

## Briefing paper to support Circular 5/08: Institutional approaches to curriculum design

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This briefing paper accompanies JISC Circular 5/08: Call for projects on institutional approaches to curriculum design. It provides background information about the rationale and context for the Circular. Prospective bidders are encouraged to attend the community briefing meeting on 21 May 2008 in Birmingham. Information on this meeting is available at: [www.jisc.ac.uk/curriculumdesignmeeting](http://www.jisc.ac.uk/curriculumdesignmeeting). Specific questions concerning the call should be addressed to Sarah Knight, Programme Manager, JISC e-learning programme ([s.knight@jisc.ac.uk](mailto:s.knight@jisc.ac.uk)).

### Scope and definitions

In HE and FE the '*curriculum*' usually means the learning and teaching to take place within a specific programme of study, leading to specific unit(s) of credit or qualification.

For the purposes of this call, JISC is concerned with the '*curriculum design*' processes which take place before any real learners are enrolled onto a programme of study. Curriculum design addresses the questions: 'what needs to be learned?', 'by what kind of learners?' and 'what resources will this require?', including technology-based resources such as e-content, tools and learning environments. Effective curriculum design also asks 'what kinds of interaction need to take place?' between learners and teaching staff, in the context of the appointed curriculum tasks and using the available curriculum resources.

Curriculum design in this sense produces idealised representations of a learning programme including core documentation, public descriptions, handbooks and associated materials such as topic lists and indicative reading lists.

JISC is investigating the possibility of issuing a sister call on '*curriculum delivery/realisation*', which would fund projects to focus on processes which take place when real learners engage with a designed curriculum.

There is often overlap and interplay between curriculum design and delivery/realisation – in fact it is essential that this should be so<sup>1</sup>. Curriculum design needs to be built on real-world learning and teaching considerations and a good understanding of the needs of individual learners. The aim of the two parallel calls is not to keep these two processes apart – though we note that in many institutions there may be a disjuncture between them – but to focus on how technology can support different phases of the curriculum cycle more effectively.

Projects which demonstrate effective linkage between design and delivery/realisation – for example by allowing design concepts to be more efficiently realised, by allowing feedback from real learners to influence design decisions, or by facilitating information flow and decision support across the different phases – may be relevant to either call.

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<sup>1</sup> The learning design community defines an intermediate stage, 'instantiation', during which a curriculum design is adapted for a specific instance of its delivery with a real cohort. There are three processes defined by the IMS Learning Design specification: authoring (design), production (instantiation), and delivery (see [http://www.imsglobal.org/learningdesign/ldv1p0/imsld\\_bestv1p0.html](http://www.imsglobal.org/learningdesign/ldv1p0/imsld_bestv1p0.html))

Curriculum design is typically the primary responsibility of subject-based staff in departments. However, the JISC is concerned through this call to address **institutional processes** (or large-scale faculty/college processes) which impact on how effectively curriculum design is carried out by subject teams. Institutional processes which might be addressed by projects include: information management, systems integration, processes of validation and review, the policy framework, allocation of staff time and resource, capacity building, advice and guidance to staff, use of internal and external evidence in support of design, sharing of design practices and resources, and stakeholder participation. Included in the scope of institutional processes will be projects which can demonstrate good value to institutions through strategic use of external services.

We recognise that production or repurposing of **course materials** may also be undertaken during the design phase, and these will be significant resources for delivery/realisation. In some cases specialised **learning environments** or tools may be designed or adapted for the programme in question. The JISC funds many projects in the area of content production and digitisation<sup>2</sup>, sharing of content, repurposing/reuse<sup>3</sup>, and exploration of learning environments and tools<sup>4</sup>, so bids are unlikely to be funded which focus only on these areas. However, projects might wish to address the effective integration of curriculum design processes with the processes of content design or sourcing, or with the development, adaptation or personalisation of learning environments.

In funding these projects the JISC is concerned to encourage the **strategic use of technologies** to enhance curriculum design processes, including those institutional processes identified above.

## Overview of current practice and process

Our assumptions about a typical curriculum design **process** are that it:

- concerns an accredited programme, or credit-bearing module(s) within a programme
- takes place within a regular review cycle, though there may be other occasions for curriculum (re)design
- is an essential part of how the institution defines and distinguishes its offering to students
- represents significant investment of institutional resources, especially administrative resources and teaching staff time, often at a senior level
- involves a team of people – including academic staff and associated staff such as subject librarians and educational specialists – making educationally-informed decisions about teaching and learning within the programme
- is an opportunity for learning and teaching issues to be discussed and new ideas to be put forward
- can also act as a brake on innovation, especially if re-validation is too costly or difficult
- requires formal validation by a panel including some external members, and is subject to stringent quality assurance procedures
- is often influenced by the requirements of relevant professional bodies and associations, though rarely involves employers or other external stakeholders directly
- is rarely influenced in any way by learners or potential learners

Our assumptions are also that the **outcomes** of the curriculum design process will be recorded in a range of documents<sup>5</sup> such as:

- Course description and validation documents (for internal administrative use)

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<sup>2</sup> For a summary of these activities see <http://www.jisc.ac.uk/whatwedo/themes/eresources.aspx>

<sup>3</sup> See for example the JISC digitisation programme ([http://www.jisc.ac.uk/whatwedo/programmes/programme\\_digitisation.aspx](http://www.jisc.ac.uk/whatwedo/programmes/programme_digitisation.aspx)) and the Reproduce programme ([http://www.jisc.ac.uk/whatwedo/programmes/programme\\_elearning\\_capital/reproduce.aspx](http://www.jisc.ac.uk/whatwedo/programmes/programme_elearning_capital/reproduce.aspx))

<sup>4</sup> See for example the JISC e-learning framework programme ([http://www.jisc.ac.uk/whatwedo/programmes/elearning\\_framework](http://www.jisc.ac.uk/whatwedo/programmes/elearning_framework)) and the Users and Innovations programme ([http://www.jisc.ac.uk/whatwedo/programmes/programme\\_users\\_and\\_innovation.aspx](http://www.jisc.ac.uk/whatwedo/programmes/programme_users_and_innovation.aspx))

<sup>5</sup> These are derived from the XCRI project, referenced in more detail in the following section.

- UCAS entry profile (for prospective students)
- Prospectus entry (for prospective students)
- Course handbook (for enrolled students)

These documents will include various **design elements**<sup>6</sup> such as:

- Rationale (why this module/programme is needed)
- Learning pathways/entry routes, inc. UCAS profile for programmes
- Learning objectives and outcomes
- Credit/qualification available
- Assessment methods (and sometimes criteria)
- Learning and teaching methods/modes of delivery
- Staff/student time commitments
- Statement of learning content e.g. indicative bibliography; topics
- Statement of other resource use e.g. physical and virtual environments
- (For a programme) cost model and outline costings
- (For a programme) component module descriptors

Ideally, curriculum design should be effectively integrated with **other institutional decision-making processes** such as timetabling and room allocation, library ordering and content services, ICT resource allocation, student advice and guidance, student support and learning development, assessment management and so on, to enable institutional efficiencies and to ensure learners receive joined-up support for their studies. We recognise that this does not always happen<sup>7</sup>, and the lack of integration provides the context for many of the challenges this call is designed to address.

Besides this general lack of integration with other institutional and curriculum processes, **problems** with current practice in curriculum design include:

- It is perceived as time-consuming, bureaucratic and inflexible
- Because of this, programme designs may not be revisited for many years once validated
- There are few opportunities for students, employers, communities and other stakeholders to have input to the process
- Established practices may not take full account of the opportunities for e-learning, especially outside of an institutional VLE
- Established practices may not take full account of the changing and diversifying needs of learners, and may not build flexibility into curricula to respond to these
- There may be few or no opportunities for curriculum designers to visualise/imagine what the experience will be like for learners
- The learner-led curriculum ideal is at odds with current validation models and QA/accountability processes in many institutions
- Decisions taken for sound educational reasons may not be articulated to other institutional decision-making processes such as timetabling, learning content management, assessment management and resource allocation
- There is little sharing of curriculum ideas, resources, examples and designs, and very little collaborative design, either within or across institutions

## Drivers for change and future vision

The call for projects to help transform curriculum design is motivated by a number of **general drivers and opportunities**. Ron Barnett (*The challenge of the changing curriculum*, 1999) identified the challenge in terms of wholesale changes to:

- *the customer base (through a more heterogeneous student population)*

<sup>6</sup> These are derived from a number of domain mapping projects, XCRI, CoVaRM and LADIE, referenced in more detail in the following section.

<sup>7</sup> The XCRI project has found that it is essential but challenging for institutions to manage the relationships between parts of the process, and between curriculum fragments as outcomes of design.

- *the pattern of content (from subject knowledge to employability skills)*
- *the mode of delivery (from "chalk and talk" with print based media to flexible learning and communications and information technology (C&IT))*
- *the level of resourcing (with lower per capita government funding and increased fees paid by students).*

To these we could add more **specific current drivers** for change.

- The Leitch agenda<sup>8</sup>: institutions are under increasing pressure to deliver both work-based learning and high level skills for work, including demand-led CPD modules, entailing changes to both the content and the learning methods of curricula
- Widening participation: more relevant, more accessible curricula and more flexible modes of participation are required to meet government targets of 50% participation by young people in HE
- Foundation degrees and two-year degrees: new curricula are emerging, and new ways of supporting learners to achieve their goals
- The globalisation of the market in HE: new markets and new kinds of competition are emerging in the higher education sector, demanding new kinds of provision
- Falling unit costs: institutions need to ensure efficiencies in their core processes at a time when they are also expected to be more flexible and respond to a wider diversity of needs
- Business and community engagement: there is a growing demand for graduate skills such as teamwork, business awareness, sustainability skills and digital literacies. Stakeholders are also expecting a more direct involvement in design of the curriculum to ensure it meets their needs.
- Rise in learner-owned technologies: learner-created content, learner-defined contexts for learning, and personal learning environments may all present challenges to existing practices of curriculum design<sup>9</sup>.
- Educational change: there is a move towards flexible, learner-defined or enquiry-based curricula, in response to some of these drivers and evidence from learning research<sup>10</sup>

These general issues may lead to or interact with **internal drivers** such as:

- Falling enrolments on specific programmes/modules, poor subject reviews or major student dissatisfaction
- Educational restructuring e.g. of a major programme or of the first year, or other requirements for large-scale revalidation
- Physical/departmental restructuring, e.g. merger, new build, new campus, new learning centre
- Major changes to the learning environment, virtual or physical
- New vision for a programme or suite of modules, e.g. to integrate digital literacies, employability skills, or other identified national or regional priorities
- Desire to capture a new market, e.g. continuing professional development, international students, hard-to-reach learners, work-based learners

The **future vision** for curriculum development in UK HE is articulated in the Circular in relation to three core areas of: learning and teaching practice; technology and standards; and strategy and policy. This is the vision for the sector as a whole. Individual projects are expected to advance this vision in some way through innovative development in one or more of the core areas.

<sup>8</sup> The Leitch Review, *Prosperity for all in a global economy: world class skills* (2006) reviewed the UK's likely need for skills in 2020 and beyond, and concluded that HEIs will have to expand provision both numerically and in terms of market served, with graduates continuing to undertake CPD throughout their careers. See [http://www.hm-treasury.gov.uk/independent\\_reviews/leitch\\_review/review\\_leitch\\_index.cfm](http://www.hm-treasury.gov.uk/independent_reviews/leitch_review/review_leitch_index.cfm)

<sup>9</sup> See for example the JISC user-owned technologies demonstrator projects ([http://www.jisc.ac.uk/whatwedo/programmes/programme\\_elearning\\_capital/el\\_tsle.aspx](http://www.jisc.ac.uk/whatwedo/programmes/programme_elearning_capital/el_tsle.aspx)), which are addressing the challenge of integrating personally owned and institutional technologies for learning.

<sup>10</sup> The research background to enquiry-based learning is summarised in two substantial articles on the resources page of the Centre for Excellence in Enquiry-Based Learning (CEEEL): <http://www.campus.manchester.ac.uk/ceebll/resources/>

## Previous JISC-funded projects and relevant outcomes

The JISC Design for Learning programme<sup>11</sup> ran from 2006 to 2008, assisting practitioners in the processes of designing, planning and managing learning activities, and promoting the development and implementation of tools and standards to support these processes. Two projects were funded to develop educational planning tools<sup>12</sup>, to help practitioners make sound decisions in the planning of learning sessions and programmes. Other projects have developed tools and approaches to support design of learning activities, for example in systems such as LAMS and ReLoad/ReCourse, or using Generative Learning Objects, or have developed designs to support a particular vision of the curriculum, or have shared designs of various kinds to support more effective practice. The programme developed a process model, summarised right, with design processes taking place at the four levels of: course design, session planning, activity design, and learning object development. Tools and outcomes aimed at the course design level are most relevant to this call, but many outcomes from this programme may be of value to potential bidders.

course design

session planning

activity design

LO development

JISC has supported the development of a series of models or domain maps which aim to describe the various functions, processes, information and technical services that make up an area of practice. These play a key role in bridging the world of users with the underlying invisible world of technical services and provide a route for institutional planners and users to finding appropriate tools and services that meet their needs. The domain maps of particular relevance to this call are eXchanging Course-Related Information (XCRI<sup>13</sup>), Course Validation Reference Model (CoVaRM<sup>14</sup>), Programme Specification Domain Map (P-SPEX<sup>15</sup>), LADIE (Learning Activity Design in Education<sup>16</sup>) and FREMA (e-learning Framework REference Model for Assessment<sup>17</sup>). The original XCRI project produced a full draft specification<sup>18</sup> for sharing of course-related information, including all the data elements required to exchange such information effectively. The CoVaRM project has produced a canonical (i.e. standard) process model for course validation<sup>19</sup>. Both are essential reading for projects looking to support effective curriculum design through better management of information.

The Digital Libraries in the Classroom Programme<sup>20</sup> was jointly funded by JISC and the National Science Foundation and aimed to bring emerging technologies and readily available digital content into mainstream educational use. The four large-scale projects ran from 2003 to 2007. These projects have achieved a range of outcomes relating to digital repositories, collaborative course design, and the use of innovative technologies to enhance the learning experience, including a variety of models for re-designing the curriculum and some useful case studies to illustrate these. The DialogPlus project also produced a toolkit to support the learning design process<sup>21</sup>.

The Scottish Funding Council have recently funded a large scale e-Learning Transformation Programme<sup>22</sup>, managed by the JISC, which aimed to support an accelerated process of

<sup>11</sup> [http://dfi.cetis.ac.uk/wiki/index.php/Main\\_Page](http://dfi.cetis.ac.uk/wiki/index.php/Main_Page)

<sup>12</sup> see <http://www.wle.org.uk/d4/> and <http://phoebe-app.conted.ox.ac.uk/>

<sup>13</sup> <http://www.xcri.org>

<sup>14</sup> [http://www.jisc.ac.uk/whatwedo/programmes/elearning\\_framework/elfref\\_tvu.aspx](http://www.jisc.ac.uk/whatwedo/programmes/elearning_framework/elfref_tvu.aspx)

<sup>15</sup> [http://www.jisc.ac.uk/whatwedo/programmes/programme\\_elearning\\_capital/courseinfo/pspex.aspx](http://www.jisc.ac.uk/whatwedo/programmes/programme_elearning_capital/courseinfo/pspex.aspx)

<sup>16</sup> [http://www.jisc.ac.uk/whatwedo/programmes/elearning\\_framework/elfref\\_southampton.aspx](http://www.jisc.ac.uk/whatwedo/programmes/elearning_framework/elfref_southampton.aspx)

<sup>17</sup> [http://www.jisc.ac.uk/whatwedo/programmes/elearning\\_framework/elfref\\_frema.aspx](http://www.jisc.ac.uk/whatwedo/programmes/elearning_framework/elfref_frema.aspx)

<sup>18</sup> [http://www.elframework.org/projects/xcri/efc\\_r1.0.xsd/view](http://www.elframework.org/projects/xcri/efc_r1.0.xsd/view)

<sup>19</sup> <http://covarm.tvu.ac.uk/covarm/results.jsp>

<sup>20</sup> [http://www.jisc.ac.uk/whatwedo/programmes/programme\\_dlitc.aspx](http://www.jisc.ac.uk/whatwedo/programmes/programme_dlitc.aspx)

<sup>21</sup> See the DialogPlus Toolkit: <http://www.nettle.soton.ac.uk/toolkit/>

<sup>22</sup> [http://www.jisc.ac.uk/elearning\\_sfc.html](http://www.jisc.ac.uk/elearning_sfc.html)

institutional change using e-learning technologies. The six projects were driven by specific challenges related to learning, and used technology to transform a range of institutional processes. The areas covered included: supporting the transition from college to university, the first year experience, staff development, developing learning materials, curriculum re-design, re-engineering assessment, personal development planning (PDP) and e-portfolios, and work-based learning. Project outputs offer a rich source of models, frameworks and case studies to support curriculum re-design.

The Benchmarking and Pathfinder Programme<sup>23</sup> was launched by the Higher Education Academy, in partnership with JISC, in late 2005. During the benchmarking of e-learning exercise, institutions undertook a structured process of analysis and reflection of their e-learning provision, processes, and practice. The associated Pathfinder initiative provided eligible institutions with an opportunity to undertake an enhancement/transformation project which was informed by their earlier benchmarking exercise. A number of pathfinder projects are working in the area of quality, curriculum design and learning resources: projects at Oxford Brookes<sup>24</sup>, Leicester<sup>25</sup>, Hertfordshire<sup>26</sup> and the Institute of Education<sup>27</sup> may be of particular interest. Briefings from Oxford Brookes and the Institute of Education are available from the Pathfinder blog<sup>28</sup>, as are links to other pathfinder projects.

Several CETLs have produced outcomes relevant to the curriculum design area, including the SOLSTICE CETL<sup>29</sup>, which has developed a model for staff engaged in the process of planning, design, and development of online delivery;

The e-Learning team have recently been working with JISC Infonet to pull together a range of outcomes from previous JISC funded programmes in the activity area broadly defined as 'Learning Resources and Activities'. These include reports, websites, toolkits, models, frameworks, cookbooks and case studies. The aim is to provide one place for people to access such content to support their own work and prevent duplication. This resource is currently in development but should prove particularly useful to projects funded under this call<sup>30</sup>.

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<sup>23</sup> <http://elearning.heacademy.ac.uk/weblogs/pathfinder/wp-content/uploads/2007/11/BenchPathfinderEssentialsBriefing.pdf>

<sup>24</sup> <http://mw.brookes.ac.uk/display/BrightUintens/Brighton+University+Pathfinder+Design+Intensives>

<sup>25</sup> <http://www2.le.ac.uk/projects/adelie/adelieblog/carpediemreflect/?searchterm=reflections>

<sup>26</sup> <http://perseus.herts.ac.uk/uinfo/info/blu/blu/projects/cable-pathfinder.cfm>

<sup>27</sup> [http://www.lkl.ac.uk/research/benchmarking/wp-content/uploads/wle\\_op2.pdf](http://www.lkl.ac.uk/research/benchmarking/wp-content/uploads/wle_op2.pdf)

<sup>28</sup> <http://elearning.heacademy.ac.uk/weblogs/pathfinder/>

<sup>29</sup> <http://www.edgehill.ac.uk/solstice/values.htm>

<sup>30</sup> <http://www.jiscinfonet.ac.uk/themes/lra>