



Design for Learning Programme Project Completion Report

Project details

London Pedagogy Planner (LPP)

A project headed by the London Knowledge Lab, Institute Of Education, University of London and London Metropolitan University

Project Website: <http://www.wle.org.uk/d4l/>

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This is the Final Report for Phase 2 of the LPP project, incorporating also findings and outputs from Phase 1.

Teachers have been finding the integration of 'new technologies' into teaching and learning challenging, because of the lack of support to carry out the experimental innovation needed. This project exploits the potential of digital technologies to build a collaborative online 'pedagogy planning' tool that supports educational practitioners in developing and sharing learning design expertise, with enough flexibility to create learning designs that are conventional, blended, or wholly digital. The London Pedagogy Planner (LPP) is a prototype being developed based on educational practitioners' requirements, who can also test the extent to which LPP takes them beyond their current practice. This iterative 'design – test – redesign' process enables us to understand how best to support the development of new pedagogies that make use of Technology Enhanced Learning (TEL). To enable practitioners to engage in their own discovery of how best to use TEL, LPP focuses on the critical aspects of learning designs, and makes the pedagogical design explicit, capturing it for testing, redesign, reuse and adaptation by the originator, or by others. In this way the planning tool helps practitioners to be 'reflective' and become part of the educational community that engages in collaborative exploration of new forms of learning design.

Keywords: Learning design; pedagogy; technology enhanced learning; visual representation of pedagogy; cost of e-learning

Acknowledgements

JISC Design for Learning (D4L) programme is the major funder of this project. The LPP project team acknowledges the strong support given by JISC throughout: Sarah Knight for liaising and coordinating, Helen Beetham for sharing her significant points of view, JISC CETIS and Warwick Bailey for technical advice, and Glenaffric for their helpful evaluation feedback.

The project has benefitted from funding from the Centre for Distance Education (CDE) Teaching and Research Programme project which provided the opportunity to extend the work of this project to working with lecturers from the Institute of Education (Will Gibson, Martin Oliver, and Hugh Starkey); London School of Economics (Steve Ryan, Matthew Lingard, Phil Cook, Herve Didiot-Cook and Leslie Haddon) and Royal Veterinary College (Kim Whittlestone). These lecturers have helped to specify the requirements for a pedagogy planning tool in this wider range of HE contexts, also included as partner institutions here. We have also been able to run



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a user requirements workshop with colleagues at Thames Valley University, through Lyn Greaves, who is planning to use our work in her own JISC project.

We also acknowledge the contributions of those who have helped in the earlier stages of the software development: Darren Pearce and Kevin Walker, both at LKL.

Executive Summary

The London Pedagogy Planner (LPP) is a prototype for a collaborative online planning and design tool that supports lecturers in analysing, developing and sharing learning designs. LPP is based on a developing model of the components involved in learning design (e.g. learning outcomes, topics, teaching methods), and the critical relationships between them. As a decision tool, it makes the pedagogical design explicit as an output from the process, capturing it for testing, redesign, reuse and adaptation by the originator, or by others.

The aims of the project were to

1. support lecturers in HE and FE in the diagnostic process of identifying learner needs, designing learning activities, and assessing learning outcomes;
2. enable effective and innovative use of learning technologies within existing institutional contexts;
3. understand the requirements of the academic community who wish to build and share pedagogically innovative materials.

The project has attempted to meet these aims by exploiting the opportunities offered by digital technology to develop a Pedagogy Planner with practitioners.

The LPP project has reviewed and identified several ways of representing learning designs, and the decision-making process, in the form a support tool (see San Diego et al., 2007 for details). We have adopted an iterative user-oriented approach to collecting development requirements in order to embrace the different approaches teachers use to think about learning designs. The development of the learning design support prototype incorporates the following features:

- planning at different levels of granularity – activity, session, module, programme;
- customisation of terminologies to adapt to local institutional requirements;
- consideration of teacher time and learner time as significant parameters for learning design;
- updating of information in all stages after changes made in any one stage;
- externalising decisions made in designing through visual representations.

The agile method of development included iterative phases of design, development and evaluation (Boyle, 2008). A technical team responsible for the development of the tool met regularly to discuss design issues emerging from trials with lecturers, and to decide design priorities to address them. Each version was released to the project team through a 'Google group' site for discussion. This site is where we prioritised and made suggestions for changes, and raised further design issues. The site served as a way of documenting the features for each release, the discussion of results, and the record of successive versions.

A Java prototype for module planning has been implemented at a basic level of functionality. A version of this prototype is now available for the JISC R&D community to trial at



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<http://code.google.com/p/londonpedagogyplanner/downloads/list>. We have also invited others to contribute to the development of specific functionality by making it available as open source.

The form of the tool is generated from theoretical design frameworks, such as the Conversational Framework, from interviews with lecturers from partner institutions (IOE, London Met, Royal Vet College, and LSE) about their approaches to learning design, and from observation and discussion at user workshops, at different stages of the prototype development. The evaluation was further supplemented by workshop feedback sheets, and questionnaire feedback from JISC workshops.

Throughout the second phase of the project (March 2007 to February 2008), we have been in contact with the Phoebe Planner Project, with a view to cross-linking the two tools. We are aiming towards integration of the Phoebe Planner and LPP, to build a more comprehensive online collaborative learning design system.

Dissemination of the philosophy and aims of the LPP, and the general requirement for new forms of design tools for teachers, has been carried out through presentations to conferences and seminars, in the UK and overseas (see Dissemination Activity).

Project outputs

The following table shows the variance between the types of outputs set out in the project plan and the list of project outputs:

Planned outputs	Project outputs
A fully-tested integrated Planner tool, linking Module planning, Session planning, and the design of learning activities in LAMS, with existing learning activity examples, case studies, and resources relevant to the target curriculum area	A fully-tested Module planner has been developed, and can be downloaded at http://code.google.com/p/londonpedagogyplanner/downloads/list Session planner – uses the same functionality as the Module planner A storyboard for integrating with tools for ‘runnable’ learning designs e.g. LAMS, can be found at http://www.wle.org.uk/d4/ Examples of Module designs can be found at http://www.wle.org.uk/d4/
An evaluation report on the usability of the tools within selected curriculum areas, at both university and college sites	Results on workshops conducted with lecturers from London Metropolitan University, Coventry University, Thames Valley University, and the Institute Of Education, are available at http://www.wle.org.uk/d4/
A user requirements specification for a mainstream open source pedagogy planning	LPP Functionality Spec – available from http://code.google.com/p/londonpedagogyplanner/ Design issues published in ALT- J (see San Diego, J. P., et al.,



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Planned outputs environment

Project outputs (2008)

Issues log and progress of development available at <http://code.google.com/p/londonpedagogyplanner/>

Dissemination outputs in the form of workshops for the D4L programme, presentations to seminars and conferences, at least two journal papers, and web-based dissemination through existing networks (CETLs and Kaleidoscope) and open archives

Several presentations of the project in keynotes, panels, and workshops (see Dissemination Activity section for a detailed list).

Meetings and sharing of outputs with: Glenaffric, JISC Cetis, Liverpool Hope, Phoebe, Sharing the Load, LAMS round-table, and the JISC program meetings.

The project website is available at <http://www.wle.org.uk/d4l/>.
Tim: please add stats on hits, visits.

Online collaboration support tools for software development are available at <http://code.google.com/p/londonpedagogyplanner/>.

Additional project outputs

The involvement of LSE through the CDE project enabled us to consider linking to the learning design tool 'Criterion', developed within the JISC-funded 'Digital Libraries in the Classroom' project. We have also collaborated with the 'Sharing the Load' project to work on integrating the 'GLO maker' tool as a way of representing and instantiating a learning design.

The development of a 'pedagogy planning process diagram' has been useful for illustrating the full context of the process, of which the current functioning prototype is a part, and for differentiating Module, Session and Activity planning. The diagram can be downloaded from the website (publications: storyboards).

The iterative design process has generated a deeper conceptual analysis of layers of learning design, which can be thought of as a similar set of design decisions and modelling at each layer of description of the learning process, from degree programme to learning activity. However, we also need a structurally different form of description of pedagogy to capture the internal relationship between learner, activity, learning content, and learning outcome. This is where analytical design gives way to creative design and exploration. Some of these issues are discussed in the ALT-J paper, and will be taken further in forthcoming publications.

There is an initial draft for an LPP UI Specification. This is unfinished, as it is likely that further development will make use of existing interface design components, based on the current functionality requirements, as well as further requirements needed.

The two pedagogy planner projects, together with members of the CDE project team have been fortunate to secure research funding from the EPSRC/ESRC (the TLRP/TEL call) for a research



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project on building a 'Learning Design Support Environment' (£1.5m funding for three years). This project will focus on building an interdisciplinary research understanding of how digital representations of learning theory and learning design can contribute to both computer science and education. As part of this process we will develop further specifications for the integration of LPP and Phoebe in a single online environment.

Project outcomes

The extent to which the project met its objectives is discussed in detail below.

The project has identified approaches to learning design and their specifications for a planner, collected from lecturers at partner institutions (IOE, London Metropolitan University, Royal Veterinary College, and LSE). Alongside this, we reviewed existing planners (e.g. DialogPlus, Lesson Planner™, JISC Effective Planner, Pattern Annotated Course Tool, LAMS planner), and previous research about ways of representing learning designs and teachers' approaches to learning designs (e.g. Conole et al., 2004, JISC, 2004, Inglis and Bradley, 2005, Masterman and Manton, 2007). The main challenges to developing a reasonably comprehensive learning design support tool were categorised as e.g. pedagogic, contextual, cultural, social, representational, and technical (for a detailed description see San Diego et al., 2008). We conclude that all these issues must be addressed by a pedagogy planning tool. Based on the above user requirements and the review of previous tools and research, the LPP project identified a comprehensive list of learning design system features as:

- Multi-level planning i.e. *course, module, session, activity, learning object*;
- Flexible starting points and editing at any stage, adaptable to users' needs;
- Ease of use and simple manipulable learning design components;
- A way of capturing the context of learning design that can be easily understood, interpreted, evaluated and *shared*;
- An instantiation of learning designs as a sequence of learning activities;
- Support for teacher-collaboration;
- Alternative forms of external representations, giving lecturers the option to work with structured text or concept-mapping representations;
- A way of ensuring coherence between each of the components of learning designs such as topics, outcomes, methods, tools, staff resource, and student workload.

The project adapted a user-oriented agile method of development, involving iterative phases of design, development and evaluation with users taking a significant part of the development process (Boyle, 2008). A technical team responsible for the development of the tool met regularly to discuss design issues emerging from trials with lecturers, and to decide design priorities to address them. Online collaborative tools for developing software and documentation were used to record and negotiate design decisions and further plans (Google technologies e.g. Google groups and Google code).

The development of the current LPP prototype built on the previous 6 versions of the Module planner in its Excel format, and 8 versions in its Director format. The pedagogic design process within the Session planner has been developed through 6 versions of a storyboard in interactive



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PowerPoint. These iterations enabled us to establish the feasibility of the structured, analytical approach to learning design and to test the way lecturers were able to change their thinking about learning design through an interface design that provided a greater degree of scaffolded decision-making, visualisation and flexibility.

In parallel with the prototype development, the project developed an analysis of the data-structures needed which would provide the required flexibility and efficiency for lecturers, and that would also allow us to explore different forms of representation of the learning design process. One example is how to support coherence between design decisions by enabling the user to link any two sets of components, such as aims and outcomes, and what kind of guidance should be offered in support. As another example, the database structures make provision for adapting user-defined terminologies based on personal or institutional requirements, and for this customised data to be inherited across levels and stages of the design. Each decision overwrites default data or earlier decisions, and each stage calls on the most recent entry for that data item – i.e. data entered at one stage, such as a selection of teaching methods, will appear at any stage where relevant, thereby enabling users to begin at any stage in the design process. This flexibility is essential, because lecturers continually iterate between the different levels of granularity of their learning design, and have different preferences for where to begin.

Each level of granularity is an aggregate of components at the next level: 'modules' consist of 'sessions', which consist of 'activities', which consist of 'learning objects'. The generic data structure means that we can offer users maximum flexibility in the way they approach the design, beginning the data input and decision-making at any level of description (e.g. module or session), and iterating between stages within a level (e.g. selecting teaching methods and deciding on how learning outcomes will link to teaching methods). The decisions made at any point will be available to all the other decision points – for example, if a teaching method is added at the point of linking methods to outcomes it will automatically be added to the list of teaching methods previously selected. The tool behaves in an intuitively intelligent way in support of the learning design process.

Taking the user-defined features, the identified database structure, and the information gathered from previous research, the tool has been developed in Java to support offline as well as online planning and analysis of learning design. The move to the third prototype in the first part of Phase 2 has been time-consuming, but promises to be very worthwhile in the long run. This development takes the project to a different level of tool design, making it open source. The project has faced some problems in terms of managing the level of funding acquired in developing a prototype with at least the minimalist user-defined requirements but at the same time with enough functionality for users to try out. The development of the tool has also been affected by changes in staffing (in all, five different people have worked on the design at different stages) – a risk that had been foreseen, because the funding was only sufficient to employ part-time developers. The turn-over of developers set the project back because of the time taken for handover of 'codes' and development documentations.

In spite of these problems, the project has been able to release a module planner that integrates, in prototype form, most of the user requirements. The prototype has been tested with lecturers from three different universities (London Metropolitan, Thames Valley and Coventry), in the form of collaborative workshops. The workshops included storyboard testing, and hands-on use of the LPP prototype for both module and session planning. Records of observations from hands-on interactions, worksheets, and observation notes with the prototype and



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storyboard generated the main issues that are being addressed by the pedagogy planning tool. Further testing with other groups are planned, given their continuing interest.

Developing user requirements

The idea of a digital learning design tool is unfamiliar to most lecturers, so it is not possible to ask them about their requirements for such a tool in advance of them experimenting with one. Early interviews identified Word as the most likely design tool to be used, with only occasional reference to concept mapping tools. From the initial prototype onwards, the project has been able to develop user-defined requirements from users reflecting on their experience of its functionality. User requirements therefore continue to evolve every time a functionality is tested with lecturers.

Users have always positively acknowledged the need for a learning design support tool that scaffolds and outputs their decision-making as visual representations, as the evaluation results show. Furthermore, once users experience this approach through LPP, they generate more innovative requirements than the ones previous users have identified. This suggests that as we aim to digitise an approach to learning design, users have a critical role in the process, and the tool enables them to contribute to a now developing view of learning design practice.

The project aimed to use existing learning designs generated in the D4L programme; but access to well-developed, proven, learning designs, and learning design templates has been difficult. These would have enabled us to see more clearly the nature of the end point we have to support academics in working towards. It is an inevitable problem of the timing of the different strands in the programme. As the programme is now coming to an end, we should be able to incorporate the design ideas implicit in other learning designs in our list of requirements for the LPP.

The list of user requirements for a tool of this kind is an output of the project, now available from the website as the 'LPP Functional Specification'.

Embedding pedagogic theory

The project used existing pedagogic design frameworks based on the Conversational Framework (Laurillard, 2002). Any future development of the LPP will need to embrace other alternative, or compatible pedagogic frameworks, depending on the form of representation they require. For the Conversational Framework, for example, it is instantiated in the tool at the 'teaching methods selection' stage, where the user is asked to select from a given list of teaching methods, and allocate the total learner time (e.g. credit hours) over the selected methods. The tool returns an analysis of the resulting learning experience in terms of the five types of cognitive learning activity required by the Conversational Framework: attention, inquiry, discussion, practice, and production. An alternative analysis could be done, for example, for the four types of learning activity required by the Kolb Learning Cycle. Later, at the Session Level, the user is asked to evaluate a sequence of learning activities against a checklist of ten more detailed requirements of the Conversational Framework, such as "Does the design motivate the learner to repeat their practice, by enabling them to share their trial actions with peers, for comparison and comment?" – where each item is generated from the dynamics of the framework. An alternative framework would probably generate a different checklist. For some learning theories an entirely different kind of analysis would be necessary, which would require more substantial development of functionality.



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Within the project timescale it has only been possible to represent one type of pedagogic design principle, but this is a proof-of-concept that demonstrates the feasibility of implicitly incorporating a pedagogic theory in a tool so that teachers may approach learning design in an alternative, theory-informed way.

At each stage of the design process the tool offers the opportunity to link to other resources, so that teachers can build on existing design ideas, research, and case studies. In this way alternative approaches to learning and teaching can be directly accessed by users.

Evaluation outcomes

In the workshops conducted to date, there has always been a warm response to the idea of the LPP tool. Altogether, 50 out of 59 (85%) of the participants/respondents see the pedagogy planner as a worthwhile development; 1 disagreed; 8 were uncertain or gave no response. About 50% of the respondents are willing to be contacted for future user testing.

Users need a high quality interface, which the current prototype does not have, although we benefited greatly from their tolerance and acceptance of a poor interface design in the context of a prototype. The positive features of the LPP that encourage them to use it are:

- Flexibility to work iteratively between different levels of learning design
- Visual representations of the consequences of design decisions, and of the overall representation of the Module or Session
- Checks on coherence between learning components such as aims and outcomes
- Seeing the consequences of design decisions makes it a good reflective tool
- The potential for collaboration on design with colleagues
- Useful help and guidance, especially for newcomers to teaching
- Being able to link the design decisions to local repositories
- The record of a design that makes its pedagogy explicit.

Some of these points were echoed in the post-workshop survey conducted by JISC, after the workshop on the pedagogy planners. In addition, participants valued: the potential to improve the quality of learning and teaching, to foster reflection and collaboration between teachers, and to improve teacher efficiency. Reasons for not endorsing the idea were because it might be inflexible, and was unnecessary as the tools exist already. Unfortunately, we have so far found it difficult to identify the tools that practitioners refer to.

Additional developments suggested for the future are:

- A version to help students with their own planning
- Support for teaching for standard learning outcomes, e.g. cross-mapping to key skills
- More background information on the theory behind the design decisions
- With links to other institutional systems it could provide an input once-only system
- More, clearly defined, building blocks to work with
- The option to add locally-defined teaching methods.

Negative features, apart from the interface, were all related to a concern that the LPP would not be flexible enough, or too constraining:

- Lack of customisation
- Should not be a “reductionist” tick-box approach, but encourage reflection
- Should not be used for QA, but for quality enhancement.



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The full list of requirements is being recorded in the Issues Log, and is represented in storyboards not yet implemented in the Java tool. The developer time needed for such a tool far outstrips the ease with which new requirements are generated.

Integration of LPP with Phoebe

The vision is to offer a state-of-the-art digital learning design support tool. The JISC-funded planner projects (LPP and Phoebe) have been actively working towards data compatibility and two-way links. Members of both project teams regard the projects as mutually complementary. Phoebe provides a strong resource bank of conceptual guides, whereas the LPP displays multiple dynamic numerical and graphical representations of a learning design. Integration works currently on two levels: the LPP links to relevant sections of the Phoebe guidance materials where appropriate, and Phoebe passes users to the LPP for more explicit design and planning decisions once their ideas have been clarified. We recommend the continuation of the development of a learning design system that takes the two planners into different levels of user-engagement, community-engagement and practice.

Integration

It is expected that plans generated in LPP can provide a helpful visualisation of learning design requirements for 'executable' learning designs in other tools. Those currently being investigated are (i) the Generative Learning Object tool, being developed at London Met to provide a link between the higher planning levels in the LPP tool and the more specific executable and modifiable learning designs at the GLO level, (ii) LAMS, a learning activity management system where a session can be instantiated as a sequence of individual and collaborative online activities, and (iii) the 'Criterion' tool, developed with JISC funding at LSE, and designed to support a collaborative learning activity which can be adapted to subject areas beyond its original context. Initial work has been done to integrate LAMS, the GLO tool and the Criterion Tool, which has brought together theoretical frameworks, tools and environments in the light of user requirements. Various pedagogic ideas have been embedded within LPP, which is storyboarded to be implemented as a LAMS sequence, or similar, in a way that scaffolds lecturers' design of learning for their students, and enables them through implementation to discover more about their students' learning.

Project team members

Prof. Diana Laurillard is the Principal investigator project leader of LPP; designs the basic functionality and pedagogical input of LPP; now continuing this work as PI for a TLRP/TEL-funded project developing a 'Learning Design Support Environment' (LDSE).

Prof. Tom Boyle is the co-Investigator and leads the development of the GLO tool (Generative Learning Object), which will be linked with the LPP; develops the design of hierarchies and layers of learning events and their representation; now co-investigator on the LDSE project.

Jonathan P. San Diego is the project manager whose primary roles include investigating ways to represent learning design in the LPP interface, conducting user-experience studies, evaluating lecturers' feedback of the functionality of LPP and use of representations; now working as RF on the TLRP/TEL 'Phantom' project at Kings College London.



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Claire Bradley is the evaluator, identifying lecturers' requirements, and collects user evaluation data from interviews and user experience studies and seeking relevant learning patterns in other D4L projects; now working on the JISC-funded project BL4ACE at Thames Valley University, which plans to make use of the LPP and carrying out evaluation studies for the RLO-CETL.

Tim Neumann is the Website manager and establishes links with Phoebe and other D4L projects and connections to relevant online repositories; now working on the LDSE project, and leading on pedagogy in the JISC-funded APT STAIRS project (Appropriate & Practical Technologies for Students, Teachers, Administrators and Researchers).

Dejan Ljubojevic is a project researcher working on links to supporting resources, learning patterns, case studies, learning design tools, linking to the CETL-RLO and other JISC/HEA sites; now continuing to develop learning designs through the GLO tool to be linked with the LPP.

Yishay Mor is the current lead LPP Programmer, responsible for designing and implementing interface options and lecturer-defined functionality, and for managing the Google-code site; now working on the JISC-funded Learning Patterns project.

Dissemination activity

LPP has attracted different audiences not just from education but also from Computer Science and the Learning Sciences. Several publications and presentations, peer-reviewed and non peer-reviewed have been given in the UK, and at international conferences. We have published three papers in: *Studies in Higher Education*, *ALT-J*, and *Higher Education*; conducted five workshops with lecturers in four different universities in the UK; and the Principal Investigator contributed a chapter in the Carnegie Foundation book 'Opening Up Education', and has given numerous keynote talks and presentations about the work of the project and its underlying theory.

Book chapter

Laurillard, D. (2008). Open teaching: The key to sustainable and effective open education, in *Opening Up Education: The Collective Advancement of Education through Open Technology, Open Content, and Open Knowledge*, Toru Iiyoshi and M. S. Vijay Kumar (eds), MIT Press.

Journal papers

Laurillard, D. (2008) 'The teacher as action researcher: Using technology to capture pedagogic form', *Studies in Higher Education*, 33(2), forthcoming.

San Diego, J. P., Laurillard, D., Boyle, T., Bradley, C., Ljubojevic, D., Neumann, T., & Pearce, D. (2008). Towards an analytical approach to learning design. *ALT-J*, 16 (1), 15-29.

Laurillard, D. (2007) 'Modelling benefits-oriented costs for technology enhanced learning'. *Higher Education*, 54, 21-39.



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Conference keynotes

Keynotes given by Prof. Diana Laurillard

'E-learning for teachers: Why? What? and How?', West Sussex Teachers Learning Day, March 2008.

'The case for making 'teaching' more like 'research', SRHE Conference on Reshaping Research and Teaching, Brighton, Dec 2007.

'The pedagogical challenges to mobile collaborative technologies', Computer Supported Collaborative Learning Conference, Rutgers University, July 2007.

'Learning Design as a foundation for the future success of e-learning'. European LAMS Conference, University of Greenwich, July, 2007.

'Collaboration between standards-makers and practitioners in Learning, Education and Training', Global Leadership & Governance of ICT standards for learning, education & training, London, March 2007.

'Pedagogic Planning Support for Lecturers', First International LAMS Conference, University of Sydney, December 2006.

'Working with and Learning from Pedagogical Expertise', MERLOT International Conference, Ottawa, August, 2006.

'Effective Learning Technology Design: Engaging the Professionals', 4th International Lifelong Learning Conference, Central Queensland University, June 2006.

Conference presentations

Laurillard, D. (2008) 'Enabling faculty to move forward the agenda: Tools for learning design', Open Learning Initiative Conference, Carnegie Mellon University.

Laurillard, D. (2007). Teaching as a learning process: the key to sustainable and effective open education. OpenLearn Conference, The Open University, Milton Keynes.

Laurillard, D. (2007). 'Technology and the Transformation of Learning and Teaching', at the Becta Seminar: How must educational practice change? RSA, 12 October 2007.

Laurillard, D. & San Diego, J. P. (2007, June). Development and testing of a 'Pedagogy Planner'. Centre for Distance Education (CDE) Fellows Conference, Institute Of Education, University of London.

Walker, K., Boyle, T., Bradley, C., Laurillard, D., Neumann, T. and Pearce, D. (2007) Introducing theory to practice in pedagogical planning. CAL 2007 conference, Dublin, 27 Mar 2007. This presentation was part of a Symposium titled 'Designing for Learning - revolution or evolution', which included other projects in the JISC Design for Learning programme.



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Other presentations

Laurillard, D. 'Digital technologies and their role in achieving our educational ambitions', Inaugural lecture, Institute of Education, February 2008.

Laurillard, D. 'The teacher as researcher: Using learning design to move to blended learning' University of Oxford, Nov 2007.

San Diego, J. P. and Mor, Y. London Pedagogy Planner. JISC Design Bash and Experts' meeting, Birmingham, 23 and 24 October, 2007.

Laurillard, D., Boyle, T., San Diego, J. P., and Ljubojevic, D. Pedagogy Planners Round-table discussion, London Knowledge Lab, 6 July 2007.

San Diego, J. P. & Laurillard, D. 'A Planner for learning analysis and design', LKL Open Day, London Knowledge Lab, 18 July 2007.

Neumann, T., 'Shifting from Content-centered to Activity-centered Instructional Design', joint presentation with Allan Carrington and Cynthia Russell, eLearning Guild Online Forum on 'New Techniques and Strategies for e-Learning Design', 17 August 2007.

Laurillard, D. and Mellar, H. (2007) Learning design tools to support practitioners' innovation with learning technology, Seminar at BETT 2007.

Laurillard, D. (2007) 'E-learning in Higher Education, Max Weber Doctoral Programme, European University Institute, Florence, 8 March 07.

Laurillard, D. (2007) 'E-Learning in Professional Education, UNESCO Institute for Water Education, Delft, 26 March 2007.

Laurillard, D. (2007) 'The teacher as researcher: Making pedagogic design part of the move to blended learning' ICT and Education Seminar, University of Cambridge, 6 March 2007.

Laurillard, D. (2007) 'E-Learning in Higher Education, Russell Group Learning and Teaching PVCs, University of Edinburgh, 20 March 2007

Workshops with Lecturers

Laurillard, D. & San Diego, J. P., 'Designing and testing a Pedagogy Planner', Coventry University, 5 March 2008,

Laurillard, D., San Diego, J. P. & Bradley, C., 'Designing and testing a Pedagogy Planner', Thames Valley University, 11 February 2008,

San Diego, J. P., Neumann, T., Bradley, C., Ljubojevic, D., & Cohen, U. 'Designing and testing a Pedagogy Planner', London Metropolitan University, 24 January 2008,

Laurillard, D. & San Diego, J. P., 'PREEL Workshop: Pedagogy Planner', London Knowledge Lab, 30 March, 2007.



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Laurillard, D., San Diego, J.P., Pearce, D., Neumann, T. & Ljubojevic, D. 'Pedagogic Planning', London Metropolitan University, 20 June 2007.

Laurillard, D. Workshop for lecturers: 'Working with and learning from educational practitioners', NIACE conference for e-Mentors, March 2007.

Synergies

LPP has established an active link with Phoebe (Oxford). The two planners have been working towards data compatibility and interlinks. Both projects regard themselves as mutually complementary. Phoebe provides a strong resource bank of conceptual guides, whereas the LPP takes the user through a series of design decisions, and displays their consequences in multiple dynamic numerical and graphical representations of their learning design. Integration is on two levels: the LPP contextually links to relevant sections of the Phoebe guidance materials where appropriate, and has developed similar learning design output formats so that, to some extent, the designs can be displayed and altered in both planner tools.

Diana Laurillard attended the CETIS meeting at Liverpool Hope University on 26 April 2007, and gave a demonstration of the Director Prototype with storyboards for developments in Java. Plans for further development were discussed.

Veronica Adamson and Jane Plenderleith of Glenaffric Ltd with Sarah Knight, JISC Programme Manager met with the project members on 3 July 2007, at the London Knowledge Lab. The project members demonstrated a working prototype in Java and discussed Phase 2 progress and plans for user testing. As a result of the meeting, the team was encouraged to produce specifications for further development and sustainability plans. The evaluators clarified the intention of the system development from Java standard edition to a system using Java Enterprise.

Four members of the team joined a Pedagogy Planner round-table discussion sponsored by LAMS International. This was held in connection with the European LAMS conference. The meeting took place on 6 July 2007 at the London Knowledge lab. In this meeting, several members from the D4L programme were present. There has been a unified understanding of the value of a Pedagogy Planner.

The team contributed slides and information for Helen Beetham's presentation to the September 2007 meeting of the JISC Learning and Teaching Committee on pedagogy planners.

There was a strong link with the Sharing the Load D4L project. They have part funded the GLO tool reusable learning designs that can be accessed and used by the LPP (e.g 'Evaluating Multiple Interpretations'). This provides an example of different parts of the D4L programme linking up in a way that will interest JISC.

The project team has made contact with several projects in the D4L programme, to exchange software and ideas – Phoebe, Mod4L, SLED, ALED, D4LD, C2Learn, eLIDA and Sharing the Load.



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Sustainability

Further development of the tool through JISC funding would be highly desirable, given the warm reception from users, and the lack of any digital support tool for academics wishing to explore the use of new technologies. The development task is substantial, if the potential of the tool is to be realised for HE and FE alone. It is possible that commercial involvement would provide a more stable development context, but at present our focus has been to enable the developer community within JISC to have access to the prototype, in the absence of a longer term strategy.

In the short-term, funding to integrate LPP and Phoebe, improve the usability and documentation, and complete the initial functionality would be highly desirable, as this would enable other institutions to take the development further.

Now that the user requirements are clearer, further development will need to re-build the software environment using available libraries, public/ in-house schemas/standards and software platforms, as recommended by Warwick Bailey in his review of the project.

Exploration of contrasting learning contexts, and of the synergy between pedagogic theory and practice catalysed by a 'learning design support environment', will be taken forward through the LDSE research project.

Continuing user-experience evaluations will be possible through feedback from take-up by other projects (e.g. TVU), and universities (e.g. Coventry).

Maintenance of the LPP website <http://pedagogyplanner.org.uk/> at the London Knowledge Lab will support the:

- open source development community
- community of researchers researching users/uses of LPP
- community design specifications.

Key messages

While there are many issues still to be resolved, for example, how to represent alternative learning theories, how to establish a unified understanding of the terminologies related to learning design, how to offer a choice of representation, how to track ownership of shared designs, etc., it is clear that this style of pedagogy planner is providing an effective way to explore these issues. The lecturers who have tried LPP can see its potential and endorse the need for an online collaborative learning design tool.

This research will help to inform design-based research as we hope that this tool will aid teachers to be researchers in their own classroom. We are exploring ways in which teachers can generate research data from the use of the tool to test their practice as represented in the form of their design. This is possible by extending the functionality of the tool so that teachers can feed back what has transpired during their teaching into the LPP, and can analyse their inspirational design in comparison with what has transpired.

Pedagogy planning has opened up a range of research questions. There is a need to host a community of users, researchers, and designers in order to meet the iterative and continuing



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user requirements. With the user-oriented approach adopted in developing LPP, we envisage a collaborative open source/resource/research/users community for developing pedagogy planners.

The major aims that still remain are: to develop an online collaborative support system that meets teachers' needs and aspirations that encourages exploration, adaptation and improvement of TEL and pedagogy; to adapt this system for local use so that through the experience of planning learning, analysing design decisions, and sharing resources and pedagogic design, the educational community can build a collective understanding of learning design.

It is an ambitious and complex vision, and needs considerable further funding for both research and development. The seed funding provided by JISC provided an extremely valuable initial phase, which has demonstrated the proof of concept through the enthusiasm of lecturers for a design support tool of this kind. Further funding will continue to be sought through other research and development funding opportunities.

If and when the LPP tool is developed on a larger scale, design decisions that have been captured and explored at this stage of prototyping will be invaluable for the rapid development of such further systems; even if the same code is not used, the design remains valid and useful.



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Financial Statement

The final budget statement for Phase 2 is attached.

In the early stages of Phase 2, Andrew Logue resigned from LAMS International and was not replaced. The funding for a consultant was vired to provide additional funding for programming.

All other costs were invoiced as planned.

All the project team members spent more time on the project than was budgeted for, which came from institutional funding. In addition, further funding was needed for programming time in order to maintain the delivery of the prototype functionality, following several changes of staff. This was covered by London Knowledge Lab research funds.



Design for Learning Programme

Project Completion Report

JISC Pedagogical Planner Extension - Final budget - Feb 2008			
Project dates: Mar07-Feb08 (1 year)			
Code: BHW5			
Institute of Education			
<i>Directly Incurred Costs</i>			
Staff	Money available	Day rate	Days
Tim Neumann (7, 32)	[REDACTED]		
Jonathan San Diego (6, 28)	[REDACTED]		
Darren Pearce/Yishay Mor (7, 36)	[REDACTED]		
Travel Costs	£1,600		claimed directly by researcher
<i>Directly Allocated Costs</i>			
Staff			
MST	[REDACTED]		
Diana Laurillard	[REDACTED]		
Sophie Covey-Crump (6, 32)	[REDACTED]		
Elizabeth Andrews (6, 23)	[REDACTED]		
CLC	[REDACTED]		
Will Gibson (8, 42)	[REDACTED]		
A&H	[REDACTED]		
Hugh Starkey	[REDACTED]		
Consultants			
Andrew Logue	[REDACTED]		
Estates			
MST	[REDACTED]		
CLC	[REDACTED]		
A&H	[REDACTED]		
Indirect Costs			
MST	[REDACTED]		
CLC	[REDACTED]		
A&H	[REDACTED]		
IoE Subtotal (100% FEC)	£63,634		
London Metropolitan			
<i>Directly Allocated Costs</i>			
Staff			
Tom Boyle	[REDACTED]		
Claire Bradley	[REDACTED]		
Dejan Ljubojevic	[REDACTED]		
Debbie Holley	[REDACTED]		
Peter Oriogun	[REDACTED]		
Estates	£0		
Indirect Costs	£8,276		
LM Subtotal (100% FEC)	£26,131		
TOTAL BUDGET AWARD (100% FEC)	£89,765		(89586)