## JISC

## Enhancing Curriculum Design with Technology

Outcomes from the Jisc Institutional Approaches to Curriculum Design Programme

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Jisc is an independent education charity, owned by the Association of Colleges (AoC), GuildHE and Universities UK (UUK). It enables people in higher education, further education and skills in the UK to perform at the forefront of international practice by exploiting fully the possibilities of modern, digital empowerment, content and connectivity. Jisc has been at the forefront of the practical application of technology in colleges and universities for over two decades. We've earned a reputation as a trusted partner for the education and research sectors and today we combine the latest in digital thinking, network and IT services with access to content and resource procurement to deliver new and better ways of working for all customers to achieve operational advantage.

## Introduction

Enhancing Curriculum Design with Technology offers points for discussion, pragmatic tips and hands-on resources from the Jisc Institutional Approaches to Curriculum Design Programme to enable those involved in curriculum design and approval in higher education to enhance their practices through the use of technology.

During 2008–2012, the Institutional Approaches to Curriculum Design Programme (otherwise known as the Curriculum Design Programme) investigated how curriculum development can be made more agile, flexible and responsive with the support of technology. Running in parallel was a partner programme, Transforming Curriculum Delivery through Technology, which explored the impact of technology on the delivery of the designed curriculum to students.

During the four-year lifespan of the Curriculum Design Programme, 12 projects based in UK universities addressed some significant organisational, technical and educational issues in their bid to enhance curriculum design in their institutions. Their achievements demonstrate the potential for substantial change in the systems, processes and practices relating to curriculum design in institutions of varying types and backgrounds. While the programme has resulted in some significant reforms to institutional systems, outcomes have also included enhanced design practices. Chief among these has been greater recognition of the value of team-based approaches to curriculum design and an increase in opportunities for dialogue and collaboration. Strategies for stakeholder engagement, partnerships with students and opportunities for reflective, community-based design activities have all been significantly advanced through the work of the programme.

The focus of this publication is on such practice-based outcomes. While recognising the impact of streamlined systems on curriculum design, **Enhancing Curriculum Design with Technology** offers readily transferable strategies, ideas and resources to assist those involved in curriculum design in improving the relevance and responsiveness of practices in their institutions – aims that have increasing urgency in an uncertain economic climate. Enhancing curriculum design, after all, is a fundamental step towards enhancing the learning experiences of students.

"The ultimate goal [of the programme] has always been to enhance the curriculum offer, making it more responsive to new markets and needs, more sustainably delivered, more flexible, and more attuned to the capabilities required by graduates in the 21st century."

Institutional Approaches to Curriculum Design: Final synthesis report

## About curriculum design

Much has been learned from the Jisc Curriculum Design Programme about the processes and practices of curriculum design and how these can be enhanced through the use of technology.

Broadly speaking, we now understand that curriculum design entails two types of activity: educational design – the decisions taken by curriculum teams as they design the learning experience – and connected institutional processes – for example, information management, market research, marketing, quality enhancement, quality assurance and programme and course approval.

Thus curriculum design is likely to involve a complex interplay between the institution's mission and values, underpinning systems and processes and the expertise of those developing and delivering curricula in higher education. Changing one aspect such as business and course information can have a knock-on effect elsewhere, for example, on approval or recruitment.

Greater competition is bringing these processes and practices into sharper focus as students look for a wider range of benefits from their courses. However, established practices all too frequently work against the agile, responsive curricula required by 21st century institutions, students and employers. Enhancing even some aspects of curriculum design can help universities, and those studying or working with them, to gain an advantage in challenging times.

Curriculum design is generally understood as a high-level process defining the learning to take place within a specific programme of study, leading to specific unit(s) of credit or qualification

#### Enhancing curriculum design

Tackling the challenges associated with curriculum design by means of technology was the aim of the 12 projects in the programme. Their work has demonstrated that harnessing the full potential of technology can revolutionise a number of curriculum design processes and practices.

#### In terms of design processes, these have included:

- Improved information flow
- Reliable 'single-truth' sources of information
- More efficient administrative processes
- Efficiency and effectiveness gains from streamlined approval events
- Improved access to pedagogical guidance for those designing and describing curricula
- Greater consistency in quality assurance and approval procedures

Design practices have also been enhanced by skilful uses of technology. In particular, technology has offered new ways of visualising, capturing and discussing designs, bringing originality and collaboration to what has all too often been a risk-averse, insular process. Designs can also be more readily shared through technology, for example, with employers and professional bodies. And with the introduction of technology has come the involvement of a wider range of professionals in the design process, and a greater emphasis on students as partners in curriculum design.

#### Enhancements to design practices have included:

- A greater focus on the design process, allowing for light-touch approval events
- Richer ways of engaging stakeholders, including students, in the development of curricula
- Effective ways of representing and modelling curricula
- Reduction in the time spent on administrative tasks
- Improved understanding of educational principles as a benchmark for design quality



#### About this publication

**Enhancing Curriculum Design with Technology** is structured around the sequence of activities typically involved in the design cycle. A representation of the cycle can be found in the centre pages of the publication.

The focus in each section of the cycle is on sharing achievements, lessons learned and resources from the programme to support more effective approaches to curriculum design. Owing to the interlinked nature of the activities involved in curriculum design, the publication also touches on enhancements to information management, communication processes and the wider student experience that become possible when institutions fully embrace the use of technology in the systems and processes that underpin the curriculum.

To differentiate between background information and guidance of a more immediate nature, the content of each section is divided into two parts: **Important to know** and **Strategies to try**. You will also be prompted to try resources developed by the projects by following links in the **Over to you** sections.

#### Who this publication is for

A wide range of roles are touched by or directly involved in curriculum design – from curriculum managers to students, from marketing departments to quality assurance personnel, from professional and administrative staff to curriculum managers and academic teams. Thus this publication will be of relevance to you if your day-to-day work involves:

- Curriculum design and approval
- Strategic approaches to learning and teaching
- Management and marketing of programme and course information
- Promotion of graduate attributes and employability skills
- Educational development
- Quality assurance and enhancement

Through this publication you can:

- Find out about recent Jisc-funded work on innovative approaches to curriculum design
- Discover the benefits gained and lessons learned
- Become better informed about underpinning systems and processes
- Consider curriculum design initiatives of your own
- Explore new resources to support you on your journey

Further information on the Jisc Curriculum Design Programme can be found in a dynamic web-based toolkit, the Design Studio.

#### http://jiscdesignstudio.pbworks.com

Complementary resources on process improvement, course information management and other curriculumrelated topics can be found at www.jiscinfonet.ac.uk/curriculum

## Engaging stakeholders

#### What this means

Involving stakeholders in the practices of curriculum design introduces fresh insights that can change for the better the way a course or module is designed and realised.

Most institutions already have in place strategies for involving students, employers and professional bodies in curriculum design and, increasingly, the contribution of other stakeholders is being recognised. Professional and IT staff, business and community representatives and student alumni, for example, can all play a part in developing the curriculum. Who the key stakeholders are in your context is one of the first questions to resolve.

Meaningful engagement of each stakeholder group is the next challenge; choosing the most appropriate strategy for each individual stakeholder enables dialogue to be successfully initiated and sustained. Online discussion tools, for example, enable conversations to commence and be sustained at a distance while learning design tools offer a more sophisticated means of visualising and sharing designs with stakeholders – the rich representations of the curriculum such tools support can make designs more accessible for some stakeholders. For others, face-to-face, hands-on activities work better; captured as digital images, the evidence generated from face-to-face collaboration can have a value beyond a particular moment in time.

#### What we have learned

Projects in the Jisc Curriculum Design Programme developed a wealth of experience in stakeholder engagement, providing greater understanding of the potential pitfalls as well as a richer variety of engagement strategies.

#### Important to know

It can be difficult to identify the full spectrum of individuals with a stake in the development of a curriculum. Important but often overlooked roles with a gatekeeping function include those involved in the day-to-day management of academic quality.

- Engaging the interest of each stakeholder group is the next key step. Dialogue has to be framed in a way that is accessible to each stakeholder and expectations carefully managed so that shared, achievable goals remain at the core of the agenda.
- Stakeholders on the periphery of the design process, such as potential students, need clear information about the nature and extent of their involvement to avoid raising expectations that are difficult to meet. Nonetheless, widening the range of stakeholder groups can only enrich your understanding of what makes a design effective and help you recognise and address wider issues.

- As levels of engagement are likely to vary in line with the degree of involvement in the design process, using frameworks for communication, such as the stakeholder engagement matrix produced by Birmingham City University's Technology-Supported Processes for Agile and Responsive Curricula (T-SPARC) project, can help you prepare for different types of interaction.
- Workshops provide time and space away from daily routines so are often the most effective strategy for engaging internal stakeholders. There are also benefits to be gained from blogs and online communities, either as follow-up activities or as a means of engaging the wider design community as demonstrated by the Open University's Cloudworks tool.
- Educational principles provide common ground which can frame discussions with stakeholders. Activities in a workshop setting offer an equally powerful and unthreatening way of addressing curriculum challenges.
- Planning ahead helps make full use of information acquired from stakeholders. For example, digital records of stakeholder interviews can be used for other purposes such as building a business case and thus repay the time and effort expended. The process of recording can also result in a closer working relationship with stakeholders.

"Curriculum design and approval is one of the few institutional processes in which almost all faculty-level processes and central services have a stake."

Principles in Patterns (PiP) project, University of Strathclyde

 While it is not easy to engage all those who have a stake in a curriculum, the benefits of doing so are considerable. And in some cases, the engagement process itself can engineer a new consensus which helps you implement solutions to challenging issues.

#### **Inside story**

The Supporting Responsive Curricula (SRC) project at Manchester Metropolitan University worked with employers and professional bodies to identify the skills expected of graduates as they enter employment. The project mapped competences required by professional bodies in the health care sector to help students evidence appropriate skills in their e-portfolios. The team went on to develop a tool for tagging assignments with employability standards, making employment-related skills a transparent and achievable target for all course teams. SRC project, Manchester Metropolitan University

#### Inside story

The UG-FLEX project at the University of Greenwich devised different engagement strategies for each stakeholder group to clarify the meaning of flexibility in the curriculum from different perspectives. Rich picture workshops explored the issues for curriculum staff, while 'world café' conversations were the preferred approach with students. The success of the project's engagement strategies led to wider institutional changes, including reorganisation of the academic timetable to allow flexible use of the university's estate for learning and teaching across the academic year.

"UG-FLEX came along and people started to systematically try to work through and disentangle and pull out... issues and look at them in a systematic way." UG-FLEX project, University of Greenwich

## Over to you

#### Resources to try

Birmingham City University T-SPARC project Stakeholder engagement matrix http://bit.ly/jisc-tsparc-sem

#### University of Greenwich UG-FLEX project Rich pictures

http://bit.ly/jisc-ugflex-rp

Video clips on stakeholder engagement http://bit.ly/jisc-ugflex-videos

World cafés http://bit.ly/jisc-ugflex-wc The Open University Learning Design Initiative-Jisc (OULDI-Jisc) project

Cloudworks http://bit.ly/jisc-ouldi-cloud

#### Links to follow up

Manchester Metropolitan University SRC project http://bit.ly/jisc-src

University of Greenwich UG-FLEX project http://bit.ly/jisc-ugflex

## Making the case

#### What this means

It is increasingly important that the rationale for a new programme or course demonstrates awareness of future trends as well as alignment with current institutional aims and aspirations.

At this stage of the cycle, curriculum designers begin to analyse the context in which the curriculum will be delivered. Thinking ahead is important in curriculum design. Asking questions such as: *What kind of students does the institution want to attract in three years' time? How is the student body changing? What is expected of graduates in the workplace?* can result in a firmer rationale.

Market research teams, alumni, employers and professional bodies provide equally valuable routes to identifying and addressing market trends, changes in the workplace or developments in professional roles that could affect the relevance of the curriculum over the long term. Where a new programme or course is being proposed, the robustness of the business case is particularly important. In this case, the use of business modelling tools can prove helpful.

#### What we have learned

Projects in the Jisc Curriculum Design Programme came to understand the importance of building an effective business case for a proposed programme or course. Their experiences offer valuable insights into this aspect of curriculum design.

#### Important to know

- Making the case for a programme or course is an integral part of the design process. All involved should be able to articulate a rationale for the course that takes into account its relevance to emerging trends.
- A sound business case is dependent on good market intelligence which itself is dependent on robust strategies for stakeholder engagement and the accuracy of information from previous iterations. Innovative new designs which cannot draw on information of this kind must seek other means of establishing their validity.

Innovative curriculum approaches frequently entail significant changes to processes and practices and therefore present a greater challenge. Where the innovation is to take place alongside or as part of mainstream course delivery, established processes and cultures can present barriers as in resource distribution and management. Modelling software such as the open source solution, Archi, can help visualise where these issues might arise.

- Curriculum designers who have access to centralised course data have an advantage when developing a rationale for future offerings. Where this does not apply, it is important to discuss with those responsible how information flow might be improved to enable you to develop a well-informed case.
- The timing of stakeholder engagement can be crucial to a successful business case. Market research teams, for example, can help identify trends in the market and should be involved at an early stage. Business cases at a more mature stage of development can be shared with marketing, support and professional staff to obtain their views on your proposals for resourcing, supporting and promoting the course.
- Consider who your partners are when developing your rationale. Students, who are increasingly recognised as key partners in curriculum design, can help you evaluate how far the proposal meets the needs of those who might apply for the course. At a very early stage in the design process, you can thus address needs such as the flexibility required by work-based or part-time students.
- A sound business case not only outlines course content but also considers how information about the course will be communicated to potential students and employers. Student-facing course descriptions as produced by Cardiff University's Programme Approval Lean Electronic Toolset (PALET) project, for example, enable applicants to fully understand what the course entails.

"A key purpose of the validation process is the establishing of a business case for a proposed new course, something that is widely recognised as being very difficult to do."

Coeducate project, University of Bolton

 When developing the rationale for a new programme or course, be aware of institutional initiatives or strategic intentions that might have a bearing on your proposal. Examples include aims to enter new markets or improve flexibility for work-based and part-time students. Demonstrating the benefits to be gained from the use of technology can further strengthen your case.

#### Inside story

Cardiff University's PALET project worked to improve the feasibility of new programmes at the university by exploring different approaches to business case planning, ranging from a light-touch approach to complex, highly collaborative business propositions. Recognising the need to balance the academic focus of approval events with greater awareness of market relevance, the project produced a template to capture information about the rationale, resources and costs associated with a proposal going forward to approval.

PALET project, Cardiff University

#### Inside story

The University of Bolton's **Coeducate project** has developed and validated a new framework for interdisciplinary, inquiry-based learning that enables work-based students to negotiate their own curriculum. In making the case for this innovative approach, the team discovered the importance of good market intelligence, clear communication of course aims and effective business modelling tools. Out of all the challenges the project met in its ground-breaking work, obtaining reliable market intelligence was singled out as one of the most critically important stages in the development of a successful business case.

"In... developing new programmes, a common comment is the difficulty of creating a business model that is required for validation and, in particular, the difficulty in obtaining reliable market intelligence for expected student numbers." Coeducate project, University of Bolton

#### Over to you

#### **Resources to try**

#### Cardiff University PALET project

Business case template http://bit.ly/jisc-palet-bcase

Student-facing programme and module specification templates http://bit.ly/jisc-palet-pms

#### Jisc CETIS

Archi modelling software http://archi.cetis.ac.uk

#### University of Bolton Coeducate project

A framework for interdisciplinary, inquiry-based learning http://bit.ly/jisc-coed-idbl

#### Links to follow up

Cardiff University PALET project http://bit.ly/jisc-palet University of Bolton Coeducate project http://bit.ly/jisc-coed1

## Capturing the process

#### What this means

During the design process, complex decisions are made about the educational aims of courses, and the specific learning approaches, activities and assessment regimes to be adopted.

Capturing these decisions and the discussions that have informed them is often overlooked by those involved but digital media can readily be used for this purpose. Design tools and modelling languages offer more formal approaches.

The benefits of capturing the design process, by whatever medium, are considerable. Digital recordings and representations of the curriculum make preceding deliberations and their outcomes accessible and transparent to others. Decisions can then be justified and explained to everyone involved, from external assessors to staff who may be delivering the course several years into the future. There may even be cost benefits if greater transparency leads to improved efficiency.

#### What we have learned

A number of projects in the Jisc Curriculum Design Programme have pioneered ways of capturing design processes in digital formats. In doing so they have demonstrated the potential to introduce light-touch approval events and increased opportunities to disseminate good design practices.

#### Important to know

Design decisions and the discussions around them are often richer, and more complex and original, than would appear the case from formal approval documents. Little of the deep understanding curriculum teams possess of effective learning and teaching, for example, is captured in traditional, paper-based approaches to approval. As a result, there is a growing commitment to bringing the real world of curriculum design into the approval process.

- Capturing the diversity of curriculum design practices was also for some institutions the first step towards more efficient approaches to curriculum design. Closer analysis of activities on the ground sometimes revealed unhelpful complexity and duplication of effort alongside rich design practices. As a result, some projects worked on formalising approaches to curriculum design using modelling or formal process analysis derived from the world of business.
- Nonetheless, a balance needs to be struck between standardising capture processes and enabling the creative decision making of curriculum staff to flourish. Although the richness and diversity of real-world design processes can be difficult to bring into formal approval events, capturing these processes can encourage innovation, improve transparency and make possible lighter-touch approaches to approval. As digital assets, recordings and representations of these design processes can also be shared with others to disseminate effective design practices.

- Capturing curriculum design discussions as digital media files is straightforward and offers a number of benefits.
  Caught on camera, decision making can be made transparent and meaningful. Dialogue with external stakeholders such as professional bodies or employers can be easily verified. And, in some cases, interviews on video can change the very nature of the engagement, encouraging greater thoughtfulness about the curriculum. It should be noted, however, that digital recording requires a data protection policy for collecting and sharing recorded media.
- Formal approaches to process modelling can prove helpful in determining where current design processes can be made leaner and more efficient. Such analyses are equally important in the development of radically new curricula. A simple approach to process mapping that works well as a course team activity is demonstrated by the PALET project's curriculum approval process map.

"Anything that can tighten up thinking about why we are producing what we are producing is a good thing, and it is financially a good thing because it can speed up some of the other decisions."

Open University Learning Design Initiative-Jisc (OULDI-Jisc) project, The Open University

- Sharing the outcomes of your design discussions and curriculum modelling activities via an online platform can provide a repository of design ideas that helps build tacit knowledge and understanding of curriculum issues and potential solutions across the institution.
- Thus capturing design processes can establish a richer, more holistic understanding of curriculum design as well as enhancing the efficiency and responsiveness of the processes involved.

#### **Inside story**

The **PiP project** at the University of Strathclyde developed an online system known as C-CAP which replaced paper-based design and approval processes. By providing timely pedagogic guidance to staff as they engage in the design process, the system builds understanding of what constitutes educationally sound decision making. Designs that have been proposed and reviewed via C-CAP are then added to an online repository providing a reference point for staff across the institution.

PiP project, University of Strathclyde

#### Inside story

The **T-SPARC project** at Birmingham City University has developed a radically new approach to approval. One-off, paper-based validation events are replaced by a continuous process of curriculum development and enhancement captured via digital media and supported through Microsoft<sup>®</sup> SharePoint<sup>®</sup>. To guide course teams in implementing this innovative approach, the T-SPARC project team has produced a rough guide to curriculum design, confident of the benefits the new system offers for integrating authentic, real-world practices into formal approval processes.

"If you can see real examples of those students in practice, doing an assignment, working on a project, that's going to be so much more powerful... because you can see behind the words."

T-SPARC project, Birmingham City University

### Over to you

#### **Resources to try**

#### Birmingham City University T-SPARC project

Data protection policy for collecting and sharing recorded media

#### http://bit.ly/jisc-tsparc-dp

The Rough Guide to Curriculum Design http://bit.ly/jisc-tsparc-rg

#### Cardiff University PALET project

Curriculum approval process map http://bit.ly/jisc-palet-cpm

#### University of Strathclyde

Introducing C-CAP http://bit.ly/jisc-pip-youtube

#### Links to follow up

Birmingham City University T-SPARC project http://bit.ly/jisc-tsparc University of Strathclyde PiP project http://bit.ly/jisc-pip

## Enabling design conversations

A key theme from the Jisc Curriculum Design Programme is the importance of dialogue. Indeed, the programme establishes design as an inherently collaborative activity.

## What we have learned about tools for planning and discussing curriculum design

#### Important to know

- Learning design tools such as the OULDI-Jisc project's
  CompendiumLD can support a full range of design activities from programme creation to learning activity design. Such tools enable curriculum designers to model the curriculum then share and discuss the outcomes with stakeholders.
- However, time and commitment are needed to learn new tools. While virtual design practices offer some efficiencies, they should be seen as enhancing the quality of design conversations rather than saving time.
- Finding a way of representing educational designs that is clear and acceptable to all disciplines and cultures still remains a challenge.

- Curriculum staff can also be reticent about sharing designs online.
- Nonetheless, virtual spaces in which curriculum teams can discuss design issues and develop successful outcomes are an invaluable way of enabling an iterative, high-quality approach to curriculum design.

#### Strategies to try

- The value placed by staff on faceto-face activities suggests that combinations of workshops and online design activities may prove the most effective means of facilitating design conversations.
- A format that meets the needs of most stakeholders is a time-based representation of the designed course or module linked to a set of educational principles or proven approaches. This activity can be conducted online as well as face to face.
- Learning design tools are not the only option. Generic technologies such as Google Docs™ or Microsoft Sharepoint can also support collaboration on curriculum design.

#### Inside story

The CompendiumLD tool developed by the **OULDI-Jisc project** offers curriculum designers a number of benefits. Chief among these is the ability to collaborate on design activities at a distance. In addition, the project has developed a set of course mapping and profiling templates and activities. Available in the Cloudworks Learning Design Toolbox, these simpler tools help visualise the consequences of design decisions on pedagogy, cost and the student experience.

"One of the OULDI-Jisc project's key aspirations is to enable teachers to shift away from a focus on content and subject matter to thinking more holistically and laterally about the design process." OULDI-Jisc project, The Open University

## "A new delivery mechanism can change a design totally... ...so new technologies in particular can drive the design process." T-SPARC project, Birmingham City University

## Over to you

#### **Resources to try**

Digital tools and activities to support designing, visualising and discussing the curriculum

## The Open University OULDI-Jisc project

The Learning Design Toolbox offers a suite of tools to enable staff design, visualise and share representations of the curriculum. These include:

Cloudworks: a tool for networking, sharing and discussing design ideas http://bit.ly/jisc-ouldi-cloud

CompendiumLD: a tool for planning, representing and sharing sequences of learning activities

#### http://bit.ly/jisc-ouldi-comld

Course features cards: downloadable cards to help teams design and describe their courses http://bit.ly/jisc-ouldi-cfc

Course map: a tool for mapping course or module elements http://bit.ly/jisc-ouldi-cmap

Digital literacy facilitation cards: downloadable cards to embed digital literacies in the curriculum http://bit.ly/jisc-ouldi-dlfc

OULDI-Jisc learning design 'lite' workshop template: introductory activities on learning design http://bit.ly/jisc-ouldi-lite

Activity (Pedagogy) profile: a tool for mapping learning activities http://bit.ly/jisc-pedprof

## Other tools to support online design activities

#### Cardiff University PALET project

The PALET project set up an online community in Lotus® (now IBM) Connections

Supporting curriculum design workshops

http://bit.ly/jisc-palet-wshop

#### Staffordshire University Enable project

The Enable project combined a number of simple, readily available technologies to support discussion

Technology-supported learning development planner http://bit.ly/jisc-enable-ldp

#### University of Bolton Coeducate project

The Coeducate project developed an online version of the Viewpoints storyboard activity, allowing cards to be placed on a canvas, annotated and shared virtually

Design widget http://bit.ly/jisc-coed-vld

#### Links to follow up

Jisc Institutional Approaches to Curriculum Design: Final synthesis report

#### http://bit.ly/jisc-cdsynthesis

The Open University OULDI-Jisc project http://bit.ly/jisc-ouldi

# The curriculum design cycle

### The case for change

When the Jisc Curriculum Design Programme was launched, design practices were often localised, unquestioned and unresponsive to changing circumstances. Through a combined focus on organisational, technical and educational issues, the work of the projects has introduced transformative approaches to curriculum design, sometimes on an institution-wide scale.

"Without exception, the discussions that take place during panel events demonstrate the presence of better design than is obvious through the documentation."

"The baseline review found that the formal module production process required limited consideration of pedagogy early in the module development process."

"When you are expected to produce a document within quite a short space of time, it's quite problematic having to go around accessing lots of different people and get the information from a number of different sources."

"A primary driver for the project at the outset was a belief that the university's systems and processes were acting as a constraint to the development of a more flexible curriculum."

> "A focus on the products... rather than the process of curriculum design distracts activity away from rich team discourse and innovative solutions to curriculum design challenges."

Capturing the process

Making the case

> Engaging stakeholders



#### Outcomes from the programme

Communicating

the outcomes

Enabling conversations

Validating

"The management of curriculum designs as 'knowledge assets' was considered to support a number of key academic quality processes and better enable responsive A holistic view of the student curriculum design." experience

> Awareness of technology as an enabling factor

"The successes at more than one of the external pilots have undoubtedly strengthened the internal case for adopting a learning design approach."

"It is possible

to achieve success in

A culture of

Awareness of the

approaches

responsiveness

to change

changing or improving the process, practice value of team-based and perception of curriculum design yet this requires a combination of elements working together."

Trusted, timely course information

> Realising the design

Feedback review

> Supportive communities of practice

"... engaging stakeholders with ideas is very difficult as long as they remain just ideas, but demonstrators and prototypes which allow a hands-on experience can be much more effective."

Course Tools project, University of Cambridge

### Over to you

#### Resources to try

## Adaptable tools for face-to-face activities

## Manchester Metropolitan University SRC project

The SRC project offers a set of cards representing teaching and learning activities, types of assessment and outcomes relating to employability and sustainability to prompt discussion around course design issues

Course planning cards http://bit.ly/jisc-src-cpc

## University of Greenwich UG-FLEX project

The snakes and ladders tool developed by the UG-FLEX project is designed to help academic staff understand the challenges faced by students before, on arrival and during the first year of study. The resource comes with a guide and downloadable templates Snakes and ladders tool http://bit.ly/jisc-ugflex-sl

## University of Ulster Viewpoints project

The Viewpoints project offers a series of user-friendly, reflective resources for use in workshops on curriculum design. The resources have been tested with a range of stakeholders, including student representatives

Assessment and feedback cards

Creativity cards

Information skills cards

Learner engagement cards

Module and course view timeline worksheets

http://bit.ly/jisc-viewpoints

#### Links to follow up

Jisc Curriculum Design Programme http://bit.ly/jisc-curdesign

University of Ulster Viewpoints project http://bit.ly/jisc-viewpoints

All resources are available to download under a Creative Commons licence for use in an educational context and can be modified to suit your purpose.



"An overwhelming theme from feedback... was the opportunity... to take 'time-out' from the day-to-day academic role and focus on the design of [a] module."

Open University Learning Design Initiative-Jisc (OULDI-Jisc) project, The Open University

It is not only in online environments that design conversations flourish. Many projects record the high value staff place on collaborative, faceto-face activities such as workshops.

## What we have learned about workshops on curriculum design

#### Important to know

- Workshops provide much needed time away from daily routines to focus on curriculum design. In the neutral space of a workshop, groups of stakeholders can combine to discuss curriculum challenges and learn from each other's perspective. In most cases, the dialogue that ensues is as valuable as the outcomes.
- Workshops enable a shared language to develop, establishing curriculum design as a professional, collaborative practice based on educational principles.

 Curriculum staff are more likely to be guided by educational principles in their decision making after taking part in workshop activities that establish these as a benchmark.

#### Strategies to try

- Workshop activities run more smoothly if simple, tangible formats, such as cards and timelines or rich pictures, are used to prompt discussion and develop ideas.
- As activities work in different ways for different users, a pick-and-mix approach is likely to be more effective than a one-size-fits-all methodology.
- A representation of the curriculum as experienced by students is an ideal goal for all participants. These representations should always be recorded for reuse, ideally, in formats that can be shared with stakeholders.
- An online community provides a forum in which design conversations can be sustained over a longer period.

#### Inside story

The University of Ulster's **Viewpoints project** has created storyboarding activities for face-to-face workshops based around a canvas and sets of cards that can be selected, arranged, annotated and used as prompts to decision making. The success of the approach shows that time set aside for reflective, hands-on activities can make a significant difference to the forward thinking of curriculum teams. Most importantly, pedagogic values are placed back at the heart of the design process.

"In the workshop, these tools help participants... to identify solutions to curriculum design challenges and to maintain an educational rather than content focus, a learning focus rather than a teaching focus." Viewpoints project, University of Ulster

## Validating

#### What this means

The process of compiling evidence for validation or approval is time-consuming but often fails to capture the quality of preceding discussions. As a result, a gap is often felt to exist between formal validation processes and the real-world practices of curriculum design.

Now lighter-touch approval events are coming forward in which curriculum designers demonstrate the quality of their design process rather than simply documenting the outcomes. Approval panels are meeting in new ways and considering new kinds of evidence based on an assumption of continuous curriculum enhancement. There is reason to believe these more agile processes provide a better framework for assuring the quality and appropriateness of curricula.

#### What we have learned

Tackling challenges associated with validation has been the aim of several projects in the Jisc Curriculum Design Programme. Their work has been both exploratory and innovative but nonetheless points towards potentially valuable reforms.

#### Important to know

- In some institutions, a radical overhaul of systems, processes and procedures relating to the curriculum has led to centralising and standardising quality assurance procedures and changing the focus of validation to bring the educational quality of the design into sharper focus.
- Despite support for a more systematic approach, traditional practices can still exert a strong hold; the culture of validation in some instances is more resistant to change than the mandated procedures themselves.
- Highly innovative approaches such personalised, negotiated curricula can struggle to gain approval in many validation regimes. Such innovations nonetheless offer valuable test cases against which institutional processes can be assessed for their flexibility and responsiveness.

 Dependence on large-scale, set-piece approval or validation events has been effectively challenged in institutions in which a process of continuous curriculum enhancement has been shown to support innovation without sacrificing quality.

- Institutional cultures vary widely and innovative approaches to validation cannot be undertaken without preparation. Mapping current validation and review processes and practices can establish a rationale for change; process maps can demonstrate where duplication and delays exist in current processes and provide a focus for constructive discussions with others.
- Structured online systems such as the University of Strathclyde's C-CAP system can provide more efficient workflows.
- Changing the way evidence is gathered can also transform approaches to validation. Video or audio interviews with stakeholders provide valuable records of the 'lived experience' of the curriculum. Equally, digital representations of the curriculum, and recorded conversations around their development, can provide evidence of the principles and frameworks that have informed the design.
- Digital evidence may initially need to be submitted alongside the mandated documentation to demonstrate the value of the new approach – a time consuming process in the first instance. It is also important to provide in advance a clear outline of any innovative approach to the approval panel and other stakeholders.
- Working within existing structures can prove just as fruitful. Inviting students to take part in approval and periodic review panels, for example, ensures that the quality of the student experience remains the focus of discussions. Student representatives offer a valuable perspective on the quality of the learning experience, and often respond favourably to digital evidence presented for validation.

"[We ran] workshops focused on mapping the current state of the curriculum design and approval processes, highlighting the positive parts of the process, the issues and challenges involved and noting any bottlenecks."

Programme Approval Lean Electronic Toolset (PALET) project, Cardiff University

Where innovative approaches meet with difficulties, the surrounding systems, cultures and working practices are at the very least exposed to critical view, laying the groundwork for later change.

#### **Inside story**

Some projects have found that modelling the big picture of the curriculum is essential to understand where dependencies, bottlenecks and unexpected consequences might occur in a proposed curriculum. For example, Archi, an open source modelling tool developed by Jisc CETIS, was used by Staffordshire University's **Enable project** to contrast the current and future state of business processes at the university. A similar approach was taken to bring together business processes, institutional regulations and pedagogic advice in the project's Flexible Learning Advice and Guidance (FLAG) tool which supports curriculum staff in developing innovative, flexible programmes. Enable project, Staffordshire University

#### Inside story

The SRC project at Manchester Metropolitan University also aimed to achieve curricula that were more responsive to the needs of students and employers. Streamlined documentation and transparent approval and review processes are some of the outcomes of an ambitious project that, in conjunction with the university's EQAL initiative, re-engineered the entire undergraduate curriculum with a sharper focus on formative assessment. At the same time, faculty-based approval processes were replaced by a centralised, light-touch review and approval system ensuring a more consistent student experience across all units of learning.

"The six-year cycle of programme review, modification and approval still takes place, but is now undertaken using a standing panel process."

EQAL initiative, Manchester Metropolitan University

## Over to you

#### **Resources to try**

#### Manchester Metropolitan University SRC project

Accreditation!: a board game based on curriculum design and approval processes http://bit.ly/jisc-src-accred

Staffordshire University Enable project FLAG tool http://bit.ly/jisc-enable-flag

#### University of Greenwich UG-FLEX project

UG-FLEX validation and review process map diagrams http://bit.ly/jisc-ugflex-vrp

#### University of Strathclyde

Introducing C-CAP http://bit.ly/jisc-pip-youtube

#### Links to follow up

Manchester Metropolitan University SRC project and EQAL initiative http://bit.ly/jisc-src

Staffordshire University Enable project http://bit.ly/jisc-enable

# Communicating the outcomes

#### What this means

The audiences for information about an approved course vary widely, ranging from professional bodies and employers to partner organisations and prospective students.

In addition, it is likely that curriculum information will be required for course marketing, student handbooks and reading lists, the virtual learning environment (VLE), Key Information Sets (KIS) and Higher Education Achievement Reports (HEARs). It is no wonder that the efficiency of information systems matters more each year to busy curriculum staff.

With such a variety of user needs, it is also unlikely that one format will suffice. Core information from the validation event may need to be supplemented or reformatted, exemplified or simplified to make it meaningful to all those with a stake in the curriculum. And to improve the flexibility and relevance of information provided, course-related services, information and resources need to be available on a range of platforms and in flexible ways to address the needs of all students.

#### What we have learned

During their initial research, projects in the Jisc Curriculum Design Programme found weaknesses in the communication of course information in their institutions. Enhancements introduced as a result of the programme achieved both educational gains and cost savings.

#### Important to know

- Prior to the work of the projects, management of course information at the funded institutions tended to be dispersed, document-based and poorly used, providing stakeholders with little incentive to engage in recording course information.
- Once processes were enhanced by means of technologysupported systems and improved documentation, benefits were experienced in terms of time and cost savings. For example, as a result of establishing a single source of module information at Cardiff University, the PALET

project estimated significant savings to the institution each year. Access to timely, accurate course information also enabled academic staff at the university make a speedier response to the requirements of the KIS.

- Curriculum staff similarly benefitted from the UG-FLEX project's work on systems interoperability which ended the necessity of re-entering course information into different systems. The reduction in time spent on these administrative tasks increased the time available for more creative aspects of curriculum design.
- However, unfamiliar data handling processes may initially increase the workload of administrative and curriculum staff. Thus the value of improving communication processes should be made evident to those most affected by modelling the process before and after a transformation initiative. In general, clear communication about the aims and progress of such an initiative is of high importance.

- Good design decisions need to be acted on swiftly as the curriculum moves into the recruitment and delivery phase. Important activities at this point include ensuring the language and timing of information is right for recipients. The Cardiff University PALET project, for example, produced revised programme and module specifications to ensure course information is transparent and accessible to students before they enrol.
- Revisions to course information templates can help you address key curriculum issues – such as the balance between formative and summative assessment – as you write course descriptions. Such small-scale enhancements can have a significant effect over time by setting a minimum requirement for design quality.
- Writing for different audiences nonetheless requires new skills. Forward-thinking institutions have invested in guidance for curriculum staff on writing student-facing course information. Centres for excellence in learning and teaching have often taken up this advisory role.

"The way in which a school engages with the information it provides to students and the way it engages with the design of its provision fundamentally affects the student experience."

Professor Mary Carswell, Pro-Vice-Chancellor (Academic and Employer Engagement), Birmingham City University

 Before the introduction of enhanced communication systems and processes, it is important to engage in dialogue with colleagues about the likely impact of the changes on workflows to ensure successful implementation of the initiative.

#### **Inside story**

Having first mapped all student-related systems at the university, the UG-FLEX project at the University of Greenwich made a series of bespoke changes to its student records system to increase the granularity of programme and course information, then made the system available to all users. For academic and administrative staff, the changes have enabled more effective management of curriculum-related information, while students benefit from improved access to up-to-date information and services relating to their programmes of study. These include online access to enrolment for overseas students, personalised timetables and course-related resources on the VLE. UG-FLEX project, University of Greenwich

#### Inside story

The **PALET project** at Cardiff University worked on several fronts to ensure more effective communication of course information. The project developed web services to enable academic schools to manage the publication of module data; they also restructured the information held in the student information system by developing templates for module and programme descriptions. These developments have transformed the ability of staff and students to access programme information. And there is a much greater likelihood that the information they use is consistent and accurate.

"It is not the cost benefit that is the greatest outcome here, it is... ensuring consistency in the information we are communicating to our students. This enhancement to the student experience is priceless." PALET project, Cardiff University

#### Over to you

#### Resources to try

#### Cardiff University PALET project

Student-facing programme and module specification templates

http://bit.ly/jisc-palet-pms

#### City University London Promoting Realistic Engaging Discussions in Curriculum Teams (PREDICT) project

Learning outcomes guidance

Revising module specifications: a guidance booklet Revising programme specifications: a guidance booklet Writing student facing documents http://bit.ly/jisc-predict University of Greenwich UG-FLEX project

Student systems map http://bit.ly/jisc-ugflex-ssm

#### Links to follow up

Cardiff University PALET project http://bit.ly/jisc-palet University of Greenwich UG-FLEX project http://bit.ly/jisc-ugflex

## Realising the design

#### What this means

Putting a design to the test in a real-world learning context is a key stage in the iterative cycle of curriculum design and redesign.

The curriculum design cycle enters a new phase once students interact with a designed curriculum. Close collaboration is now needed between the multi-professional teams who support learning and teaching – the IT, learning and library staff, careers officers, learning technologists and educational developers who work alongside academic staff to provide rich and rewarding learning experiences for students.

These staff may themselves need to develop new skills, hence the importance of accessible, rich and relevant staff development running in parallel to the delivery of the curriculum to build the capacity of teaching and support staff. Students who are involved in the development and delivery of innovative approaches to the curriculum may themselves require support.

Further considerations at this point in the cycle include the timeliness and accessibility of curriculum-related information and systems for monitoring progress as students engage with a designed curriculum.

#### What we have learned

Enhancing the learning experience and delivering more flexible, responsive curricula were aims identified by the Jisc Curriculum Design Programme. Outcomes from the programme range from systems enhancements to personalised curricula, from strategies for embedding curriculum initiatives to team-based approaches to staff development.

#### Important to know

 Outcomes from the programme indicate that student learning benefits from timely, personalised information about the curriculum; timetables, reading lists, assignment deadlines, even opportunities to search examination question databases, all help students progress more effectively through a taught curriculum. Enhancing information access is now a priority for many institutions.

- As designs are realised in a real-world context, technologysupported processes help monitor student engagement with their courses. Tracking tools, for example, provide warnings to curriculum staff of emerging issues by making visible patterns in student attendance and performance so that improvements can be implemented before the next iteration of the design. Curriculum staff in institutions that have invested in integrated systems have an advantage in this respect. However, data from VLEs and library systems can also supply indications of the degree of student engagement with set tasks.
- The human dimension is equally important in ensuring a successful interaction between students and the designed curriculum. As evidenced by user stories from the OULDI-Jisc project, cross-role team meetings and workshops encourage understanding and collaboration between academic and support teams, thus enabling a seamless and effective curriculum experience for students. Co-partnership with students in the delivery of the curriculum has also enabled new curriculum models such as coaching to become effectively embedded.

- Virtual tools and spaces for learning design enable you to experiment and evaluate the quality of your designs in advance of delivery. Online design communities such as Cloudworks offer public spaces in which you can exchange, discuss and refine ideas for enhancing student learning.
- Engaging in staff development opportunities with colleagues from outside the course team builds understanding of each other's role in the design and delivery of the curriculum, ultimately improving the way curriculum designs are realised and experienced by students. A range of stakeholders can benefit, for example, from engaging with tools to visualise the

## "... Consider the range of delivery methods you intend to utilise [and] how students will experience the module."

The Rough Guide to Curriculum Design, Technology-Supported Processes for Agile and Responsive Curricula (T-SPARC) project, Birmingham City University

curriculum and resources to embed educational principles in the curriculum.

- Involving students as partners or ambassadors in the realisation of a curriculum initiative – particularly an innovative approach – is another way of bringing about unexpected new understandings.
- Embedding technology effectively into learning and assessment activities enhances the delivery of all types of curricula. As one example, e-portfolios can provide you and your students with opportunities to record and reflect

#### **Inside story**

The **PREDICT project** at City University London aimed to build capacity by means of a cascading ripple model of staff development. Wide-ranging outputs from the project include a module on technology-enabled academic practice and guidance on developing studentfacing programme and module specifications. As a result of this multi-faceted approach to culture change, the project made the curriculum, formerly a little understood concept, a major talking point at the university. PREDICT project, City University London on your learning journeys as a curriculum is realised.

 Detailed guidance on transformative uses of technology in curriculum delivery can be obtained from the Jisc Curriculum Delivery Programme.

#### Inside story

The Personalised Curriculum Creation through Coaching (PC3) project at Leeds Metropolitan University has developed a 20-credit Masters' level module on personalised learning through coaching. In addition, a coaching toolkit has supported academic staff in applying the coaching philosophy to other modules. Students have played an active part in the development of the new curriculum and taken up roles as ambassadors for the initiative, an approach to curriculum change that has benefited students as well as course teams.

"We have demonstrated that coaching is a highly effective support process for students, particularly in the areas of selfassessment of competencies and personal development planning."

PC3 project, Leeds Metropolitan University

#### Over to you

#### **Resources to try**

City University London PREDICT project Cascading ripple model http://bit.ly/jisc-predict-rip

Leeds Metropolitan University PC3 project

Coaching toolkit http://bit.ly/jisc-pc3-coaching

The Open University OULDI-Jisc project

User stories http://bit.ly/jisc-ouldi-stories

#### Also see

Resources from the Jisc Curriculum Delivery Programme <a href="http://bit.ly/jisc-curdelivery">http://bit.ly/jisc-curdelivery</a>

#### Links to follow up

City University London PREDICT project http://bit.ly/jisc-predict

Leeds Metropolitan University PC3 project http://bit.ly/jisc-pc3

## Feedback and review

#### What this means

Feedback from the delivery phase takes the cycle forward to further enhancement of the curriculum, for example, to a redesign or the introduction of new programmes and courses.

Student and staff surveys, achievement and attendance data, VLE usage data, cohort comparisons, external assessors' reports and dialogue with wider stakeholder groups can all be mustered to inform the next iteration of the curriculum design cycle.

#### What we have learned

Integrated and well-managed information systems are now providing potent new ways of obtaining feedback and enhancing the next iterations of a curriculum. Sustainable benefits can be experienced where such innovations are underpinned by sound educational understanding and a commitment to involving students as active partners in design, approval and review.

#### Important to know

- Course teams may soon have powerful new ways of understanding and responding to the student experience thanks to tools that support collation and analysis of student and course data. Even now, curriculum staff are able to obtain feedback that can help them respond to curriculum issues from data available from commonly supported e-submission and e-marking tools.
- Enhanced information management can enable yet more detailed analysis of the outcomes of an approved curriculum. At the Open University, for example, factors such as student satisfaction, retention, progression and employability can be analysed by module or programme, and across the curriculum offer. These analyses feed back into redesign activities and underpin a process of continuous monitoring and timelier curriculum enhancement.

- Institutions are becoming more aware of the ability of such technology-enabled systems to support more agile quality processes. The potential gain is not just one of increased efficiency; a strong finding from the programme is that improved approval and review processes aid rather than inhibit good educational design.
- Nonetheless, only the expertise of curriculum designers can enable an effective, educational response to the information provided by learning analytics, whether that occurs through revised curriculum offerings or through responsive teaching and learning support.

- Discuss with colleagues how information about course enrolments, student performance, feedback scores and quality assurance reports might be gathered and made available to assist you in undertaking course reviews, as is now occurring at a number of institutions that have participated in the Curriculum Design Programme.
- Alongside feedback provided by automated systems, students offer the clearest insight into the performance of the curriculum. Through the work of the programme and other initiatives, the concept of 'listening to the student voice' is being extended to one of partnership at different stages of the design cycle. For example, at Cardiff University, the PALET team has created the expectation that students should be co-partners with academic staff on designing curricula, while at City University London students are now participating in both approval and periodic review panels.
- To help students adapt to these new responsibilities, the Viewpoints project at the University of Ulster has developed an online blended learning module designed for student representatives. The Viewpoints workshop resources can also be used to focus design practices on the student perspective and to support constructive dialogue between staff and students about how a

## "We have influenced the periodic review process to be developmental [and] not just an audit."

Promoting Realistic and Engaging Discussions in Curriculum Teams (PREDICT) project, City University London

curriculum has been structured, and how it has subsequently worked out in practice.

An educational framework, such as the Re-engineering Assessment Practices (REAP) principles, provides a firm basis for discussions around the review of a taught curriculum. While updating information management systems can facilitate more efficient curriculum review and redesign processes, sound educational understanding is essential to the achievement of effective, studentfocused curriculum enhancement.

#### **Inside story**

In response to internal feedback, the School of Real Estate and Planning at the University of Reading used CompendiumLD, a learning design tool developed by the OULDI-Jisc project, to redesign courses in ways that better addressed the needs of students and employers. The team created visualisations of new course structures to prompt discussion and generate feedback. One of the most significant outcomes of the redesign process has been to focus the minds of teaching staff more keenly on benefits to students.

OULDI-Jisc project, The Open University

#### **Inside story**

The Viewpoints project at the University of Ulster has created reflective workshop resources underpinned by pedagogical principles to enable stakeholders to collaborate effectively on curriculum design. The impact of this work has extended beyond workshops to change the nature of the discourse about the curriculum at a strategic as well as at a course team level. This is occurring particularly in relation to assessment and feedback where underpinning principles are becoming embedded into institutional policy and forming the basis of discussions in advance of revalidation. By these means, the project has established a culture of principlebased approaches to the design, approval, review and redesign of curricula across the university.

"The Viewpoints workshop process has stimulated constructive dialogue and fostered collaboration among informal groups and course teams, and staff and students, helping them build ideas towards a learner-centred curriculum design model." Viewpoints project, University of Ulster

## Over to you

**Resources to try** 

Cardiff University PALET project

Student voice framework http://bit.ly/jisc-palet-svf

#### The Open University OULDI-Jisc project

CompendiumLD: a tool for planning, representing and sharing sequences of learning activities http://bit.ly/jisc-ouldi-comld University of Strathclyde REAP project www.reap.ac.uk

University of Ulster Viewpoints project resources http://bit.ly/jisc-viewpoints

#### Links to follow up

The Open University OULDI-Jisc project http://bit.ly/jisc-ouldi University of Ulster Viewpoints project http://bit.ly/jisc-viewpoints

# About the programme

The Jisc Curriculum Design Programme was supported by a network of organisations and community experts participating in a Support and Synthesis project led by Jisc infoNet in partnership with Jisc Advance services, Jisc CETIS, the Jisc Regional Support Centres and the Higher Education Academy.

#### Outcomes from the programme

Independent evaluations of the outcomes of the Jisc Curriculum Design Programme indicate a more flexible curriculum offer, improved learning experiences and more effective and efficient design and approval practices in the participating institutions.

Programme outputs such as the Viewpoints workshop timelines and cards and OULDI-Jisc learning design tools have been widely adopted across the sector.

In 2013, Manchester Metropolitan University's EQAL initiative which had its roots in the Jisc SRC project won the Guardian Student Experience Award.

With funding from the Jisc Embedding Benefits Programme, a number of projects in the Curriculum Design Programme have worked with other institutions in higher and further education and the skills sector to embed outputs and outcomes from their work. Those projects are:

**Staffordshire University** – Supporting Creative Thinking around Course Development Processes

**The Open University** – Open Learning Design Studio (OLDS) MOOC

**University of Greenwich** – Snakes and Ladders: A resource for realising strategies for transition and retention

University of Ulster - Panorama

Further information on the funded projects is available at <a href="http://bit.ly/jisc-embedben">http://bit.ly/jisc-embedben</a>

A suite of complementary resources on curriculum-related topics is available at **www.jiscinfonet.ac.uk/curriculum** 

#### Find out more

#### Jisc

Institutional Approaches to Curriculum Design Programme http://bit.ly/jisc-curdesign

Institutional Approaches to Curriculum Design: Final synthesis report http://bit.ly/jisc-cdsynthesis

#### **Design Studio**

A summary of benefits from the Curriculum Design Programme http://bit.ly/jisc-curdes-ben

A summary of evaluation techniques from the Curriculum Design Programme http://bit.ly/jisc-curdes-eval

Institutional stories from the Curriculum Design Programme http://bit.ly/jisc-curdes-stories

#### Jisc publications

Transforming Curriculum Design: Transforming Institutions (Jisc 2011) http://bit.ly/jisc-curdesign

Managing Curriculum Change (Jisc 2009) http://bit.ly/jisc-curdesign

#### Jisc On Air Radio Show

A Jisc On Air Radio Show, **Curriculum change: designing for the future**, discusses the approaches taken by the T-SPARC and SRC projects

http://bit.ly/jisc-curdesign-onair

#### Related Jisc work

Transforming Curriculum Delivery through Technology Programme http://bit.ly/jisc-curdelivery

National Student Change Agent Network www.hei-flyers.org/wordpress

#### **Funded institutions**

The 12 universities, which took part in the Jisc Curriculum Design Programme with the aim of transforming curriculum design in their institutions and their partner institutions, are:

#### **Birmingham City University**

Technology-Supported Processes for Agile and Responsive Curricula (T-SPARC) project

Transforming institutional culture and practice around curriculum design and approval.

#### **Cardiff University**

Programme Approval Lean Electronic Toolset (PALET) project

Creating a new context for approaches to the design, management and communication of educational provision at the university

#### **City University London**

Promoting Realistic and Engaging Discussions in Curriculum Teams (PREDICT) project

Supporting staff development to change the institutional culture of curriculum design

#### Leeds Metropolitan University

Personalised Curriculum Creation through Coaching (PC3) project

Developing coaching models and resources within the curriculum

#### Manchester Metropolitan University

Supporting Responsive Curricula (SRC) project

Streamlining the curriculum and associated systems and processes to improve efficiency in design and approval processes and enhance the learning experience

#### **Staffordshire University**

Enable project

Managing curriculum design initiatives through an enterprise approach

#### The Open University

Open University Learning Design Initiative-Jisc (OULDI-Jisc) project

Enhancing curriculum design practice through a range of learning design tools, approaches and resources

#### **University of Bolton**

Coeducate project

Developing an inquiry-based curriculum model for more flexible online delivery

#### University of Cambridge

Course Tools project

Developing more individualised timetabling and searchable exam question database

#### **University of Greenwich**

#### **UG-FLEX** project

Enhancing curriculum development processes and underpinning systems for more flexible educational provisior

#### University of Strathclyde

Principles in Patterns (PiP) project

Supporting curriculum design and approval processes through a web-based system

#### University of Ulster

Viewpoints project

Developing workshop processes and reflective resources to support effective curriculum design

## Enhancing Curriculum Design with Technology

#### Further information

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