information is entered on a "learning agreement" form which is then printed for signature by the two parties.

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[3] Recognition and Recording of Progress and Achievement: http://www.niace.org.uk/Projects/RARPA/Default.htm

Last year Hannah converted the paper form to a Phoebe template, which entailed cloning the "Basic" template, deleting some components, changing the names of others and adding three "blank" learning activities. However, Hannah retained the "Reflection" section of the template, which the original paper form did not have. This now meant that students could record the outcomes of their learning experiences at the end of the module, in the same place as their original plan. Hannah also created some custom context-sensitive help to scaffold students' planning skills. At the end of the year, when students had filled in their reflections, Hannah selected several agreements that she thought would serve as inspirational exemplars for future cohorts. The students then removed sensitive identifying information from their agreements and made them available within Phoebe to the "Social Work" group only.

This year, now that she has some Phoebe-based learning agreements, Hannah has updated the context-sensitive help with illustrative links to relevant agreements, although Social Work students can still browse all of these agreements on the "Shared Designs" page. While browsing through this collection one of this year's students, William, comes across an agreement that covers similar ideas to his own. However, reading the "Reflections" section he discovers that the student who created this design encountered substantial problems getting the authorities to agree to his proposed research methodology. William realises that the same thing could happen to him and, since forewarned is forearmed, he takes steps to revise his own methodology before developing his sections of the agreement form any further.

***Commentary***

*With the trend towards active, reflective learning and student's control over how they learn it is important that Phoebe should be able to support learners as (co-)designers. A number of Phoebe evaluators have indicated interest in using the tool for this purpose.*

## Further information

Phoebe pedagogy planner tool (self-registration): http://phoebe-app.conted.ox.ac.uk/
Information about the development project: http://phoebe-project.conted.ox.ac.uk
Email address for all other enquiries: phoebe@conted.ox.ac.uk