Open Research Online

Fostering connectivity and collaboration: using a cluster approach around reflections as strategic investment for change

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Abstract

This chapter describes the experiences of four projects under the Higher Education Academy (HEA) funded e-learning pathfinder initiative. The projects focused on institutional strategic change and in particular on embedding e-learning. Each adopted different approaches, tailored to their own specific institutional contexts. However the projects also worked at a cluster level, which enabled them to draw on commonalities and differences. Working within the cluster also enabled them to adopt a reflective approach to their projects and to consider the implications of their findings for future strategic change within their institutions.

1. Introduction

A review of recent international policy documents for education illustrates that technologies are no longer seen as peripheral to the business of universities (Becta, 2008; O'Donoghue, forthcoming; Redecker, forthcoming; NSF, 2008). There is recognition not only of their fundamental importance as part of institutions' infrastructures but also of their potential to transform learning and teaching.

In the UK there has been a range of initiatives to support the development and implementation of e-learning. Funding sources include the Joint Information Systems Committee (JISC),[6] Becta,[7] and the Higher Education Academy (HEA).[8] Conole et al. (2007) provide a timeline of e-learning developments and their relationship to policy directives in the UK. They conclude by suggesting that in recent

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[6] http://www.jisc.ac.uk/

[7] http://www.becta.org.uk/

[8] http://www.heacademy.ac.uk/

years there has been a shift from small-scale, individual e-learning pilots to more strategic initiatives.

In 2006, the HEA and JISC initiated an e-learning benchmarking exercise, to enable institutions to assess their own use of technologies for learning. The operational definition for benchmarking of e-learning was:

> "An opportunity, facilitated by a recognized methodology, for rigorous institutional reflection and analysis of e-learning provision, processes, and practice which can be used to inform internal decision-making, policy, practice, and further development; and if desired, enables institution to draw their own comparisons with other institutions with whom they have established a relationship and who have undertaken a similar exercise." [Morrison, 2007]

'Benchmarking' was a somewhat misleading term for the initiative, as it was not so much about producing an e-learning 'league table', but more an opportunity for institutions to take stock of where they were in terms of e-learning implementation, as the final report notes:

> …a process of institutional self-review and facilitated reflection. The exercise provided an opportunity for analysis and reflection on e-learning processes, provision and practice. While the key focus was on e-learning, the scope of the review had a broader significance for quality enhancement and continuous improvement in all aspects of learning, teaching and assessment provision. [Morrison, 200718]

Following on from the benchmarking exercise, an e-learning pathfinder programme was established. The programme started in October 2006 and consisted of two phases; 28 institutions participated in total. These were grouped into seven clusters each with four institutions and each cluster was allocated a 'critical friend' appointed from an institution external to the participating universities. Both the benchmarking and pathfinder programmes had programme-level and project-level blogs and a series of briefing papers and project journeys were produced as well as programme evaluation reports and final reports. More information and links are available from the main website.[9]

This chapter focuses on four of the e-learning pathfinder projects: 'Cluster C'. It includes a brief description of each project, but focuses on the overarching themes that emerged at cluster level. It will reflect on the value of adopting a cluster-based approach for initiatives of this kind and will draw out the synergies and experiences of the four projects, demonstrating how all four adopted an evidence-based approach to implementing e-learning.

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[9] http://www.heacademy.ac.uk/ourwork/learning/elt/pathfinder

In particular, we will explore

1. An overview of approaches to implementing institutional change through adopting an evidence-informed approach
2. A description of the approaches and tools adopted by the different projects: Data collection methods and research instruments; Analytical frameworks or strategies; Engagement strategies; and Communication strategies.
3. The role of evidence in informing engagement with stakeholders and participants and the development of practice in HE;
4. Ways of sharing models of evidence-informed practice in HE.

The meaning of an evidence-based approach in this context and the perceived benefits will be addressed by questions that will include:

1. What informs and drives change in HE? Ideology, policy, demographic patterns, individual innovators, research and evaluation?
2. What characterises the evidence-base, which informs and supports change? How might such an evidence base be developed to complement, enhance or even replace existing structures and drivers?

What kind of evidence, in what kind of evidence base, would best support: 1) Stakeholder engagement? 2) Development of practice? 3) High levels of credibility across our institutions? 4) High quality research activity?

Background

A total of 28 institutions took part in the Higher Education Academy e-learning pathfinder projects. They were divided into 7 clusters made up of 4 institutions each. Each cluster was assigned a 'critical friend' to provide an external perspective on the work and draw out synergies between the different projects.

> The focus of the Pathfinder Programme is on the design, planning, implementation, and evaluation of transformation processes and activities which are intended to lead, ultimately, to the full and effective embedding of e-learning into the learning and teaching processes of the entire institution, i.e. the aim is long term change and not just short-term innovation. (taken from the pathfinder blog at http://elearning.heacademy.ac.uk/weblogs/pathfinder/?page_id=2)

The four institutions that comprise cluster C[10] were all very different in terms of cultural context, institutional mission, and the balance of research vs. teaching. Each adopted a different approach to instigating change within their institution. Despite this, coming together as a cluster enabled the projects to identify commonalities and themes that may be of value to other institutions planning on undertaking institutional change programmes of this kind. While the institutions all

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[10] Universities of Brunel, Cambridge, London South Bank and Reading

used different methodologies, it became apparent that underlying each project was an evidence-informed approach. This report draws upon the collaborative activities of the institutions, focusing on the way they adopted common approaches to support their change processes.

At the heart of the benchmarking and e-learning pathfinder programmes is the notion of 'embedding'. At every turn, stakeholders in the Higher Education sector reiterate the need to embed e-learning in the curriculum: political masters devise policies that call for its integration (Clegg, Hudson & Steel, 2003); funding bodies reward those who are committed to its application (HEFCE, 2005); and employers prefer students who are competent in its use (O'Neill, Singh & O'Donoghue, 2004). That a university is perceived to address such demands may influence a student's decision to study there (Heywood, 2000). On the other hand, there is often a lack of congruence between public stand and internal workings; between theory and practice (See Conole, 2007 for an international comparison). Embeddedness is seen as moving beyond isolated innovation towards more of a strategic approach to deployment of technologies.

Stiles and Yorke (2004) suggest that 'embeddedness' of e-learning can be considered to have occurred in an institution when there is full integration between this approach to learning and all others in terms of "policies, procedures, roles and responsibilities". In different ways each of the four projects described here were attempting, through their pathfinder projects, to embed e-learning in their own institutional context and to move towards that integrated position. The other common aspect of the four projects is an explicit focus on searching for evidence in their projects that will inform the ongoing process of integrating e-learning in their particular institutions (Simons, Kushner, Jones & James, 2003). At the time of writing, a range of national and international drivers are prompting educational institutions to adopt evidence-informed models for policy and practice, with the support and leadership of major UK-based research and policy initiatives such as the EPPI-Centre,[11] the Observatory on Borderless Higher Education,[12] and the TLRP.[13] In today's globalised environment for higher education, the gathering and interpretation of meaningful evidence can provide a key source of competitive advantage for individual institutions. Yet it also offers much more than this: a renewed focus on evidence offers an opportunity to rethink deeply the way that we collaborate and share knowledge across institutions. Focusing on the value of developing evidence at the local level (Oliver & Conole, 2004) to inform ongoing implementation of e-learning, the projects have thus also generated outputs that can be adapted by other institutions that wish to create their own localised evidence base.

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[11] http://eppi.ioe.ac.uk/
[12] http://www.obhe.ac.uk/
[13] http://www.tlrp.org/

These two concepts, "embedding" and "evidence-informed", are key in the four research projects discussed. Working at the cluster level, we also identified a number of common themes across the projects. In this chapter we will consider the four substantive themes that emerged: adopting a strategic approach; gaining "buy-in" from staff, both in the centre and in faculties and schools; enhancing the student experience; and sustainability.

2. Overview of the Cluster C projects

This section provides a brief overview of each of the projects, their institutional contexts and the focus of their pathfinder work. The four institutions are very diverse in their missions, contexts, student population and the specific focus of their projects. The role of evidence in informing engagement with stakeholders and participants, and the development of practice in HE is highlighted; ways of sharing models of evidence-informed practice in HE and research approaches that can improve engagement with stakeholders and participants - while still generating high-quality research outcomes will be described.

In addition the idea will be promoted that an evidence-informed approach can be appropriate for ensuring accountability and validity of change initiatives in Higher Education (HE) in general and e-learning specifically, if recognition is made of the local context. . Each university's project is identified by the name associated with the original bid to the HEA: Brunel's project is called *Entice*; the one from Cambridge is the *Learning Landscape Project*; LSBU called theirs *Compass* and Reading's was known as *Pathfinder: enabling enhancement.*

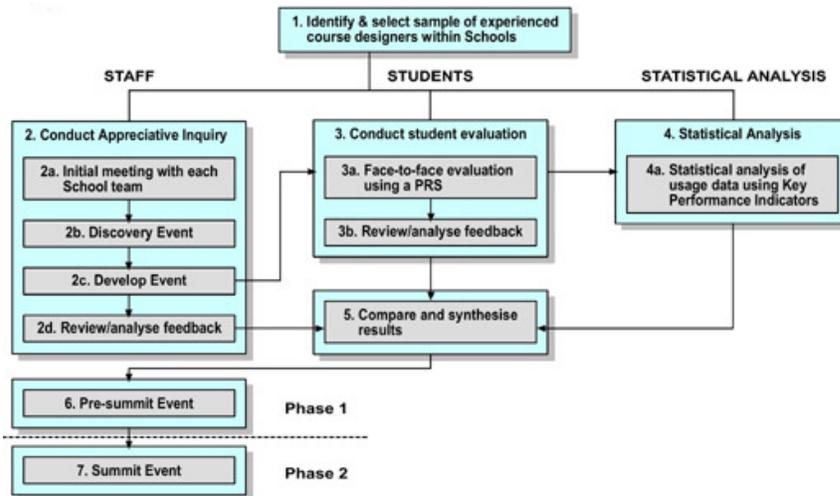## 2.1 Brunel University - An Appreciative Inquiry approach

Figure 1: The Brunel Appreciative Inquiry approach

The aim of Brunel University's project was to identify sound e-learning practices being implemented by staff, particularly within u-Link, the University's virtual learning environment. The project entailed a campus-wide investigation (involving all eight Schools) and made use of an Appreciative Inquiry (AI) methodology – an engaging participative process that has the potential to lead to a more dynamic organisation. Rather than focussing on a traditional change management process, which predisposes the investigation towards problem-solving and concentrates on the negative or what is not working, AI is distinctively different being an approach for catalysing positive change. To quote, "AI is based on the simple assumption that every organisation has something that works well and these strengths can be the starting point for creating positive change" (Cooperrider, Whitney & Stavros, 2005). Many organisations have embarked on AI initiatives, for example, the National Aeronautics and Space Administration NASA [14], Save the Children and the United States Navy[15] (Cooperrider, et al., 2005).

Every AI investigation is unique to that organisation. In this investigation, Brunel tailored the '4D' model (Destiny, Dream, Discovery, Design) to accommodate the specific purpose of the project: the 'Dream' phase was renamed the 'Develop Event' and the last two phases of the cycle 'Design' and 'Destiny' were

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[14] http://www.nasa.gov/centers/goddard/pdf/110442main_gnews1-05.pdf

[15] http://www.navy.mil/navydata/cno/clark/news/clark011212.txt

combined to form the 'Summit Event'. The Affirmative Topic Choice was: "(Ways of) creating and sustaining outstanding e-pedagogic teaching and learning".

The results of the AI investigation were compared with student evaluation of the identified e-learning practices, making use of a Personal Response System (PRS), as well as statistical analysis of student usage data within u-Link. Eventually, the findings for each School were reported to the School at the Pre-Summit Event and utilised to prepare/review e-learning strategies and action plans for each School during the Summit Event.

For a more detailed discussion of the specifics of this project, see the related chapter in this book (Alberts, Murray & Stephenson:, Using Appreciative Inquiry (AI) for an e-Learning Change Management Programme: the ENTICE Project at Brunel University).
Alberts, et al., forthcoming).

2.2 Cambridge University – Developing an empirical evidence base

Cambridge has a collegiate structure with 31 colleges coexisting alongside departments, faculties, and research centres. Against this complex structure, the development of strategic approaches to teaching and learning, and to e-learning in particular, has of necessity involved careful negotiation and collaboration. Another important element of the University of Cambridge context is the fact that boundaries between teaching and research are blurred (many undergraduates participate in original research activities, while staff research interests inform the curriculum). The existence of residential colleges makes it hard to make distinctions between formal and informal learning, and the social lives of staff and students. As a result, issues related to teaching and learning (including e-learning) can emerge in many contexts.

What underpinned, and continues to underpin, the development of e-learning at Cambridge is the recognition that any e-learning, whether discipline specific or institutional VLE, must be seen as an element of broader teaching and learning environments which are supported and enhanced by the introduction of new technologies.

The Pathfinder Project at Cambridge, known as the *Learning Landscape Project*, was led by a team based at the Centre for Applied Research in Educational Technologies (CARET),[16] supported by a Project Board chaired by the University Pro-Vice Chancellor for Teaching and Learning and a large Steering Group including representatives of colleges; faculties and departments; central units and

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[16] http://www.caret.cam.ac.uk/

services of the University; and the Students' Union.[17] The Project Board and Steering Group provided the project with governance and oversight but also with essential guidance in developing the project; acted as fora for discussion; and offered validation of project approaches, analyses and dissemination strategies. Individual members of the Steering Group in particular acted as 'key respondents' in interviews and focus groups and were gatekeepers and champions of the project within their own organizational contexts.

A multi-method project design was developed with a primary aim being informing the University's Learning and Teaching Strategy. This included three major data collection strands:

- 'Case records' describing approaches to teaching, learning and management within ten departments across the university: These drew on secondary analysis of existing documents such as QAA submissions, teaching and learning strategies, student and staff handbooks and professional development materials, as well as extended, semi-structured interviews with key respondents in participating departments.
- Case studies of innovations in teaching and learning: These ranged from large-scale innovations involving the development of new courses, through the introduction of innovative approaches to teaching, learning and assessment, to individual staff members experimenting with e-learning in order to support specific disciplinary practice.
- Student experience studies in which students acted as co-researchers, reporting on their lives at Cambridge (the 'Day in the Life' study), exploring their dependence on personal technologies (the 'Shutdown Challenge') and taking part in activities in which they attempted to envision the future of technology enhanced learning (the 'Very Advanced Technology' study). Students also participated in collaborative activities including 'slide nights', focus groups and dynamic discussions (the 'Movers and Shapers' activity). These activities provided a valuable and possibly unique insight into the lives of Cambridge undergraduates, complementing and in some cases contrasting with staff and institutional perspectives. Of particular interest were the findings concerning students' use of ICTs to multitask and their use of social net-

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[17] http://www.caret.cam.ac.uk/llp. The Learning Landscape Project (2006-2008) was managed from the Centre for Applied Research in Educational Technologies (CARET) at the University of Cambridge, with support from the UK's Higher Education Academy 'Pathfinder' Programme. Principal project team members included: Patrick Carmichael, Catherine Howell, Matthew Riddle, Rod Rivers, and Frances Tracy. Michael Arnold (Department of History and Philosophy of Science, University of Melbourne) contributed much to the research design and data analysis during his two sabbatical visits to Cambridge in 2007 and 2008.

working sites (Riddle & Howell, 2008), and students' practice of using computers in their college rooms (Howell & Arnold, 2008).

A substantial electronic 'evidence base' was created, using the institutional VLE, CamTools, based on the open-source Sakai platform.[18]. It was designed so that 'raw' data (interview transcripts, survey data, images, texts), along with interpretative accounts (case records and more thematic analyses of key issues). Of central importance was the idea of 'referential integrity'. Referential integrity is a term commonly used in software development, particularly in relation to the design of databases and information management systems. In that technical context, the term refers to the goal of ensuring the consistency and reliability of data classification systems or 'entity relationships' (Davis 1998; Nunes et al, 2003). In the Pathfinder context of educational research and institutional development, the term 'referential integrity' was used in a not unrelated way. Here, 'referential integrity' refers to the need to demonstrate transparency in the process of analysis and interrogation of evidence; showing how analyses and case studies were explicitly linked to the data that informed them, in order to support secondary analysis and further enquiries. Four main thematic reports were produced which exemplified e-learning at Cambridge:

- Staff and student use of new technologies for teaching and learning
- Staff and student use of spaces for teaching and learning
- The role of small group teaching
- Approaches to the teaching and learning of transferable skills

2.3 London South Bank University – Skills audit and support

London South Bank (LSBU) is a post-92 institution, a 'teaching-led' university. The *Compass* Pathfinder project, which had its roots in the earlier HEA Change Academy (2004-5) and E-learning Benchmarking exercise (2006-7), focused on two anticipated outcomes. Firstly, it aimed to gain a more holistic picture of the self-perceived gaps in academics' understanding of and ability to use digital technologies in day-to-day activities and in teaching. It also aimed to identify academics who were engaged in interesting practice related to e-learning (whether via the institutional virtual learning environment, Blackboard, or using other platforms). The intention was to create resources – particularly in terms of understanding challenges associated with the use of e-learning – which might be used by other academics who wished to implement e-learning approaches in their teaching. This evidence base, however, would also inform institutional planning in terms of resource provision.

The first strand in the *Compass* Pathfinder project, evaluating academics' perceptions of their digital literacy skills, commenced with a request to all academic

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[18] http://sakaiproject.org/

staff to complete an electronic survey. This asked them to measure their perceived skills in a range of digital settings – from file management, and the use of Microsoft Office tools, to their competence in using the library's electronic resources and drawing down information from the student record system. While the responses may be skewed towards academics who are possibly more competent than some in their use of information technology (not least because they completed the survey in response to an email and using a digital form), the results highlighted certain areas for concern. Possibly the most astounding information gleaned was that only 46% of the respondents believed themselves competent to use the electronic materials available from the library, resources which cost the university a very large amount of money.

In response to the results of the survey, an 18 module information technology skills course was developed that addresses the broad range of digital proficiencies that the university expects academics to have. On an individual basis, academics are encouraged to take the diagnostic tests associated with the modules and to decide whether their scores indicate proficiency in the area. If they are dissatisfied with the results, they can "do" the module and (hopefully) improve their marks in the post-module test.

The skills course can also be used as a part of personal professional development in the context of the university's appraisal system. Individual academics and their line managers can identify areas which they agree might benefit from improvement; the employee is made accountable to engage with the course within an agreed timeframe. This approach can be expanded to include, for example, the use of the survey (possibly tailored to the particular area) as a diagnostic tool to identify the skills that would benefit from improvement.

Three particular themes surfaced in the second strand of the project, identifying existing areas of good practice in order to learn from them for future use. The first was online course design, the second addressed student transition into the university and the last explored assessment.

It was clear from the interviews that were conducted that, while several academics were delivering material online, there were little attention given to underlying pedagogic considerations. During the lifetime of *Compass*, LSBU was a partner institution with the University of Leicester on their ADDER (Assessment & Disciplines: Developing E-tivities Research) project and this provided a valuable opportunity to explore online course design. Three teams from the Arts and Human Sciences faculty worked with the Leicester team in 2-day *Carpe Diem* events as they explored the rationale for delivering material online; other interested parties from across the University accessed the process by acting as instructional designers to support the AHS teams, and the core LSBU Pathfinder team gained the skills to run *Carpe Diem* workshops in the process.

In the student transition strand, the *Compass* team worked with the management of one faculty on a pilot project to explore how e-learning (and Blackboard, in particular) might be used to "turn offers into students", to encourage prospective students to choose LSBU as their higher education institution. Lastly, work went ahead in inestigating the use of various means of electronic assessment. A drawback for this strand was the unfortunate abandonment of an electronic examination early in the year of the project. This enforced a review of the reasons for the problem, initiation of discussion about new exam regulations to cater for online exams, and consideration of alternative modes of online delivery for examinations, rather than relying on the virtual learning environment.

Outputs from the project include: a Staff ICT Skills Survey; a Staff ICT Training Course; statements (in three faculties) of minimum levels of use for the virtual learning environment; team development events – in collaboration with the University of Leicester – with the purpose of redeveloping existing course material for online delivery; models for *Onboarding* (the transition of new students into the University); and two briefing papers.

The sustainability of *Compass* is evident from activity subsequent to its winding up which may be directly attributed to the project. As discussed, there is potential to use the ICT skills survey and training course in various ways. The input from Leicester has resulted in several subsequent *Carpe Diem* workshops in other faculties, with more in the pipeline. The student transition pilot, or *Onboarding*, as it came to be known, is now in its second iteration in the initial faculty, and has informed the work around student transition in a second faculty. The other two faculties are actively in discussion (independently!) to implement similar models for the 2009/2010 academic year. Although assessment might at first glance seem to have been the least successful of the three themes, a more robust process has been born from the experience, and we are currently piloting the use of Assessment21's product ABC (Assess By Computer) for a small funded project in one of the faculties. Lastly, there is an initiative with all the faculties to develop a framework of examples in which e-learning has been instrumental in addressing particular pedagogic challenges.

2.4 Reading University – Alignment with quality assurance

The University of Reading is a medium-sized, research-intensive institution, which for many years has developed and supported an e-learning infrastructure. The HEA Benchmarking exercise highlighted that innovation within the institution has tended to be local and centred on "academic champions". Consequently, the level of engagement with e-learning varied not only across the institution, but also within Schools. The lack of any coherent course-led approach in the majority

of cases could result in a disjointed experience for students. The University had recognised that in order to achieve a deeper change, it needed to move beyond the "champions" and towards a strategic approach to the adoption of e-learning targeted at School-level.

At the same time as the e-Benchmarking exercise, the University was reviewing its quality management processes to examine how they could be used to support Schools to develop and enhance their provision as well as review it. It was recognised that the Periodic Review process, whereby a School's degree programmes are scrutinised to assure academic standards are being met, tended to be a retrospective exercise, was time-consuming for academic staff and of limited benefit for future planning.
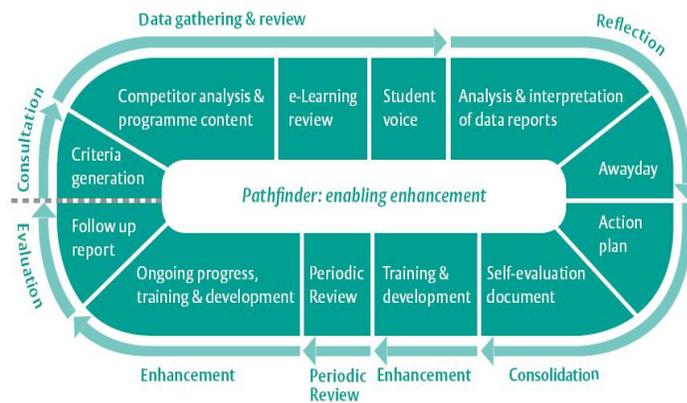

Figure 2: The Reading QA cycle

The aim of the *Pathfinder: enabling enhancement* process, the name of the University's project, was to support Schools through Periodic Review, moving from a focus on quality assurance to one of quality enhancement. The process was co-ordinated by a central support team and was supported by a framework which aimed to:
- enable schools to drive forward enhancement strategically;
- appropriately embed e-learning in the design, development and delivery of programmes;
- strengthen the student voice in the process of development and review;
- improve institutional support and develop a more proactive approach to working with Schools;
- provide the academic community with models of change in quality management processes.

The *Pathfinder* process had two phases. The first supported schools in the lead up to Periodic Review; and the second focused on the longer term and ongoing process of enhancement. The framework (shown in Figure 2) allowed Schools to engage with the process according to their own objectives, their own subject and culture, and was considered as a journey of development and enhancement for academic teams.

The process consists of the following aspects:
1. **Consultation**. The aim of this stage was to identify the key objectives of the review, a schedule and timeline.for the process.
2. **Data gathering and review**. This stage provided an objective overview of the programmes in the school – a snapshot of 'where they are now', drawing upon competitor analysis and programme context, e-learning use and inclusion of the student voice. The outcome was a Contextual Review report, written for the School by the *Pathfinder* team, and which formed part of the documentation for the Periodic Review event.
   a. **Competitor analysis and programme context**. Using the objectives and criteria generated in the consultation process, information was collected about competitors, recruitment and admissions, student profile, student progression and graduate destinations. The process involved the extraction of the relevant data from sources both internal and external to the University.
   b. **e-Learning review**. This consisted of an e-learning audit regarding staff skills and attitudes, an audit of online activity, and feedback from students. It sought to identify how e-learning might be exploited to address issues arising from data gathering and the review process.
   c. **Student voice** The collection and analysis of student feedback was captured from existing sources such as the National Student Survey, existing documentation (e.g. minutes from Student-Staff Liaison Committee meetings) and Schools' module evaluation forms. This was complemented by detailed student reflection on programme provision captured through a student experience survey and focus group sessions.
3. **Reflection**. This stage had two parts: the analysis and interpretation of data, and the school Awayday.
   a. **Analysis and interpretation of data**. Data was analysed, triangulated and presented within the Contextual Review report. Information was presented not as final conclusions, but as initial observations which informed discussions, and lead to the School's own interpretations.
   b. **School Awayday**. A major milestone in the *pathfinder* process was the School Awayday,. The aim was to arrive at a shared understanding bout the issues facing the School, as outlined in the Contextual Review Report, which challenged assumptions, identified strengths and weak-

nesses and developed a shared vision and fed into an action plan for the future.

4. **Consolidation**. This process was undertaken by the School, with the academic team reflecting on the process and developing a detailed action plan of enhancements to be achieved in the future. This formed part of the Self-Evaluation Document drawn up by the School and submitted to the Periodic Review panel.

5. **Enhancement**. The enhancement process started after the Awayday to address the School's concerns. These were short and long term needs addressed through training sessions and workshops tailored to the Schools' specific needs to cover e-learning, assessment, etc. The longer term needs related to the creation of new programmes, and ongoing support for enhancement including the use of e-learning. The enhancement process offered an invaluable opportunity for teaching and learning support teams to work with the School at a more strategic level, and this was achieved by a process of ongoing engagement, where the *pathfinder* team drew upon other expertise and resources within the University, as required.

6. **Evaluation**. Evaluation was scheduled a year after the Periodic Review event when the School evaluated progress and reported on actions and progress to date.

Embedding *pathfinder* into the Periodic Review cycle was a significant and forward-looking step for the University. It represented a real shift from that of assurance to enhancement, and demonstrated that embedding enhancement is a longer term and serious challenge. Moreover, the approach encouraged academics to engage with e-learning within their own subject and cultural context and introduced new ways of engagement between faculty and internal support departments.

During the engagement with the pathfinder process a number of challenges arose relating to issues of culture, ownership, embedding enhancement, and sustainability. Working with different academic schools uncovered different cultures and awareness of and sensitivity to these was essential. Other factors that affected the success of the process included, a fully engaged Head of School ;and strategically appointed staff. Meanwhile, ownership of the change process had to reside with the school, and the role of the pathfinder support team was one of facilitation and empowerment. This enabled academic teams to reflect upon information and make decisions about their future. Another challenge related to the embedding of continuous improvement and sustainability of the momentum gathered during the process, which was intended to be one of long-term engagement and to ensure that the enhancement cycle was fully achieved.

The approach that has been developed may well be relevant and transferable to other institutions, especially those considering the same step-change from individual e-learning innovation to discipline and institution-led embedding and en-

hancement. The experience has shown that embedding e-learning strategically is a challenging process, but by aligning this process with institutional quality management and review processes change is being driven forward with e-learning as a key enabler for the wider enhancement agenda, and a way to develop a culture of reflection and enhancement across the academic community.

3. Reflecting on the experience of the Cluster C projects

While the institutions all used different approaches, it became apparent that underlying each project was an evidence-informed approach. This section draws upon the collaborative activities of the institutions, focusing on the way they adopted common approaches to support their change processes.

3.1 Commonalities

Despite the very different institutional contexts within which the projects worked, and despite the differences in their respective frameworks, a number of commonalaties emerged:

- As all the projects were conducted with a view to long-term outcomes, the change process needed to be grounded on a platform of solid evidence. This data was collected using a diverse range of qualitative and quantitative research techniques such as large-scale surveys (on the use of information and communication technologies); staff and student focus groups (to gather attitudinal and perceptual data); and some innovative methods (such as use of PRS and student experience sampling). There was a common theme of involving research 'subjects' in the collection of data to make them participants in the inquiry process. This strategy adds validity to the data collected, encouraging participants to reflect on their own practices.
- In all cases the evidence base was organised and consolidated into an appropriate and meaningful format for sharing findings with local stakeholders and project participants. Some innovative techniques were developed for 're-packaging' of project data. This included the formation of metadata schemes for a tiered searchable database with increasingly interpretive data and outputs.
- Communication of research findings was integral to each project as a medium for initiating change. The formation and use of the evidence base was key to engagement with participants at multiple levels including students, staff, and policy makers. Using the evidence base as a tool for initiating change can be characterised as a strategic approach that could be used in many other Higher Education research and development contexts.

3.2 Challenges

The projects highlighted a number of challenges with trying to implement an evidence-based approach to embedding e-learning:

- The main challenge for the pathfinder project researchers was dealing with the interdisciplinary nature of the research setting. The research methods used had to be accessible and appealing to a wide range of participants and stakeholders. Using a mixed methods approach to data collection helps to inspire 'buy-in' from a variety of disciplines but it was important that the full range of data was recognised and understood.
- The language used in communications with students and staff had to be sufficiently clear and free from research terminology to make findings accessible. Also, some research data included information, which needed to be communicated sensitively.
- Much of the innovative implementation of e-learning was by enthusiasts acting on their own initiative, rather than an embedded practice of the majority of academics. Escalation in the engagement with e-learning required changing mindsets and challenging the status quo. Teaching practices needed to be scrutinised and reflection encouraged. Advertisement of tools and resources was essential for stimulating interest widely, but it was important to manage expectations by not over-exaggerating potential outcomes.
- Finally, a major consideration for each project was enabling sustainability and scalability. Ensuring that change and enhancement is continual involves setting up a structure that makes research findings accessible and relevant. Some projects were conducted in a cyclical format that involved re-assessment of issues and support at multiple stages. Several of the research methods or strategies used lend themselves to being scaled up or repeated within different institutional settings. It was therefore important to document these processes for future use.

3.3 Implications

The Cluster C Pathfinder projects demonstrated the effective use of an evidence-based approach to investigate and implement change in e-learning in the University environment. Methods and findings have been documented and disseminated by the HEA and at a number of e-learning conferences. Cluster C modeled the use of innovative methodological approaches, strategic change management processes, sustainability and scalability, which should inspire future projects at other institutions.

4. The Cluster C approach

This section will focus on describing the approach Cluster C adopted to developing a collaborative approach to sharing progress on the projects, reflecting on

emergent findings, synthesising commonalities and themes and applying this through a variety of communicative and dissemination channels. Despite the fact that the four institutions were very different culturally and in terms of their focus for their projects it was possible to distil out a set of synergies at the cluster level. This was achieved by adopting a particular approach – collegiate, pragmatic and productive – that is outlined here. Figure 3 provides a summary of the key ingredients for the success of the cluster, which consisted of three inter-related factors: a series of focused away day meetings at each of the institution sites, an approach based on sharing and reflection and a focus around targeted outputs at key points in the projects' lifecycle.
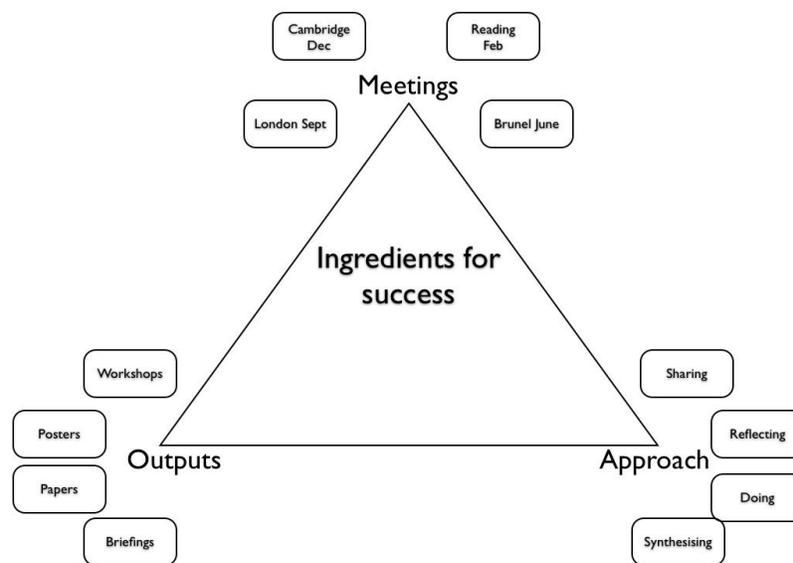
Figure 3: Cluster C ingredients for success

The cluster met four times over the lifetime of the programme. The meetings were focused around particular themes – agreed in advance – which followed the natural lifecycle of the projects, and outputs in each case, and drew upon discussions and presentations on current project activities. The critical friend, who acted as a facilitator for the process, provided an external perspective and was able to reflect back to the projects on their discussion.

The initial meeting set out an outline of common themes across the project. The second concentrated on a comparison of the four frameworks used by the projects and the associated methods and tools. The third meeting focused on commonalities, themes and challenges; and the last one concentrated on evaluation and dis-

semination. The focus of each meeting was designed around a specific imminent event or deadline, which gave purpose and natural outputs for the discussions. The four types of outputs or deadlines were – collaborative writing of programme level and conference presentations and workshops, production of joint papers, production for project and cluster-level posters and development of shared briefing papers. The cluster approach adopted was an iterative and pragmatic one combining a mixture of sharing, reflecting, synthesising and applying.

The cluster was supported by a 'critical friend', who both helped to facilitate the process of joint collaboration and acted as an external reflective voice on the issues arising from each of the projects. The concept of a critical friend is generally attributed to Nuttall:

> "A critical friend can be defined as a trusted person who asks provocative questions, provides data to be examined through another lens, and offers critiques of a person's work as a friend. A critical friend takes the time to fully understand the context of the work presented and the outcomes that the person or group is working toward. The friend is an advocate for the success of that work." (Referenced in Heller, 1988)

As with other critical friends in the HEA pathfinder programme, the aim was to have an expert in the field.

Reflecting on the process of the way cluster C worked, members of the group stated that the critical friend played an important role in facilitating the cluster activities and guiding the developments of outputs. Factors of importance cited included the fact that the critical friend was an 'expert in the field' and therefore able to relate the issues arising from the projects to other initiatives. Further, the critical friend was able to maintain an overview of the projects/cluster, helping to make connections between projects and to synthesise overarching themes. In addition, because of the external perspective, the critical friend was able to maintain an objective view, as well as providing encouragement and identifying new areas of joint collaboration. Perhaps most importantly the critical friend helped to keep the cluster on track, to push, to encourage, to inspire and to work with the projects to see beyond the day-to-day operational aspects to the valuable scholarly insights that could be gained from the experience. The dynamics in the groups – between project members and also with the critical friend – were also cited as an important factor. Lastly, the overall willingness and enthusiasm to share across the group led to collective trust, and the recognition that everyone was part of a team with shared interests and responsibilities.

4.1 Ten tips for leveraging cross-institutional collaboration in the design and management of institutional change processes

On reflecting on the collective experience of the institutions involved in the Cluster C initiative, the following seem to be some of the key ingredients for success in initiatives of this kind:

1. A willingness to engage with collaborators by participating in joint activities, and a willingness to share – including the sharing of negative as well as positive experiences.
2. Having a clear and coherent set of themes, mapped to the natural lifecycle of the projects.
3. Targeted away day events, with clear agendas and preparation times, and focussed outputs. Away days should be timed at critical moments in the project lifecycles.
4. Mutual respect and equal contribution; listening to each others' perspectives, with a respect that allows constructive criticality.
5. A 'just-in-time' but responsive and pragmatic approach; with a focus on the production of collaboration-level outputs. Clear deadlines enabled constructive work between meetings via email and constructive use of a shared, digital space.
6. Fun! Genuine motivation and engagement in the process.
7. A good team spirit and shared understanding, supporting environment of trust and mutual respect, confidentiality.
8. Use of Chatham House rules.
9. The 'critical friend' role seen as independent from each of the project institutions and from the overarching funding body.
10. Funding to support both the meetings of project institutions but also for the time and investment of the critical friend.

5. Conclusion

Since the completion of the pathfinder programme, we have now heard that we have been successful in securing one of the new JISC Curriculum Design projects. This is being led by the Open University, in conjunction with the four projects and will enable them to take forward the strategic change activities initiated in the pathfinder programme.

The experience of these projects provides a useful case study of good practice on collaborative strategic change, at two levels. Firstly, in terms of the models each of the projects adopted and how they were sensitised to local institutional contexts and cultures. Each was mapped to local strategic objectives and used a range of mechanisms to align to parallel work within the institutions. Secondly, in terms of cluster approach and how this was used as a forum for shared discussion and collaboration. This was used as a reflective tool to consider collectively the

shared experiences across the projects at critical moments over the lifespan of the projects.

Acknowledgements

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