

Interim Reporting Template

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Reporting period	<i>Project start - October 2009</i>

Table of Contents

Section One: Summary.....	1
Lecture List	2
Central Repository of Programme Information	2
Support for creating new courses	3
Timetabling	3
Resources for course organisers.....	4
Plan of Work.....	5
Sustainability of project outputs.....	5
Section Two: Activities and Progress	5
Section Three: Outputs and Deliverables	6
Section Four: Outcomes and Lessons Learned	8
Section Five: Communications and Dissemination Activities	10
Section Six: Evaluation	11
Section Seven: Issues and Challenges.....	13
Section Eight: Collaboration and Support.....	14
Section Nine: Financial Statement.....	15

Section One: Summary

Provide an overview of the project to date, highlighting key developments, deliverables/outputs and achievements for the reporting period. This section may be used to inform the Programme and Support team , and may also provide the basis for an update to inform the sector about the project.

During this reporting period the University of Cambridge’s Curriculum Design project has engaged widely with the wider community of curriculum management, both IT and academic-led, progressively refined its understanding of stakeholder needs, and deepened its alignment with institutional developments.

Joining Academic Curriculum Design And Workflow (**JACDAW**) was originally conceived as a workflow tool supporting curriculum and pedagogic development. Early in the project it became clear that in order to win broad-based support for developments in an area which is a key competency of the University we would have to be demonstrably stakeholder-led. At the same time, it was suggested to us that both "curriculum" and "design" are words we should be careful of applying to teaching at Cambridge, especially regarding Part II courses which are intentionally left very open for lecturers - and students - to explore their subject. Accordingly we adopted near the start of this reporting period, for internal use, “**Course Tools**” as a better name. This is short and reasonably descriptive, while allowing us plenty of scope to respond to participants' input as we proceed, and opening the door to some degree of integration with the Sakai-based VLE CamTools. With the support of the Programme Manager Course Tools has now become the project’s official name.

We were keen to ensure that, in what might appear to be a project focusing on administration and institutional change, the student voice was not forgotten. With this in mind, four students were invited to work as part of the project team over the summer. They were all extremely competent and shared a number

of useful insights while learning a great deal themselves: we would highly recommend this idea to other projects.

After engaging with key project stakeholders, and in particular securing the support and involvement of the Management Committee of the the Natural Sciences Tripos, five **areas of interest** have been identified as providing opportunities to support curriculum design through information technology. These areas of interest were identified through a series of interviews following the Developmental Work Research framework, wider review of existing documentation, emailed suggestions from stakeholders, and meetings with stakeholders including administrative staff, academic staff and the Students Union. The initial research findings were then validated in a series of three stakeholder workshops and individual meetings with key stakeholders, before being presented to the NST Management Committee.

Lecture List

The idea of an on-line, searchable list of lectures, courses and seminars taking place at Cambridge was by far the most popular suggestion at all three workshops, being dubbed by one participant the “21st-Century Lecture List”. People felt that this fitted in with the University's core values, and that it would serve both a useful educational role and administrative one. Indeed, there was a general feeling that an online lecture list was well overdue. The administrators were extremely conscious that the existing paper Lecture List is not complete and not entirely accurate. Although the NST academics were initially dubious, thinking that their undergraduates' packed schedules would prevent them attending any other lectures, the suggestion that graduates are often recommended to attend undergraduate lectures was recognised by all of them, and opinions changed. The Students Union representative expressed the caveat that this should be clearly presented as an extra opportunity for students to broaden their horizons, not an expectation or an additional requirement. The only major worry expressed was that the project might be too successful – many teaching rooms are limited in size, and there would need to be a way of ensuring that the students registered for a paper did not find themselves squeezed out of appropriate lectures. However, the Students Union representative felt that, if there genuinely were a much greater demand to attend certain lectures than there was space available, it would be important for the University to become aware of it, and to have the option to take steps to address the issue.

Some suggested functional requirements:

- same information as currently in the Lecture List for all courses (date, lecturer and title), with the option to include full descriptions of each course and lecture, suggested reading lists, lecture handouts, location and maps
- searchable by a range of criteria including title, lecturer, description, location, time
- course organisers and individual lecturers should have control over their entries
- expected pre-requisites for the lecture should be given
- should be presented as a 'bonus' to students, not an expectation
- a way of limiting 'visitors', e.g. of indicating that space is limited
- reduces workload for staff rather than increasing it

Central Repository of Programme Information

Related to, and perhaps a prerequisite for, the lecture list, the Central Repository enables ‘write once, use many times’ re-use of information about programmes, saving time and promoting consistency across all the many places in which programme information appears. Information would be maintained in situ by its owners, but in a central, searchable repository with a variety of export options. It would also support other applications such as the lecture list and time-tabling.

Staff were generally in favour of this idea, with administrators (whose role this largely is) noticeably more positive than academic staff. People felt, however, that it might be difficult to create a standard template for information across the University. All made the caveat that a lot of the current problems seemed due to organisational issues, and that these would also need to be addressed. If well-embedded in University communications strategies, the software would be able to ensure consistency, but it would not be able to ensure that the core material was correct or kept up to date. The administrators also agreed that this repository should have an archiving function as well as a dissemination function. The Students Union representative felt that programme information is not so valuable to students that this would be seen as a big bonus to the student body. We plan to investigate this issue further, to see to what extent students are aware of inconsistencies of programme information in different places.

Some suggested functional requirements:

- standard web forms for information to be filled in, with ability to adjust template to meet Departmental needs
- archiving feature allows people to see previous versions of documents
- contact details for whoever is currently responsible for the course
- ability for central admin to prompt the person responsible via email at appropriate times of year
- clear information about what the information is used for, the dates its needed, and the workflow it goes through
- a list of all the websites that receive a feed of each piece of information
- easy for central website administrators to add feeds from the repository into their web pages, and to restyle them if appropriate
- easy to use, for people new in post or who only need to use it once a year

Support for creating new courses

Online tool(s) supporting the process of achieving official approval for new or revised courses, at a range of scales spanning Tripos parts, Masters courses, whole papers and smaller units. Such tools would, we hope, support collaborative development of course structure and material, documentary consistency and completeness, and transparency of workflows and responsibilities.

The need for this appeared clear during the interviews, which were specifically with those who had recently been involved in creating new or revising existing courses. However, during the stakeholder workshops, opinions of academic staff on this idea varied hugely - possibly depending on the number of times people had been involved in creating new courses. We would posit that those who have created a large number of new courses now find the process easy, and those who have never created a new course are not aware of the difficulties involved, while those who have created one or two new courses feel that software support would have been extremely valuable. In general, the administrators seemed to think that this was a useful and sensible idea, agreeing that the process was at present not clear, and that it was not easy to find out who could help or where information was available. They pointed out that this might be a problem for a new system - it would only be of use if people knew that it existed.

The feeling of the CourseTools team was that, based on the initial research and the feelings of the Education Section, this would indeed be a very valuable tool, but that it will need tactful introduction. We feel that levels of trust in the CourseTools project will need to be increased further (quite possibly by the introduction of a tool that everyone agrees is needed, such as the Lecture List) before this tool should be developed.

Some suggested functional requirements:

- clear guidance on the process of course approval, the information is required by each committee and what they want it for
- guidance from those who have been through the course approval process, explaining how the various steps helped them to create a good course
- visual workflow with timings, showing when the course will be approved and be available for students
- templates for people to fill in with course information (which may be same as used in the Repository)
- collaborative writing environment and file storage (e.g. loose integration with the existing VLE, or to the new University electronic document management system)
- meeting time organiser (e.g. in the style of Doodle)
- University 'good practice' guidelines, and examples of good practice
- all the crucial committee dates (plus deadlines to get material onto the agenda) in one place
- easy to use, even for the first time or infrequently

Timetabling

Software supporting both flexible timetabling and timetable presentation. Timetabling would take into account the many constraints and requirements, but readily allow scenario planning and timetable changes.

Timetable presentation would make timetables readily accessible for people, groups, and rooms, exported in a variety of formats.

Timetable display has been suggested as contributing to the students' time management issues reported by supervisors to the University's TransSkills project, looking at the needs of transition students. We propose to investigate this further in collaboration with the TransSkills project.

Feelings about software for creating timetables are generally rather ambiguous. Again, those who have directly experienced the difficulty of creating timetables, who have been told that pedagogical ideas cannot be implemented because of limitations with the timetabling and room-booking systems, and those with responsibility for planning teaching & learning spaces, are keen for this problem to be resolved. It also appears that there are some growing issues for students with disabilities related to the packed timetable. However, relatively few people have direct experience of creating the timetable, simply because it is so complex. Lecturers do currently have a working system, and are aware of how complex a process making changes might be. This type of software is in use in a few Departments already, but separate software systems mean that inter-Departmental courses are not supported.

Some suggested functional requirements:

- pull in details about courses from central repository and create a suggested timetable
- allow teaching to drive timetables, not vice-versa
- should support responsiveness and flexibility of departments
- make it easy to explore options for rearranging teaching in future years
- function to allow lectures to be rescheduled while avoiding clashes for rooms, teaching staff or enrolled students
- ensure that there are no clashes for individual lecturers
- connection to room-booking software
- import timetables into VLE, Google calendar, Outlook, etc.
- clear and comprehensive timetables produced for students and staff
- feed of timetables for each room / all rooms that can be displayed on electronic notice boards.
- function to find times available for supervisions by comparing the calendars of students and supervisors

Resources for course organisers

Resources or tools designed to assist academics and their administrative staff take up, organise and hand over course organisation work. These might be as simple as a VLE site template with one or two additional tools, such as a task list.

This was an issue reported during research by academic staff new to their role, and by administrators working within a team. During the research, confusion over tasks did appear to be a serious problem, but one that people were not necessarily willing to admit to. Again, during the stakeholder workshops there was a variety of attitudes towards the suggestion. Administrators were generally much more positive about the potential of software to help in this area than were academic staff. The more experienced academic staff suggested that a number of the problems reported were due to poor organisation on the part of individuals. However, most people seemed to agree that a very simple online file store and dated task list might be appropriate.

Some suggested functional requirements:

- online task lists which show which task has to be done at what point, and which can be passed on to the new course organiser
- online file storage with version control
- something which offers benefits to the current course organiser, as well as future ones
- a clear display of what is relevant now, with past material available but somewhat concealed
- opt-in

Plan of Work

The project plan is designed to allow project outputs to be implemented and adopted in stages, so that risk can be managed, and responses made to changes in circumstances. The successful implementation of tools recognised by University members to be useful will increase the level of trust in the CourseTools project, allowing us to gradually introduce tools which now seem potentially controversial. Each phase of implementation is intended to last six months, running April-October or October-April, each including an initial evaluation of its results.

Phase Two (November 2009 - end April 2010) will construct a central repository of course information, in which course organisers and lecturers own and manage information about their own courses, with a key design requirement that it reduces workload and increases consistency and information re-use in this area, and requiring minimal initial set-up by them. Another requirement will be that the repository should contain, or should be easily extendible to contain, teaching time, pre-requisites, and other requirements necessary for algorithmic timetabling.

Using this repository as a source, we will build a '21st century Lecture List', perhaps based on the federated talks.cam seminar-list management system (funded by the JISC as project EGRET), but supporting easy search and browsing of course details, and highly usable timetable outputs, which (alongside the course information repository) are a prerequisite for more flexible timetabling. Our research has found this is a popular idea - implementing it as part of the first phase of work will give academic staff an immediate reason to maintain their information in the repository. In parallel, we will begin evaluation of timetabling requirements and products, and begin collecting necessary data.

In Phase Three (May 2010 - end October 2010), having fulfilled the main prerequisites in phase one, we will address timetabling. Any timetabling solution will need to draw information from the PeopleSoft SIS and the Estates Management database as well as from the course repository. Timetabling is a difficult problem, so we will evaluate commercial products for this.

Phases Four (November 2010 - end April 2011) and Five (May 2011 - end October 2011) will most likely be used to develop online support for course organisers, and a workflow and collaborative development environment for curriculum designers, integrating reflective tools from projects such as OULDI, Phoebe, and Viewpoints.

Sustainability of project outputs

It is necessary to address the problem of sustaining the project outputs beyond the end of JISC funding in 2012.

University funds may be available to take over support for a successful timetabling deployment, once it has been demonstrated effective and provided it can be offered in turn to the rest of the University. Because management of course information is a necessary part of the infrastructure for a timetabling application, and because the '21C lecture list' is a popular idea and will also be available to the whole University, we would plan to ask the University to take on support and maintenance costs for these elements as part of the timetabling solution, beyond the end of the Course Tools JISC funding.

Such a request would have to pass the scrutiny of the General Board, and no doubt a number of other committees. Another key design and evaluation requirement shall therefore be that Course Tools, by some measure to be agreed with key stake-holders but probably involving reduction in administrative workloads, should be at least cost-neutral, and should ideally be shown to reduce costs for the University as a whole. This requirement will apply equally on the scale of the NST, which stands to benefit from timetable flexibility in a way that perhaps does not apply to other Triposes, and having a different cost-benefit calculation should therefore independently have a reasonable option of adopting the project outputs on a smaller (and cheaper) scale.

Section Two: Activities and Progress

Report on activities in support of project objectives for the reporting period.

The broad support of the Management Committee of the multidisciplinary Natural Sciences Tripos (undergraduate degree programme) was sought and secured near the start of this reporting period, on the basis that the project would seek to address the particular concerns of that tripos around time-tabling (more details in section four).

Drawing on this and a number of other initial meetings (including with the Management Information Systems Division, custodians of the PeopleSoft SIS; the Education Section, overseers of QA/QE; the Estates Management and Building Services division, and Student Union's Academic Affairs officer) alongside committee minutes, University guidance, and three case studies of course development and management previously undertaken within CARET, we drew up a number of potential areas for research. Project researchers then conducted a series of formal interviews with 13 course organisers and departmental administrators recently involved in curriculum changes. Less formal meetings with 11 other University members included a mixture of administrative staff, academic staff and 4 undergraduates. The interviews, the majority of which directly concerned the NST, were then analysed for common themes and experiences. These were organised into five 'areas of potential intervention', including time-tabling, in which software support could be developed.

Three stakeholder workshops, held in September 2009 and advertised via the NST Management Committee's contact list of course organisers and administrators, the Education Section's Learning and Teaching Support initiative newsletter, and directly to project contacts, were held to review and validate the findings of the interviews. Fifteen people attended, involved in teaching and administering courses mainly within the NST but also representing a number of other departments and Faculties. They were presented with the findings of the research in an open-ended manner, asked to comment on how far these were true of their own experience within their Department, and to discuss what ought to be developed during phase I of the Course Tools project.

The results of these workshops represent the final output of this consultation phase and are summarised above as **five areas of interest**. A full report is available on the Course Tools web pages at <http://coursetools.caret.cam.ac.uk/project-reports>, including full listings of suggested functional requirements, motivating values and caveats.

These were presented to the NST Management Committee, along with the plan of action in section one above, who affirmed their support and agreed to take a part in the project's formal governance, by deputing a member or members to a Steering Committee. The steering committee shall act as 'customer' to the project and hear reports of progress, make decisions on matters of importance, and report to the NST Management Committee and such other Committees of the University as shall be considered necessary. The first order of business of the Steering Committee would likely be to approve a description of requirements for the first stage of development, along the lines of the NST's requirements documents for CamTools and NST 1A timetabling previously.

Cambridge being historically a decentralised university, the Steering Committee, at least for the time being, are expected to hold authority within the institution by weight of its members' authority, rather than by dint of being assigned responsibility by central management.

Briefly explain any changes to the overall approach outlined in the project plan. Note any changes to the project team, aims, objectives, technical approach, workpackages, deliverables, milestones or the Project Steering Group. If appropriate, attach an amended copy of the relevant sections of your project plan (see checklist at end of document).

The original workpackages and project approach stand, but will be reviewed in light of the five areas of work identified by internal stakeholders and the associated plan of work. Several of the workpackages are aimed at external stakeholders but are also subject to review. The Steering Committee now forming will be asked to approve any changes.

Section Three: Outputs and Deliverables

What outputs are you expecting to arise from the project? Specify the audiences your expected outputs will be for. (Note: you should have received a mapping tool to help you specify these). This should include a short paragraph summarizing expected technical outputs/system integrations etc.

Technical outputs will include a deployment of Quali Student LUM configured for a UK University and accompanying documentation explaining its operation and configuration both for the University of Cambridge and the wider UKHEI community. This is likely to include integrations with the University's Oracle / Peoplesoft SIS, which will be contributed back to the open-source Quali community, and export options via XCRI. Integrations and export options are expected to support elements of the Bologna Process requirements. The Quali data structure will support an online course and lecture browser / feed, facilitating

Institutional Approaches to Curriculum Design Programme: Course Tools (University of Cambridge)

data maintainance by course administrators, and supporting course designers and student-led enquiry. Further technical outputs are expected to include course management templates and tools/widgets for the developing Sakai 3 VLE, and a workflow tool designed to support a variety of course development and approval processes by surfacing their common requirements and the sequences of actions employed to achieve them.

Type of output (see indicative list below)	Details e.g. theme, topic, number (of this type), size/scope	Proposed audience (internal or external) and who will use this output and why?
Blog posts	Regular posts, approximately once every two to three weeks, reflecting both on what the project has been doing, and on wider issues of relevance to the project.	Both internal and external; used by both to review the progress of the project, and to learn lessons for future projects at an early stage.
Conference presentations	Three conferences on Kuali Student to be held annually, in 2010, 2011 and 2012. Presentations will (as far as possible) be recorded and made available after the event.	UK and European HE institutions interested in Kuali Student
Dissemination materials	A series of articles appearing in University newsletters	Internal, particularly aimed at those with a strong interest in learning and teaching
Dissemination materials	A series of termly project newsletters, reporting the progress of the project.	Predominantly aimed at internal stakeholders, although also available externally
Dissemination materials	Videos from stakeholders detailing their experiences over the duration of the project	Predominantly aimed at internal stakeholders, although also available externally
Guidance Materials	Recommendations of how the requirements for new learning and teaching projects at Cambridge assure quality and well designed outcomes and might be used in other universities to guide similar projects there.	PVCs and those with responsibility for institutional IT support for learning and teaching
Guidance Materials	Open licensed documentation and online training materials for Kuali configuration (for technical staff) and use (for users and managers), designed for reuse at other institutions	UK and European HE institutions interested in Kuali Student
Case studies	Pre and post-intervention case studies	Available both internally and externally
Evaluation report	Evaluation report highlighting the impact of innovations in curriculum design processes on partner institutions' ability to address strategic aims; evaluation of changes that have occurred as a result of project innovations and of lessons learnt through carrying out the project. This will be written to support the full range of roles involved in these processes including course designers, technical staff, institutional/faculty managers/heads, registrars, teaching committees	Available to all stakeholders internally: actively circulated to Education Committee of the General Board and Pro Vice Chancellor for Learning and Teaching; available externally for other HE institutions interested in learning the lessons of the Course Tools project
Review	Review of technical and pedagogical links between pedagogical planning and curriculum design. Possible integration with support tool, e.g. under the aegis of Learning and Teaching Support initiative. This will be written to support those with responsibility for QE activities	Available to all stakeholders internally: actively circulated internally via the Education Section and to Quality Assurance contacts. Available externally to all, but may be specifically promoted externally via the HEA Teaching and Learning Experts group and QAE SIG
Technical documentation	Technical documentation (which may be in a range of forms, e.g. video, text, presentations) to support both the users and the administrators of software developed specifically for the project	Available to all users of the software, internally and externally
Guidance materials	Kuali Student technical report from UK HE perspective	both technical staff and those responsible for institutional IT support for learning and teaching

Type of output (see indicative list below)	Details e.g. theme, topic, number (of this type), size/scope	Proposed audience (internal or external) and who will use this output and why?
Evaluation Plan	Detailed evaluation plan	Key stakeholder groups within the University; other JISC Curriculum Design groups
Evaluation Report	Reflections on the methodologies used, issues encountered, lessons learnt and recommendations for future projects	Both internal and external; used by both to review the progress of the project, and to learn lessons for future projects.

What outputs, if any, have you produced in this reporting period? Include any outputs, including interim and work in progress, that you have shared with other projects e.g. via the Circle site or workshops. Are there any other outputs you would like to share at this time? Please describe, provide URLs or attached documents etc

We have developed a research and evaluation methodology employing DWR theory within a framework of Realistic Evaluation, which we believe is robust and effective even in the context of institutional change projects, which necessarily involve a wide range of stakeholders and a long time period, thus being subject to unpredictable and potentially unknown influences over the course of the project. We are in the process of documenting this approach.

We held a one-day workshop in Birmingham on July 23rd, advertised via JISC, JISC CETIS, UCISA, our own blog and to CARET contacts on Quali Student. The workshop featured five core members of the Quali technical team including the three lead technical architects. The workshop was framed as a two-way discussion in which UKHEI delegates would find out about Quali and Quali delegates would find out about UK requirements and begin to expose some requirements of internationalisation. A key question for Cambridge emerged (the ability to support courses delivered by multiple departments) and JISC CETIS has taken to its Strategic Technologies Group the idea of making a UK-version of the 'Quali Reference University', a typical North American university which is what comes configured 'out of the box' in installations of Quali.

We have produced a number of case studies of curriculum change at the University of Cambridge, its enablers, values, drivers and inhibitors, on a range of scales including annual review, reform of lecture groups, and introduction of a complete new first-year option. Some of these have been shared with the JISC in our baseline report; others were investigated as part of our subsequent stakeholder engagement.

Reflection on the difficulties of and strategies for achieving institutional change is an ongoing process which Course Tools along with other Design Cluster B projects shared in a session at ALT-C 2009. This is an ideal cluster output because the sensitivity of some of the material precludes open circulation by any individual project, which might thereby damage its standing within its own institution. This has not been formally prepared in a report or paper, but it planned to be.

Finally, we have prepared a database (using traditional relational tables) containing core course information for our institutional pilot group the Natural Sciences Tripos, ready for transfer into Quali Student LUM as it becomes available. The process of developing this involved developing a Cambridge-specific schema and exposed some problems on which we reflect in our project blog.

Section Four: Outcomes and Lessons Learned

What key messages have arisen from your baselining process that might be of interest to the wider sector? Please tell us:

- *What you now consider to be the key problem(s) or challenge(s) in curriculum design at your institution?*

The key problem at Cambridge is flexibility to introduce new courses and pedagogic practices. Core curriculum-design objectives such as encouraging free academic enquiry lead in some subject areas to extremely full timetables, in which it is not possible to significantly change teaching patterns, practice or content without accepting that some students who might have taken an option will no longer have an

[REDACTED]

opportunity to do so. While increasing numbers of interdisciplinary fields are flourishing in research groups, it is difficult to find room for and develop corresponding changes in the undergraduate curriculum.

• How your project will enhance curriculum design and/or address the problem(s) at your institution in light of your baseline activities?

Course Tools will provide better information about course content and structures to, students, course organisers and to IT systems supporting teaching flexibility and course review and development processes. Academics engaged in regular course review and management will be able to accomplish it more efficiently, freeing up time for teaching and research. Lecturers and course organisers wishing to remodel their courses will have all necessary information at their fingertips, helping them make better, faster decisions about course content and organisation. Curriculum development and review processes will be transparently presented in a workflow tool integrating with the Sakai VLE to support collaborative development across departments, and offering access, at points where pedagogy is developed, to reflective tools such as Phoebe and Cambridge's Learning & Teaching Support 'good practice' database. Students will be supported in making best use of this by helping them make informed study choices and showing them relevant material which may be available in other courses.

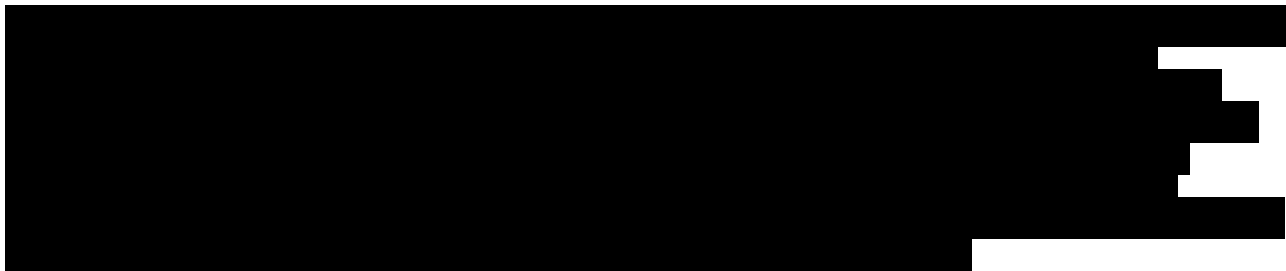
What measures you will use to assess changes to curriculum design processes at your institution, and what sources of data will be used to evidence the changes? What evidence have you collected so far?

We will use a series of both qualitative and quantitative measures to assess the extent of the changes in curriculum design process. Qualitative data will be gathered through the means of structured focus groups and individual interviews. Quantitative data will be gathered through surveys, usage stats for software, access stats for online materials, and appropriate statistics from groups such as the Education Section, the Students Union and Estates Management and Building Services (EMBS). We have begun with a series of interviews and with stakeholders, together with a number of less formal meetings and consultation opportunities. The data arising from this research phase was then validated in a series of stakeholder workshops and meetings with key stakeholders, which then allowed us to agree more firmly the forms that the new software should take. We now have a clear idea of the context in which the actions around curriculum design take place, and the interventions which we will put in place. This now allows us to craft a series of nuanced and appropriately worded survey questions, with which we propose to take specific qualitative baseline measures. Working with other University departments, such as the Education Section, we will agree the relevant data that they can provide, such as the length of time taken for new courses to be created at present.

It is important to note that our case studies of the successful introduction of similar software suggests that, at the beginning of a process, many people are resigned to the current situation and see its limitations as natural, or have developed ways either of working around it, or indeed of exploiting current weaknesses. It thus appears that the first phase of the introduction of new ways of working frequently serves to raise the awareness of current limitations, and hence reported levels of dissatisfaction. Moreover, due to the demand for very high reliability within University systems, people often wish to run both the old and new system in parallel until they feel confidence in the new system. We may thus expect both levels of dissatisfaction and levels of reported workload to rise with at the beginning of our project, dropping sharply as the software becomes embedded. This should not necessarily be seen as a cause for concern.

Outline any emerging outcomes or lessons that have been learned during this reporting period that could be passed on to other projects. Please identify those that could be passed on to other projects, and those that are confidential and require further discussion as to how they could be used to help others. Also outline any new ideas or opportunities that have emerged.

[REDACTED]



Where projects are able to align with existing work in institutions and can be framed as providing funds for improvement, in certain directions, of already-established tools, programmes or processes, they will leverage existing support and commitments and consequently be much easier to institutionalise and sustain. Course Tools has found that its interest in time-tabling tools is shared in many places across the University, including within the central administration, and has consequently been able to consider how embedding of project outputs might take place within the context of institution-wide time-tabling.

Section Five: Communications and Dissemination Activities

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

Leo Fernig, Quali Student lead technical architect, gave a one-day workshop, organised by the Course Tools team, on Quali Student and its Learning Unit Management Module. Leo is based at the University of British Columbia which as a founder member of Quali Student is committed to deploying it as it is made available. Quali Student's charter states that it should be international in scope and this workshop provided an opportunity to explore the issues around deploying KS in Cambridge and in UKHEIs in general, especially relating to UK regulatory and reporting requirements, support levels, and the possibility of developing a UK version of the 'Quali Reference University', a typical North American configuration which deploys 'out of the box'. The presentation (http://coursetools.caret.cam.ac.uk/?attachment_id=277) represents only a small part of the discussion but further documentation is available on the IUG Documentation List page of the Quali Student wiki (requires registration): <https://test.kuali.org/confluence/pages/viewpage.action?pageId=210469116>

Other Quali Student engagements include continuous build of the developing KS codebase and participation in the KS Implementer's User Group.

As part of Design Cluster B, Course Tools presented a joint session on achieving institutional change at ALT-C 2009 (<http://alt.conference-services.net/reports/template/onetextabstract.xml?xsl=template/ALTtextabstract.xsl&conferenceID=1613&abstractID=304183>) Some preparatory discussion is accessible on the Programme collaboration site CIRCLE (<http://www.circlespace.net/blog.aspx?bid=6179>).

The project has established a termly print newsletter as one means of maintaining our relationships with a range of stakeholders within the University.

As part of an ongoing investigation of requirements for encoding and sharing course-related information the project has corresponded with the Sakai OpenSyllabus project, the XCRI project, Bethanie Williams at UCAS regarding their Course Profiles database, and Dr Ughetta Tona at the University of Bologna regarding their own course database and how it supports the Bologna Process.

One of the early ideas of the project, before the project plan was finalised, was to evaluate the Phoebe pedagogical planner as part of a course creation workflow. The project accordingly contacted Liz Masterman and Marion Manton of Oxford University who were on the Phoebe project, to discuss its status and applicability.

Outline any publicity the project received during the reporting period.

CourseTools has been highlighted in the Quali Student community blog/newsletter, in the context of being a test of that project's claim of superior flexibility in representation of programmes of study.

CourseTools has featured in the two most recent editions of the termly University's Learning and Teaching Support newsletter (<http://www.admin.cam.ac.uk/offices/education/lts/news/index.html>).

Section Six: Evaluation

Provide brief details of progress to date in terms of the development and implementation of the project evaluation plan, including what you feel has worked, what has not, and any aspects you have changed.

From the start of the CourseTools project, it was recognised that the initial research underlying the software design, the implementation of the software, and the evaluation of the project as a whole, would need to take account of the complex institutional settings of the curriculum design process, and the perspectives of multiple stakeholder groups. We thus developed a research and evaluation plan based on Engestrom's 'Developmental Work Research' (DWR) model, which was in turn based on the theoretical framework of 'cultural-historical activity theory'. Although DWR had previously been used on several evaluation projects within CARET, this was the first time that it would also be used to provide a framework for the initial research for the software development. One of the key reasons for selecting DWR was that, as a 'developmental' model, it was felt to be appropriate to reflect the transformation of practice over a complex project of several years in length. At this early stage, we cannot, of course, assess the degree to which this is the case. However, we already feel that DWR has worked extremely well as a theoretical framework to inform the initial research, which will serve both as a baseline for the project evaluation, and as guidance for the software design. The particular strength of DWR is that it is both simple and robust, placing the goals and actions of each individual subject in the wider context of their community, with its rules, tools available, colleagues and division of labour. It then allows for the goals and motivations of the different individuals within the institutions to be compared. Engestrom's 'expanded triangle' modelling the activity system was used as a reference point for both technical and research staff on the project, and facilitated communication between them. The emphasis on context given by DWR fitted in extremely well with the user-centred design approach used by CARET technical teams. Again, the simplicity of DWR allows institutional stakeholders to recognise it with ease, meaning it can also contribute to stakeholder engagement, especially in situations there is suspicion that technical projects tend to be conceived of in a vacuum.

The DWR framework was used to shape the interview schedule for the semi-structured interview, and to inform the range of people that we spoke to. Interview questions were designed to 'fill in' the triangle for a certain event focused on curriculum creation, so that for each interviewee, we could provide a detailed picture of the context in which they worked, and the tensions between parts of the activity system. In the analysis process, this was then abstracted a level to provide a list of drivers, enablers, barriers, and values. This has so far proved useful for both initial interaction design and for stakeholder engagement and dissemination planning.

However, we had planned from the start to supplement this with a number of qualitative evaluation measures. Following the example of the JISC-funded SPLICE project, we are looking closely at the potential for 'realistic evaluation' to play a valuable role in informing exactly what we measure and why. Realistic evaluation posits that in order to understand why the an intervention did or did not work, vital in order if a successful intervention is to be replicated, it is crucial to understand the context in which the intervention took place. We currently see DWR as providing that understanding of the context, which we can use to identify key qualitative metrics for evaluation. Having received an initial agreement from key stakeholder groups as to the proposed initiatives, we will now begin to baseline these qualitative metrics (as shown in the table of key evaluation activities below).

It is too early in the project for this methodology to be definitely recommended to other Institutions, but we certainly have high hopes for it, and will certainly hope publish our experiences and findings more widely if it continues to work well.

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

Rationale / Purpose for activity	Planned method	Participants	Timing
Baselining current levels of student attendance at other Faculties' lectures, extent to which this is/ would be valued	Online survey (may run paper-based survey if initial response levels are low) - mainly quantitative	Undergraduates in all years, in all Schools	Oct 2009

Institutional Approaches to Curriculum Design Programme: Course Tools (University of Cambridge)

Rationale / Purpose for activity	Planned method	Participants	Timing
Investigate to what extent students agree with staff concerns over inconsistent programme information	Question within larger online survey	Graduates and undergraduates in all years, in all Schools	Oct 2009
Baselining current levels of student attendance at other Faculties' lectures, extent to which this is/ would be valued	Online survey - mainly quantitative	Graduates in all Schools	Nov 2009
Baselining how much lecturers are aware of related teaching in other Faculties	Online survey - mainly quantitative	Lecturers in all Schools	Nov 2009
Baselining how much DoSs recommend attendance at other Faculties' lectures, extent to which this is/ would be valued	Online survey - mainly quantitative	Directors of Studies in all Colleges, in all subjects	Nov 2009
Gaining broader understanding of needs and values around attending other Faculties' lectures	Focus group with student reps	Undergraduates in all Schools	Dec 2009
Gaining broader understanding of needs and values around attending other Faculties' lectures	Focus group with student reps	Graduates in all Schools	Dec 2009
Gaining broader understanding of the process of contributing to the current Lecture List and implications for the proposed system	Focus group	Departmental administrators involved in contributing to the current Lecture List	Feb 2010
Baselining current student experiences around the course timetable and their own time management.	Online survey - mainly quantitative	Undergraduates in the second and third years, in all Schools	Nov 2009
Baselining student expectations and early experiences around the course timetable and time management	Online survey - mainly quantitative	First years undergraduates. in all Schools	Oct 2009
Baselining current experience of the process of creating / revising courses	Online survey - mainly quantitative	Administrators and academics recently involved in creating / revising courses	Dec 2009 onwards
Investigating current usage of timetabling software	Individual meetings and focus groups	Administrators in Depts currently using timetabling software	Feb 2009
Investigation of extent to which lecturers feel the inflexible timetable and restricted room choice constrains pedagogy	Online survey - mainly quantitative	Lecturers and Course Organisers in the Natural Science Tripos; Lecturers and Course Organisers in other Depts - attempt to compare the responses from those who have previously taught at other Universities with those who have only taught at Cam	Feb 2009
Baselining current experience of the process of creating / revising courses	Request for statistics from Education Statistics regarding current numbers of courses created / revised, time taken to create a course, time taken to implement a course, and (if available) number of times material was re-presented to the same committee.	Education Section	Dec 2009 onwards

Rationale / Purpose for activity	Planned method	Participants	Timing
Baselining extent to which concerns over inconsistent programme information are widespread	Online survey	Administrators and course organisers	01/12/09
Outlining current workflow to keep programme information consistent (to be compared with revised workflow when central repository is introduced)	Interviews	Administrators and course organisers	01/12/09
Establish time currently taken to perform a number of common tasks related to keeping programme information constant	Interviews and timed use cases	Administrators and course organisers	01/12/09

Section Seven: Issues and Challenges

Report on issues or problems that are impacting on the development and implementation of the project. Detail what impact any issues may have on the achievement of project targets, and set out how you plan to tackle these issues. Report on any unexpected project achievements.

We have found that people who are used to working within even quite restrictive constraints often don't perceive them as problems at all, simply accepting that this is 'the way things are'. Course Tools has during this reporting period occupied itself with identifying specific areas around curriculum design where it might usefully develop support tools, but we have not achieved this by simply asking academics to identify problem areas around curriculum design, such an approach more often than not proving wholly ineffective. This poses three problems, one in research (identifying problem areas), one in evaluation (if people don't recognise a problem, can they be asked to assess its amelioration?) and one in sustainability (winning broad-based support). We found using the DWR framework in a programme of structured interviews to surface a range of issues effectively circumvented the first, allowing us to define and illustrate problem areas to stakeholders in a way that resulted in much richer feedback. The second issue requires careful design of evaluation measures, combining direct metrics with subjective metrics, and complementing the subjective measurement procedures (e.g. surveys) with illustrative 'before' cases to remind respondents of (validated) prevailing conditions. The third issue requires us to show all potential users that there is a problem being solved. Our strategy here is to focus on usability and usefulness, so that each person who trials the tools quickly discovers for themselves that here was a problem they hadn't realised needed solving.

A not unrelated problem is that a core aim of Course Tools is to support access to course-related information, which if well implemented will result in small and relatively infrequent (a few times a year) benefits for many, with significant benefits for just a few - course organisers and the like. Set against this is an institutional resistance to centralisation of all kinds and especially central IT projects. The balance of cost and benefit in individual cases may not necessarily, on this calculation, swing in our favour, and this may reduce take-up and impede institutionalisation of project outputs. We plan to escape these particular scales by being very clear that course information held in Course Tools is held by course owners in a central repository, involving no transfer of authority to Course Tools itself.

Kuali Student is currently subject to delays. Public release of code and documentation for 'release 1' modules, i.e. Learning Unit Management, has been postponed to March 2010. A programme of private, feature-incomplete 'alpha' releases is planned on a six-monthly cycle until then. We plan to use these to make an initial configuration and technical evaluation, focussing on constructing a representation of our course data using the LUM module's infinitely nestable 'Learning Unit' paradigm. The first alpha release was planned for the third week of October, but has itself been postponed by 2 weeks to permit urgent redesign of service layers which the project team felt had not been given sufficient attention. Course tools nevertheless is extremely confident in the ultimate success of the project, as a number of large North American universities (who are also contributors to the project) are well advanced with plans for deploying KS LUM. We are engaging actively in the Kuali Student community and will be using time granted by present delay to advance user interface design work.

At present the project lacks academic input to evaluation planning, Patrick Carmichael having moved to take up a chair at Liverpool John Moores. The project team has concentrated on developing a practical evaluation plan for its planned interventions, within the DWR context laid out initially, introducing Realistic Evaluation as an overall strategy for synthesising DWR-driven outputs, and layering objective metrics over more experiential ones as project objectives become definite.

What strategies have you found useful for engaging stakeholders at this stage of the project?

Our main methods have been interviews, meetings and face-to-face engagement. Email lists, appropriately selected, are suitable for promoting 'name recognition' if followed up promptly, but little more. Personal letters to key stakeholders, however, were considerably more successful than we expected, and we have recommended this approach to our CAMEL cluster. We have reinforced our stakeholder-led approach by giving previews for a very few key stakeholders for early comment, followed up with printed, personally-addressed newsletters for all our correspondents (approx 150 key stakeholders). These newsletters currently appear to have been relatively successful, increasing the number of visitors to our website and serving as a starting point for face-to-face discussions. We have had articles on the CourseTools project in the two most recent Learning and Teaching Strategy newsletters, circulated to those with a particular interest in pedagogy. When the online Lecture List is launched, we hope to have widespread publicity in the more 'mainstream' University publications, including the student newspaper.

Our Twitter stream, blog and website 'comment here' boxes have not drawn much input from internal stakeholders, though the website and blog do appear to be receiving an increasing number of visitors. However, those with an active interest in the project at this stage reasonably expect to be kept up to date personally. When we begin offering software, these channels will likely become more used. We have been following a 'common channel' policy in which we present a common face to internal and external stakeholders, but we will keep this under review in order to avoid any risk of alienating internal stakeholders.

Section Eight: Collaboration and Support

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

Contact with the programme manager and support team has been uniformly constructive and has helped us make connections, influenced our prioritisation of objectives, and generally helped us adjust our project plan to maximise benefit to the the community and the programme objectives without at any point compromising our commitment to our internal stakeholders to be guided by their needs.

The project team has benefited from numerous support meetings and workshops. Requests for support sessions via e.g. programme meeting feedback (Phoebe, XCRI) have all been satisfied.

Our Critical Friend Prof. Stephen Brown has been very valuable to us, especially, during this reporting period, in his role of challenging our conception of the project and forcing clarification of certain areas.

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

A progress meeting on BPM, perhaps identifying some common patterns. Course Tools has not (yet) embarked on BPM but is likely to do so.

Do you have any suggestions for how we could make use of the face-to-face time available at programme meetings? For example:

- *Would you be interested in using the time in small groups, working around specific themes?*
- *Would you be interested in using the time to hear from external experts on specific themes?*
- *Would you be interested in using the time for presentations from projects?*

Yes, especially on themes on which particular projects might have particular expertise and if followed by group discussions and/or workshops. This is superior to simply breaking directly into small groups which can sometimes result in a lack of focus and common direction for the intended discussion, but encourages discussion in a way that an external expert might not. That is not, of course, to say that external experts do not bring value of their own.

- *Other...?*

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

<personal perspective> While not initially convinced by the cluster assignments, I have found that Cluster B has defined for itself a common identity in institutional change around course design process, in a way which seems distinctive from other clusters, and in a way which aligns all our cluster's projects better with programme-level objectives. This owes a lot to the programme manager's insight, but something also to luck, I think. Certainly in some areas Course Tools has more affinity with projects in other clusters, and in a different Cluster may even have come to frame its aims somewhat differently. The 'informal support' role CAMEL is intended for is not perhaps meant to go this far, but clustering by commonality will have this effect, and this is in our experience highly beneficial. The more general aspects - of swapping ideas, being inspired by other projects, and providing moral support through difficulties have all been valuable also. One way in which the process might be enhanced would be to allow 'ad-hoc' elements, so that projects might invite one another as visitors to their CAMEL meetings, form one-off clusters for a single meeting, or even change clusters altogether. This would promote inter-project networking and collaboration even further, and loosen the imposition of the initial groupings, which while working well for design cluster B, might not have worked as well for everyone. Certainly also, the role of Critical Friends as impartial 'go-betweens' between JISC and projects increases trust and openness on all sides and this is a significant contribution towards programme success. </personal perspective>

Section Nine: Financial Statement

In this section you should detail the expenditure of the project so far. Against the budget headings you should set out the expenditure for the reporting period, noting any significant over/under spend giving reasons for this. You should also state the total expenditure to date against each budget heading. The table below is designed to help this reporting process. Additional budget headings may be added to fit an individual project's budget. Projects may find it more appropriate to use a spreadsheet to report financial information.

Total Grant		Duration of project	
Reporting Period			

Budget Headings	Total budget allocated	Expenditure this reporting period	Total expenditure to date	Further information
Staff				
Travel & Subsistence				

Equipment				
Dissemination activities				
Evaluation activities				
Other (please specify)				

Checklist:

Before you return this report:

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

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