

An evaluation of the introduction of blended learning to Continuing Professional Development (CPD)

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Summary

Introduction

 The curriculum development project to develop a blended learning model for continuing professional development (CPD) began in 2006. The evaluation explored staff and student experiences, seeking to illuminate good practice and make recommendations for future developments. The evaluation was funded by NHS South West.

The curriculum development project

- Previous to this development, CPD was provided through a series of modules delivered through traditional teaching formats and attendance patterns. The introduction of a blended learning approach was driven by service stakeholders at senior management level seeking a more flexible form of delivery.
- The blended learning model for CPD consists of core modules and a series of further specialist learning options. There are currently two key pathways: Managing Long Term Conditions; and Foundations of Acute Critical and Emergency Care (FACE).
- The modules previously ran a day a week for eight weeks. In moving to blended learning, most module teams opted for an approximately 50/50 split of face-to-face and on-line learning.
- The blended learning model aimed to make full creative use of the interactive potential of on-line media and maximise learning opportunities.
- The model for the project management established a team approach with: a steering group; a project leader for each of the pathways; project teams, administrative support; and involvement of The Learning Technology Development Unit (LTDU).
- The students studying the blended learning modules were mainly nurses, but included some allied health professionals. They were mainly employed within the National Health Service but some students worked within voluntary organisations or within the military.

The national context

- National government policies have urged those delivering education to health and social care professions to explore the potential of e-learning (Dearing, 1997; Department for Education and Employment (DfEE), 1998; DfEE, 2003).
- There are a number of reported benefits of e-learning delivery, particularly for adult learners trying to balance learning alongside employment and home demands.
- There are some concerns that the employment of e-learning might be technologically rather than educationally driven, without evaluation of its

ability to meet learner need. A percentage of learners remain reluctant to engage with new modes of learning, preferring the 'traditional' face-to-face delivery (Kamin et al, 2001).

Research approach and methods

- The evaluation has been planned collaboratively with staff and students, through meetings, email correspondence and the establishment of an advisory group.
- The data collection methods included:

Analysis of Applications and Completions data

A questionnaire sent to all students enrolled on the new modules: 40 questionnaires returned

Follow up telephone interviews with students: 17 interviews completed Interviews with key staff: 20 interviews completed

Findings: Applications and Completions

- More students were enrolled in the blended learning modules analysed than in the related pre-blended learning modules.
- A larger number of students from the new modules did not submit for assessment. The overall pass rate was lower reflecting the larger number of non-active students and the mean overall mark dropped from 53.8% to 48%. The difference in the results may be for a number of reasons. It may be that students chose to enrol on the module to access some of the learning but did not seek to be assessed. Students may not be used to the blended approach which requires a strong self directed learning approach.

Findings: The Staff Experience

- Staff interviewed believed the main driver to come from service stakeholders at senior management level. Other factors mentioned included the need to widen the appeal of the CPD provision, and to provide more flexible and interactive learning.
- The creation of a project infrastructure with funding and leadership was seen as critical to the success of this kind of development.
- There was widespread agreement that the enthusiasm and energy of the Pathway Leaders was crucial to the development.
- The steering group provided a forum for support, particularly for the Pathway Leaders, but some communication difficulties were reported by module staff.
- Overall, staff views of blended learning at the beginning were more negative than positive. Concerns about blended learning included the loss of relationships with students; and the time-consuming nature of providing online learning.

- The development was experienced as a learning curve, with associated high levels of anxiety, especially for lecturers without previous experience of developing on-line learning.
- Interviewees spoke of difficulties in understanding the roles of technical and academic staff in terms of initiating processes and divisions of labour.
- Although there was finance available to support the development, it was sometimes difficult to make use of the resource. Resources were more successfully used for external funding of development work.
- Delays and frustrations arose in checking copyright issues. This issue was resolved when some of the work was contracted out.

Findings: The Student Questionnaire and Interviews

- All respondents had some previous experience of on-line or blended learning.
- Just over half the respondents agreed that they felt confident about on-line learning at the beginning of the course; this increased to 75% of respondents by the end of the course.
- Most students accessed materials from home and work, with home access the most popular.
- Students felt protected time was needed for on-line study, but found it easier
 to secure for classroom work. Most worked in half-day or day study blocks
 and felt they used more time than was allocated by employers.
- Although most did have computers at home, some felt these were not able to cope with the demands of the modules.
- There was praise for the work and academic support of the module leaders and tutors. Most students found technical help available when needed.
- Feedback on the on-line materials was generally good. The majority of respondents gave positive ratings on the quality and relevance of the material, ease of navigation and interactivity.
- Resources which were seen as most useful were: links to web materials; multiple choice quizzes, course information; the introductory exercise; Pdfs; Powerpoints; 'drag and drop' self tests; image labelling exercises; images; 'fill the gap' exercises; case-studies; and self test questions with example answers.
- Factors that created difficulties for more than 50% of respondents were: limited ability to discuss on-line materials; reluctance to engage in on-line discussions; and inability to open on-line materials.
- There was general agreement that the on-line discussion board did not benefit learning.

- About a third stated there was excessive volume of material. They would have welcomed more help in deciding what was relevant.
- A small majority found the material provided on-line too complex, with a bigger percentage feeling there were insufficient opportunities to discuss the on-line material.
- Face-to-face sessions were viewed positively in terms of the expertise of outside speakers and lecturers and the opportunity to learn from fellow students.
- The majority of respondents agreed that studying on-line provided useful skills for continuing learning and was more convenient for part-time study.

Conclusions

- The curriculum development project has been effective in achieving its aim to develop a blended learning model for CPD delivery.
- The development project has successfully created quality on-line materials, with high degrees of interactivity and variety, and changed face-to-face delivery away from traditional lectures to the establishment of master classes and greater emphasis on practical and other groupwork.
- The process of the curriculum development project has demonstrated much good practice to inspire future developments in the Faculty and across the University, as well as some lessons which can be learned to improve future curriculum development.
- The starting point for many of the staff was one of scepticism regarding the value of blended learning. Most were however pleased with the end result and some of the anxieties regarding students' ability to manage blended learning proved unfounded.
- The students' accounts did not fit a simple 'love it or loathe it' view of blended learning. Views were mixed and qualified and most students pragmatically accepted the need to adapt to blended learning as a significant part of their futures.

Recommendations

- Future developments in blended learning should employ the project model and infrastructure used here, to provide effective leadership and funding to support staff in making successful curriculum change.
- Communication between groups, for example steering groups and project groups needs to move in both directions, with discussions and decisions of steering groups made transparent and accessible to all.
- Models of project management need to be consistent with the culture and working practices of higher education.

- There is a need for staff training on pedagogical aspects of e-learning and on project management.
- Change management should be explicit in helping staff understand that change is stressful and that radical curriculum development is likely to involve loss, anxiety, and take time.
- There is a need for a database of learning and teaching expertise within the Faculty, the University and also in the wider HE networks to enable people to benefit from the experience and knowledge of others.
- There is a need to think through assessment issues of blended learning and provide guidelines for module leaders.
- Copyright issues need to be understood from the beginning and ways of dealing with copyright factored into the development of on-line or blended learning.
- Frontline staff should be brought into any future development as soon as possible, to enable all to understand what is being done and why, and to input into early plans.
- The energy, enthusiasm, leadership and funding for the initial stages of development needs to be maintained to enable the on-line materials to be updated and revised and to support new module teams coming in later.
- Employers need to provide protected time for on-line study, as well as for attending face-to-face sessions.
- Mentor support in practice would be valuable in helping students make decisions for prioritising learning and relating learning to practice.
- Student input is important in deciding what material should go on-line and what should be taught in face-to-face contexts.
- Materials on-line should be integrated into classroom sessions with opportunities to discuss work done on-line.
- There is a need for careful editing on on-line materials to ensure students are not overwhelmed by too much material. Students need a clear message that they are not expected to cover all the material and guidance on selection.
- Students' expectations regarding immediate and 'anytime' access to support need to be managed.
- Consideration should be given to experimenting with alternatives to asynchronous on-line discussion boards, such as synchronous discussions at an agreed time.

Introduction

The curriculum development project to develop a blended learning model for continuing professional development (CPD) began in 2006. The aim was to create provision which would be flexible in meeting the individual needs of the students, using a blended learning approach which combines on-line learning and face-to-face learning. The evaluation focused on student experiences of blended learning, staff experiences of developing blended learning, and the process of project management by which this development has been achieved. The evaluation seeks to illuminate good practice and to make recommendations for future developments. The evaluation is funded by NHS South West. The evaluation was granted ethical approval by the Faculty of Health and Life Sciences Research Ethics Committee.

This report explains the context to the development in institutional and national policy, describes the aims and findings of the evaluation, offers conclusions and makes recommendations for further developments of this kind. The statements in the report represent findings at a particular moment in time. As such they are a snapshot of a situation which in reality was constantly changing. Ongoing evaluation has led to changes in the delivery of the modules and there have been a number of staff changes since the commencement of the evaluation.

The curriculum development project

Development of the blended learning model began in 2006. Previous to this development, CPD was provided through a series of modules delivered through traditional teaching formats with students attending one day a week for eight weeks. Although on-line materials were included to some extent, this was most commonly Pdf files which students could download, rather than the creation of any form of interactive learning. The introduction of a blended learning approach was driven by service stakeholders at senior management level seeking a more flexible form of delivery. The model was developed through a consultation process involving Faculty staff and management and external stake-holders in health and social care.

The blended learning model for CPD (previously described as a Hub and Spoke model) includes a core module and a series of further specialist learning options. The provision is flexible to meet the individual needs of the students. The core module is not compulsory and some students complete only one of the specialist modules as a short course, providing evidence of learning rather than contributing to an award. The blended learning approach combines on-line learning and face-to-face learning. The face-to-face learning includes Masterclasses which are attended by students taking modules, but also by people signing up to these classes on a stand-alone basis.

There are two key pathways:

- 1. Managing Long Term Conditions (core), commenced Jan 24th 2008, with specialist modules:
 - Neuro-science, commenced March 2008
 - Pain management, commenced November 2008
 - Posture for Function, commenced November 2008
 - Orthopaedic, commenced April 2009
 - Diabetes, to be developed
 - Renal, commenced October 2008
 - Tissue viability, to be developed

- 2. Foundations of acute critical and emergency care (FACE) (core), commenced Jan 08 with spokes:
 - Principles of Emergency care, commenced January 2008
 - Principles of Critical care, commenced January 2008
 - Principles of Cardiac care, commenced April 2008

The on-line modules are housed outside of the VLE Blackboard to enable access for those outside the university and not enrolled on a UWE module. The sites include a discussion forum to support social dialogue and networking. The blended learning model aimed to make full use of the interactive potential of the media and to creatively use the full functionality in maximising learning opportunities.

The model for the project management established a team approach with a steering group; two project leaders; and project teams. It was intended that the infrastructure and the resources provided would enable staff to be supported to provide highly effective learning experiences for students.

The national context

Policy drivers

The provision of health and social care education is complex, facilitated through a range of providers and drawing on the Higher Education (HE) sector as one key stakeholder. National government policies have urged those delivering education to health and social care professions to explore the potential of e-learning (Dearing, 1997; Department for Education and Employment (DfEE), 1998; DfEE, 2003). E-learning is viewed as a means of contributing to a digital and knowledge based economy (Department for Education and Skills (DfES), 2003). The flexibility and accessibility of such modes of delivery are seen as offering opportunities to meet lifelong learning agendas and support widening participation (Scottish Executive, 1999; Department of Health (DH),1998, 2000, 2001, 2002; DfEE, 2003, Social Care Institute for Excellence (SCIE) 2007). E-learning has been seen as crucial to the support of learners; with the Department for Education and Skills (2003) predicting that by 2013 effective learning would be impossible without access to e-learning.

Potential benefits of use of e-learning delivery

There are a number of reported benefits of e-learning delivery. Bates (2001) commented on the benefits of using e-learning for those who have full time jobs and hectic social and personal lives. Many health and social care professionals fit into this category and will be looking to technology to provide access to necessary education, training materials and opportunities. The flexibility of 'any-time, any-where' delivery is often seen as helpful to learners trying to balance learning alongside employment and home demands.

Potential issues of e-learning use

There are some concerns that the employment of e-learning might be technologically rather than educationally driven and is being taken forward by keen enthusiasts. This results from a seemingly uncritical adoption of technology to support pedagogy without evaluation of its ability to meet learner need. Such criticisms have been

levelled at technologies such as widely employed virtual and managed learning environments (VLEs and MLEs), that are said to favour content creation rather than supporting learner diversity and pedagogic creation (Britain and Liber, 2004). The VLE provides a toolkit that often constrains the educationalists' ability to develop and implement teaching and learning strategies and equally limits the learner. Educators can fail to employ all of the pedagogic options available for e-learners. For example, it is suggested that despite an increasing emphasis on active learning, e-learning systems are predominately used to provide digital information access and dissemination (Crook and Barrowcliff, 2001), including the provision of lecture notes, reading lists, journal articles and images (Levy, 2005).

Whilst educators may fail to fully use e-learning tools it should also be acknowledged that a percentage of learners remain reluctant to engage with new modes of learning, preferring the 'traditional' face-to-face delivery (Kamin et al, 2001). Indeed, the cultural and wider changes required in adopting new learning approaches should not be under-estimated and many issues still remain for its adoption within health and social care education.

Definition of e-learning terms

A number of organisations and individuals offer different definitions of e-learning. The Social Care Institute for Excellence (SCIE) defined e-learning as, 'the use of information and communication technologies (ICT) to provide, support or enhance learning.' (SCIE, 2007, p1). This is a broad definition that includes any learning facilitated through electronic media. In this study we use the term on-line learning to refer to the use of a computer linked to the Internet via a telephone line connection. The internet enables one to one communication (for example between a student and a lecturer) or one to many (for example the use of group discussion). Blended learning refers to the blend of different learning methods, techniques and resources. This approach will combine face-to-face instruction with computer-mediated instruction.

Aims and objective of the evaluation

The aims were:

- To explore the effectiveness of the project management approach, infrastructure and process
- To explore the effectiveness of the blended learning model in supporting the CPD curriculum.

The objectives were:

- To explore the role of the steering group and the relationships between the steering group and the project teams
- To understand the experiences of the project leaders in leading, managing and implementing the blended learning model
- To measure the effectiveness of the blended learning model in attracting students to the faculty
- To understand the students' experiences of the blended learning model
- To explore the effectiveness of the blended learning model in developing student learning for practice
- To ascertain the student's perception of the impact of blended learning on their use of IT in professional practice
- To review teaching staff perceptions of the purpose of the CPD model
- To ascertain whether the model meets the aims of the original Health and Social Care CPD review (October 2006)
- To understand the experiences of academic staff in developing and implementing the blended learning model.

Research approach and methods

Pawson and Tilley (1997) see the purpose of evaluation research as being to inform development of policy and practice. They suggest that the question asked in realistic evaluation is not 'What works?' or 'Did this program work?' but 'What works for whom in what circumstances?' and suggest evaluators begin by expecting measures to vary in impact depending on circumstances. The key problem for evaluation is then how, and under what circumstances, a given measure will produce impacts. Realistic evaluation aims to recognize complexity, reframe questions, and support development.

The realistic evaluation approach suggests that outcomes follow from mechanisms acting in contexts. The mechanisms here are the project management process and blended learning, about which a realistic evaluation would ask 'what is it about this measure that may lead it to have a particular outcome pattern in a given context?' Operations are however always contingent on context, since subjects only act upon resources and choices offered by a program if they are in conducive settings. Context refers to spatial and institutional locations of social situations together crucially with the norms, values and interrelationships found in them – here the CPD curriculum within the school and in the wider employment context. The question asked about the context is: 'what conditions are needed for a measure to trigger mechanisms to produce particular outcome patterns?' The outcomes here are the student and staff experiences, achievement and impact on practice.

The approach allows for a range of data collection that acknowledges the complexity of introducing the blended learning CPD curriculum, and the number of variables likely to play a part in its introduction, development and use. Realistic evaluation tries to identify the people and situations for whom the initiative will be beneficial by drawing on success and failure rates of different subgroups within and between interventions. The aim is to understand context-mechanism-outcome pattern configurations, creating propositions stating what it is about a program that works for whom in what circumstances.

All stages of the evaluation have been discussed by stakeholders. Meetings were held with key staff before beginning the evaluation. An advisory group which included student and staff representatives met three times to discuss the project and monitor progress.

Research Methods

The data collection methods were:

- 1. Analysis of Applications and Completions data
- 2. Interviews with key staff
- 3. A guestionnaire sent to all students enrolled on the new modules
- 4. Follow up telephone interviews with students

Analysis of Applications and Completions data

In order to consider the effectiveness of the model in attracting students to the Faculty, we looked at the application and completion rates for the two pathways and compared these with previous data. The data were accessed from existing Faculty databases.

Staff Interviews

The key staff involved in the development and the delivery of the blended learning CPD framework were contacted by email and invited to take part in individual interviews guided by open questions (see appendices for topic list). The interviews were audio-recorded, transcribed and thematically analysed.

Student Questionnaire

Questionnaires were posted to the home addresses of all students who enrolled on modules in the 2007-8 year. Students were offered a £10 token from Marks and Spencer as a token of appreciation for their time in participating in the research. This was sent to an address provided by the student on completion of the questionnaire (regardless of whether or not they are willing to be interviewed by telephone). The responses from the questionnaire were recorded in SPSS and analysed to identify attitude measures to certain statements and to provide descriptive statistics. Openended questions would be reviewed for key issues and themes.

Student interviews

The questionnaire included a question asking if students were willing to participate in a telephone interview. Willing students were then contacted to arrange an interview. The interviews were guided by an interview schedule, which could be adapted according to individual responses in the questionnaire. The interviews were recorded and transcribed. The transcripts were entered into NVivo 8 and coded for thematic analysis.

Findings: Analysis of Applications and Completions data

Blended learning modules were compared to pre-blended learning modules using the Foundations of Acute, Critical and Emergency Care (FACE) Module as a case study. The comparison was of the FACE Module in the first year of its delivery with the final year of delivery of the four Pre-FACE practice modules.

The Pre-FACE Level 3 practice modules were:

- Critical care practice (Applied Coronary Care)
- Critical care practice (Applied Intensive Care)
- Critical care practice (Management of the Acutely III Ward Patient)
- Emergency Care

The results for the pre-FACE modules are shown in Table 1 and the FACE Modules in Table 2.

Table 1 Pre-FACE level 3 Practice Modules

Module	Number of students	Mean mark	Range (%)	SD	Pass rate	Non Submissions – Non-Active
	enrolled	(%)	(,,,)		n (%)	Students ¹
Critical care practice (Applied Coronary Care) x 1 run	12	52.5	43-67	8.3	11 (91.7)	1
Critical care practice (Applied Intensive Care) x 4 runs (2 P/T and 2 F/T)	34	55.0	34-72		31 (91.2)	2
Critical care practice (Management of the Acutely Ill Ward Patient) x 2 runs	7	51.8	35-66		5 (71.4)	0
Emergency Care x 1 run	12	56.0	37-67	8.4	10 (83.3)	1
Total	65	53.8	35-72		57 (87.7)	4

Table 2 FACE Modules

Non Submissions – Non-Module Number Mean Range SD Pass rate n of students mark (%) (%) Active Students (%)enrolled FACE x 2 101 48.0 0-70 66 (65.3) 17 runs

More students were enrolled in the FACE modules (101 versus 65) than in the pre-FACE modules; however a larger number of students did not submit from the FACE modules, the overall pass rate was lower(65.3% versus 87.7%) reflecting the larger

¹ The means range, and SD do not include the zeros awarded for non-active students' non-submission, they do include zeros where active students do not submit or where there has been an assessment offence.

number of non-active students and the mean overall mark dropped from 53.8% to 48%.

The difference in the results may be for a number of reasons. It may be that students chose to enrol on the module to access some of the learning but did not seek to be assessed. Students may not be used to the blended approach which requires a strong self directed learning approach. The academic staff were also new to this form of teaching and learning and the feedback reflects some students found the material available overwhelming and complex in places. Finally the marks may reflect the inter-professional groups undertaking the FACE modules compared to the uniprofessional practice modules that ran before.

Findings: The Staff Interviews

We invited all staff involved in the development of the new CPD programme to be interviewed. This included the two pathway leaders, all module leaders, the LTDU team, support staff, and members of the steering group. Twenty interviews were completed.

The interviews were arranged through an administrator and took place at the University campus. The interviews were digitally recorded and independently transcribed.

Ethical issues and insider research

We are grateful for the honesty with which the participants shared their experiences with us and feel the interviews provide a rich source of data which tells an important story of a process of educational development. We are conscious however of the sensitive nature of this material and difficulty in protecting identities in a small sample. These difficulties are exacerbated by the fact that, although there are some themes which are common across all the interviews, there are also very differing perspectives. It is important that we represent the range of views, without compromising confidentiality. To directly attribute views to particular staff roles would risk breaking confidentiality and exposing people in ways we would not consider acceptable. Given these issues, we have decided to attempt to write up the interviews in a broad and generalised way which does not attribute views to particular roles and makes only limited use of direct quotations. All the points we make are however based firmly in the data. To reduce individual subjectivity in interpretation we have each studied the transcripts separately before discussing our interpretations and agreeing our findings.

There were negative experiences in the process we are describing and we have heard, in quite strong language, of pain and suffering experienced by staff. However, the emphasis of the majority of the interviews was on creating something positive in terms of learning and improvement. Participants were keen that the learning from the experience should be maximised and taken forward to improve processes in any subsequent development. We share that commitment and the emphasis in this report of our findings is on learning and improvement.

Previous provision and drivers for change

As was noted earlier in this report, CPD was previously provided through modules delivered through traditional teaching formats and student attendance. On-line materials were typically limited to Pdf files for students to download. The introduction of a blended learning approach was driven by service stakeholders at senior management level, seeking a more flexible form of delivery.

Everyone interviewed was aware of this drive from service stakeholders and understood the development in terms of this, often emphasising the desire of Trusts to reduce the need to release staff from the workplace. In a number of instances, this was referred to as being at a high level involving commissioners, evidenced in some cases by communication with lower level managers, who were found to be in ignorance of the move to blended learning.

Another factor mentioned by interviewees, although less frequently, was the need to widen the appeal of the CPD provision from predominantly nursing staff from statutory services to include staff from Allied Health Professions and from non-statutory sectors. This was enthusiastically advocated by one respondent who believed strongly that 'we teach subject not profession' and the knowledge base needed to be shared across a range of hospital and community based professions.

For some of the respondents the development provided a welcome challenge to be more creative in providing learning in more interactive forms than standard lectures. A new, more student-centred approach to learning, which no longer would start from a notion of hours of attendance, could be explored through the flexibility of various media included within a blended learning approach. Learning formats would include sessions which students would be expected to attend but these too could be redesigned using Masterclasses and workshops, and avoiding traditional lecture formats. One respondent reported that in the previous all face-to-face version, participants were not able to attend all classes and:

'were losing out and missing out on crucial elements of the course'. 'The blended learning approach has reduced required attendance' and means 'we've avoided all school holidays, public holidays and all that, so of course there's a lot more freedom and flexibility'.

Drivers in terms of educational benefits were mentioned less frequently than the push from the Trusts, and perhaps were more thoroughly understood by staff leading the development and less generally recognised by module leaders at the frontline of the development process. It was hoped by the leader of the development that the structure of the CPD programme could become more flexible in allowing students to access units smaller than modules, perhaps only attending one Masterclass or workshop, and to allow students to study without following credit bearing courses. This was seen to be consistent with more national moves towards flexible learning packages.

Some staff expressed a recognition of the need to keep up with developments in elearning, with statements like 'we live in a digital age', and referred to UWE agendas to move to increase blended learning provision to free up staff for other work by 'having a slightly smarter way of working'. One member of staff referred to the advantages of a 'greener' form of provision, reducing the need for students to drive to the campus.

The old modules: 'It ain't broke'

Everyone interviewed felt that the existing modules were successful and popular, as evidenced by positive evaluations. Students were often attending on the basis of positive feedback and recommendations from their colleagues. So there was a predominant feeling that the modules to be changed 'ain't broke'. Some expressed a sense of loss over previous arrangements.

As we explore in more detail later, the perceptions of the external impetus for change impacted on the process of the development. Although explaining that she did not intend this as a complaint, one of the participants stated:

'I very much felt that we were told 'this is what we are doing. Deliver it'.

The effect of this perception was negative in that, if it had not been perceived as:

'thrust upon us ... we could have intervened more, and actually offered more to make sure it worked better'.

This perception of a 'top down approach' was also acknowledged by interviewees from the steering group.

It was not felt by anyone interviewed that the impetus for change to a blended learning approach came from students. Indeed staff believed that the students would be likely to regret the reduced opportunities to have time away from the stressful environments in which they work, and the more limited opportunities to network with colleagues from other settings. It was also felt that the majority of students would not be confident about using information technology, and were likely to feel anxious and somewhat threatened by the new development. Interviewees did however acknowledge that the students' experience was less problematic than expected and positive feedback was received.

In one case, a module leader opted to take the module into the blended learning format as, although the module was popular with those taking it, numbers were dropping as people in the particular field found it harder to attend. The module was also in a clinical environment in which most learning was thought to be moving to elearning.

Curriculum development – the 'hub and spoke' model – the pathways

Although this report focuses on the blended learning aspect of the development, it is important to note that this was in fact a multi-faceted change. Some of the people we spoke to felt it would have been easier to only focus on the blended learning aspect. The changes in modules meant that everything had to be processed through UWE's modular procedures, taking time and creating delays. We have heard how admissions staff had to deal with students' queries when there was no concrete information on the modules and nothing for students to enrol on. The wider changes also provoked issues of identity for staff with strong senses of ownership of material.

It had been decided that the development would be supported by a project infrastructure with a steering group, adequate funding for the work to be done, and administrative support. The first stage of the project was built around two areas of learning: emergency and critical care and managing long term conditions. A member of the academic staff from each of these areas was identified as a Pathway Leader to lead staff through the development. The Learning Technology Development Unit (LTDU) was brought in to provide support for developing on-line learning.

Everyone interviewed agreed that the idea of a project with funding and leadership is critical to the success of this kind of development.

The modules were traditionally run a day a week for eight weeks. In moving to blended learning, most module teams opted for an approximately 50/50 split of face-to-face and on-line learning.

The students studying the blended learning modules are mainly nurses, but include some allied health professionals — mainly physiotherapists and occupational therapists. They are mainly employed within the National Health Service but some students work within voluntary organisations. There are also students from the military.

The Pathway Leaders' role

A Pathway Leader was identified for each of the two areas: Emergency and Critical care, and Long Term Conditions. There was widespread agreement that the enthusiasm and energy of the Pathway Leaders was crucial to the development. The role of the pathway leaders was to take the project forward, to look at areas that could be involved, establish and support small groups of staff working on new materials, and to report back to the Steering Group.

'The two pathway leaders were really instrumental in driving (the pathways) ... they worked really hard to get the modules up and running but it was a hard job for them'.

The Pathway Leaders had the contact with the module team staff and were expected to advise, guide, bolster up, and generally move people along.

'the project lead was extremely helpful, we rang her or emailed her with any problems, and she was very quick to get back, so I don't think we felt isolated'.

This was a very difficult and challenging role, partly because of the difficulties of managing staff who are peers and indeed often friends. Pathway Leaders found themselves in the middle: managing and mediating the expectations of the steering group, and being in the firing line for the frustrations and difficulties of the staff.

The Steering Group

The steering group was set up to bring together people from various parts of the Faculty management and services to ensure key people had an opportunity to input into discussions, and to monitor any potential impact of the development on other areas such as the library. The monthly meetings of the steering group provided a forum for support, particularly for the Pathway Leaders who found themselves in an otherwise lonely and sometimes disheartening role. Some members of module teams reported using members of the Steering Group for individual contact and support.

The purpose of the Steering Group was not to directly support staff at the module leader level, but the existence of the Group created a sense of resentment amongst module staff. Communication was perceived as 'a one-way street': staff reported in the interviews that they did not receive minutes and did not feel confident that their views were represented there or that responses to issues were communicated back down.

'you need to appreciate that people's views have to be heard and there has to be good communication both up the system and down the system ... we didn't have minutes from the meetings ... you need to know that your thoughts and your views have been taken up and come back down again ... it might have been better to have a bigger meeting with everybody and then the steering group break off, so at least you felt like your voice was heard'

Frustration was expressed over changes of direction which were not explained, and around times when staff had become very upset over an issue, only to find that it was then suddenly dropped. The terms of reference were not clear to module leaders,

who were unsure when the responsibility would revert back to them. It was also said that the Steering Group was 'used as a whip sometimes'.

Part of this problem at least may result from a lack of understanding amongst ground level staff of the processes of curriculum development work at a strategic level. One of the steering group members, aware of the resentment felt by others, spoke of her greater understanding based on previous experiences of curriculum development. She says:

'I could see the steering group being there as a kind of more strategy kind of group identifying what needs to be done, how it was going to pan out across the programme ... I think though the people on the subgroups, the other module leaders and the module team members found it very difficult to see what the relationship was between them and the steering group.'

She adds:

'I think some kind of clarity about the steering group and the purpose and the remit would have been helpful'.

A number of respondents from the Steering Group referred to a very helpful debriefing session in which participants analysed what had worked and not worked and the meeting served to 'de-personalise everything'. It might have been useful to extend this opportunity to other staff and allow them also to reflect in a more constructive way on what was, for some at least, a painful journey.

Project management issues

A project manager with experience of project management in business contexts was employed on the project for a period of time but did not stay to the end. Some of the interviewees referred to this member of the team, mostly in terms of an overenthusiasm for GANTT charts and a lack of understanding of the way academics work.

Some of the interviewees referred to a lack of project management experience amongst staff. A number of interviewees referred to a conflict between the attempt to project manage this work and the lack of direct management usually experienced at UWE. People who were 'used to managing our own time as academics' suddenly found themselves being asked to say exactly what would they produce, and when. There were variations in levels of confidence: a member of the Steering Group states:

'we were confident it would be done... but the team couldn't always stick to the dates ... so that caused a bit of tension and a bit of friction'.

Staff views on Blended Learning

It is probably true to say that the overall views of blended learning at the beginning were more negative than positive. Some staff were keener than others, seeing scope for creativity and a more interactive form of learning. We were told how those less supportive of the idea tended to discuss endlessly, seeking answers that were not available. In some cases it was thought to be better to drop those people who were not keen and work with those that were 'signed up' to the idea. When asked about

advantages of blended learning, these were often expressed in terms of a better alternative to on-line learning, as blended learning does at least allow for issues to be resolved in face-to-face teaching environments. In terms of on-line teaching materials, quizzes and crosswords were spoken of mostly favourably; discussion boards least favourably.

Concerns were expressed by some interviewees about ownership of work placed online and accessible by all, although this was resolved in time with authorship acknowledged for work. Staff referred to the need for 'updating of material on-line even whilst the material was being prepared' and the need for 'continuing updating'. Some staff suggested the on-line media enable lecturers to 'get carried away and upload too much material', presenting problems for students who 'think they have to do it all'. There was a strong message of lecturers' sense of loss in not getting to know their students:

'I miss the face-to-face contact and don't feel I got to know the students as well'

The issue most commonly complained of was the time-consuming nature of on-line learning from the staff point of view. This was contrasted to the ideal of academics being freed by on-line learning and was not only the issue of the time taken in preparing new on-line materials.

'Once it's up and running, you think your workload will be less, because it is less actual contact time, but actually there's more because you are having to monitor, is anybody putting anything on the discussion boards ... and modifying the content to reflect that you know its got to be a very up to date site ... and keep it relevant to all those content areas'.

Some interviewees were very honest in expressing a change to their early scepticism as they saw the quality of the final product on-line. A lecturer told how, as someone who trained in the early 90s and likes to teach, she had 'huge reservations' and did not enjoy the early stages of the development, but told how:

'having seen the work transformed into an interactive document which is now marketable has changed my opinion'.

She now feels that there is always a place for face-to-face learning but also for online learning.

A learning curve

It was a learning curve for everyone. There were very high levels of anxiety. It was described in terms of 'learning as you went along' and 'making up processes'. Sometimes people were wanting answers that could not be provided. There were varying degrees of recognition that anxiety is probably an inevitable part of change. Talking of students' anxiety on realising the module they were signed up for involved e-learning one of the interviewees said:

'I think they were more anxious about it, but then that's fine, that's part of the processes in changing something'.

It was members of the Steering Group, with a slightly more distanced role and therefore perhaps more perspective, who most commonly saw the anxiety expressed

by staff as an inevitable part of process of developing something new and complex, but ultimately worthwhile. One of the steering group suggested:

'Sometimes things do have to be painful to come out the other end, as long as it's not so painful that people are ill because of it'.

Some interviewees did however give the impression that this line was crossed and we were told of 'animosity, aggression and bullying'. There were occasions reported to us of people reduced to tears.

Things were easier where lecturers had previous experience of developing on-line learning. One member of staff with previous experience comments:

'it was fine for me because I'd had previous experience ... it wasn't daunting or frightening for me at all',

but adds that the work still takes much longer than preparing a lecture. This suggests that as more staff gain familiarity with this kind of development, it may become increasingly easier.

Challenges for staff developing on-line learning materials

Where to start?

For staff with no experience of this work, there were difficulties in knowing, what was possible, how to start and even how to ask for help:

'we didn't even know what help we wanted because we had no idea what we were supposed to do ... that's probably why it took three months to get ourselves to know what we were doing really'.

Academic staff did not understand what was being offered or what was possible.

Interviewees spoke of difficulties in terms of who initiates process and who does what. Some of the staff interviewed felt they wanted help in form of being able to say 'this is what I want to teach, how can I teach it?' whereas the support staff wanted the academics to come with material and then they would offer suggestions for additional aspects or changes. The academic staff were looking for more proactive help than was, at least initially, being offered. Staff who were most happy with the support available were those with existing experience. An interviewee who had previous experience and didn't find the process particularly challenging (and had missed the beginning so maybe was better by the time she got there) said:

'Yeah it was fine, yeah that wasn't too bad you know they were friendly around there and they were really helpful and they'd you know took it on, they very rarely said no, so they generally you know say oh well you can do it this way and they would get on and do it for you, so I mean they are really an excellent team round there.'

Some interviewees expressed a need for support in the pedagogic aspects of on-line learning, suggesting they were given support in creating on-line learning in the sense of techniques such as using 'drag and drop' for interactive exercises, but they wanted something more fundamental regarding the pedagogy of e-learning. This was not felt to be available:

'I've learned how to develop wizzy things, that I could have drag and drop exercises and do all that, but I'm still not sure I've learned what makes students learn on-line'.

The tensions resulting from differing expectations tended to ease as the development progressed and people gained a better understanding of each others' ways of working. There was much praise from academic staff for the support offered once the LTDU support workers were allocated to module teams and confidence grew as the development began to move faster and more smoothly.

Although there was finance available to support the development, and people were aware of this, it was sometimes difficult to make use of the resource as academics did not want to give up their teaching or marking. Resources were more successfully used to fund others to contribute to the development work

Re-inventing the wheel

People seemed to be inventing their own wheel:

'We felt we were very much developing it from scratch without really having any real knowledge and floundering our way through when half of that should have been avoidable.'

There is expertise in the Faculty which was not used. One participant told how, a little too late, she showed others materials already on-line which demonstrated the scope and potential of e-learning. She reflected:

'perhaps I should have gone in there earlier and flagged it up, you don't like to do that, you don't like to hold yourself in this establishment and say, hey I have got some expertise in there, ... we come in here and go into our little burrows and get on with the job and hope it's going to work for our students.'

A particular example of this was a form of software for developing educational materials called 'Hot Potatoes', which a number of staff found useful, but wished they had known of earlier in the development process.

Time and timing

The issue mentioned most frequently was the amount of time needed for this work and the difficulty of accurately assessing the time needed. A module leader explained how she underestimated the time and the work that was involved for the module team to create on-line learning from previous teaching, and many other interviewees commented that everything took longer than expected with resulting frustrations and a sense of getting nowhere. The best use of on-line media includes forms such as animation and video which are very time-consuming to develop.

The interviews revealed a tension between academic and support staff over the timing of the development work, due to different models of working. The academic staff had to fit the work around teaching and other commitments. This sometimes meant that no work would be done for long periods of time, followed by a blitz of work, often at the last minute. The LTDU manager needed regular and consistent batches of work to arrive to a pre-agreed time-table which would enable work to be costed and staff brought in to work on the project to be kept busy. Getting the

materials in place early would allow time to deal with glitches. This conflict of working patterns led to tensions, particularly in the early months of the project.

Copyright

Delays and frustrations arose as a result of the need for care to avoid infringing copyright regulations. This issue was eventually resolved when some of the work was contracted to the illustrations department at University Hospitals Bristol NHS Foundation Trust, and a contract set up to provide videos and graphics.

New forms of assessment

Some of the module teams deliberately avoided on-line assessment, fearing this would risk more students failing assignments. Those who did experiment with on-line assessment encountered some unforeseen problems. In one case students were asked to complete an assessment in an IT suite at the university. Two students arrived not knowing their username and password (which caused the lecturer to wonder how often they logged on). A decision had to be made to ask all the students all wait whilst the two left to get the necessary details. Luckily it did not result in much of a delay, but still was thought to be stressful for the others to wait. Another student managed to turn her programme off and lost her work. Again staff had to decide on the spot what to do and decided to let her start again. There was speculation as to whether on-line assessment enabled students to cheat and search the internet, but it was thought that there probably was not enough time for this. The issues were raised at the Learning, Teaching and Assessment Committee, as no guidelines existed for this kind of assessment.

Communication

There were a number of issues identified which can be seen as aspects of communication. Although there was mention of people feeling there was too much talking over the same ground, a stronger point of view seemed to be that not enough time was spent at the beginning talking over issues and anticipating problems. As has been suggested there were problems between people in different roles in the university not 'talking each other's language'. These problems decreased as time went on and people began to understand each other better and increase trust that different forms of working could still produce the desired outcomes.

It seems that meetings were less effective forms of communication and problems arose where staff in part time employment at the university did not attend meetings. More effective communication was more flexible to individual needs with emails and phone calls dealing with issues as they arose and providing individual support.

Staff perceptions of students' experiences

The difficulties of judging a new development on the basis of the first year of student feedback were pointed out and this is a point to bear in mind. There is a tendency for people to respond negatively to change.

Although most felt that students were anxious at beginning, the general consensus amongst those interviewed seems to be that students experienced surprisingly few problems. Links worked well and there were very few instances of students needing help in accessing materials. Where students did need help, in most cases the issues could be sorted out quite easily. For one interviewee, this was evidenced by a healthy sign-up rate for the second run of the module, indicating the students could

not have reported poorly on the module to their colleagues. Feedback from the majority of students was positive: most had enjoyed the modules and would be prepared to join another course which involved blended learning. Students tend to like the more interactive parts of the on-line materials. Problems referred to were more often pedagogic rather than particularly on-line issues, for example too much material and students' difficulty in discriminating and prioritising. The modules were designed for diverse groups and materials included to be relevant to all, so it was not intended that every student would study all the materials.

Staff felt that for some students the flexibility offered by the on-line learning in terms of attendance was valued. Although it was felt that difficulties of access from the NHS meant it could not be thought of as study 'anywhere, anytime'. Students were thought to like the idea that they could work on the modules at home. However they were given study days by the Trust and tended therefore to be geared into working whole days and expected to complete the tasks in one day. This was not how staff wanted the work, but this was acknowledged to be:

'a cultural thing that will change over time as students get more used to using blended learning'.

It was thought that students worried at the beginning about not having enough contact with staff: even though staff gave all contact details:

'there was always this worry of where will you be if I need you'.

Previously students could expect to ask a question the following weeks, but the new timetable meant they might not see the lecturer for three or four weeks.

Some interviewees suggested that students felt it was a 'lazy way of delivering the course for us as a university': this particularly rankled with staff who felt they had worked harder to develop the on-line teaching than if they taught in the classrooms.

Some aspects were utilised less, for example discussion boards. As an instance of this, one of the interviewees referred to an activity where students had to comment on an ECG. One student put a comprehensive report and all the others responded with 'I agree'. Others found that despite reminders, discussion boards were not used effectively and students who were asked to put draft essays up, did not do this.

Findings: The Student Questionnaire

Demographic background

Forty students responded 37 (92.5%) women and three (7.5%) men. Two (5%) were aged between 18-25 years, 19 (47.5%) between 26-35 years, 11 (27.5%) between 36-45 years and eight (20%) between 46-55 years. Thirty-nine (97.5%) were nurses and one (2.5%) was an occupational therapist. Twenty-seven (67.5%) were employed at Band 5, 11 (27.5%) at Band 6 and two (5%) at Band 7. Eight (20%) worked part time and 32 (80%) full time. The minimum time in practice was two years and the maximum 32 years with a mean of 10.8 years.

Previous experience

All the respondents had some previous experience of on-line or blended learning (Table 3). Almost all had the use of a computer with internet access at home and at work (Table 4). All were already using computers for email and accessing information on the internet and the majority used computers for other additional purposes (Table 5).

Table 3 Previous e-learning experience

	E-learning	Blended	Both	Total
	N (%)	learning	N (%)	N
		N (%)		
Pre-qualifying	5 (38.5%)	7 (53.8%)	1 (2.5%)	13
Post-qualifying (L2)	-	7 (100%)	-	7
Post-qualifying (L3)	2 (12.5%)	9 (56.3%)	5 (31.3%)	16
Masters	-	5 (83.3%)	1 (16.7%)	6
Doctoral	-	-	-	-
Other	5 (55.6%)	4 (44.4%)	-	9

Table 4 Access to computers with internet

	Yes N (%)	No (%)
At home	38 (95%)	2 (5%)
At work	38 (95%)	2 (5%)
Elsewhere	17 (42.5%)	23 (57.5%)

Table 5 Use of Computers

	Yes N (%)	No (%)
E-mail	40 (100%)	-
Word processing	39 (97.5%)	1 (2.5%)
Database management	17 (42.5%)	23 (57.5%)
Accessing information on the internet	40 (100%)	-
Accessing patient/client information	35 (87.5%)	5 (12.5%)
Social networking	23 (57.5%)	17 (42.5%)
Other (e.g. gaming, shopping)	36 (90%)	4 (10%)

On-line materials

All the students stated they had accessed the on-line materials for the course they had studied at UWE during the 2007 to 2008 academic year. Thirty-nine (97.5%) had accessed these materials from home, 26 (65%) had accessed them from work, 17 (42.5%) had accessed them from the university, 11(27.5%) had accessed them from a library. One student had stated they had accessed the materials from another (unknown) on-line source.

Students were asked to rate the on-line materials (Table 6). Only 10% did not find the quality and relevance of the material satisfactory. Eighty per cent found the ease of navigation and the interactivity of the learning materials to be satisfactory. The volume of on-line material available was rated as the least satisfactory with some respondents feeling there was too much material. However most (65%) of the respondents were satisfied with the amount of material available to them.

Table 6 Rating the on-line materials

	Satisfactory N (%)	Unsatisfactory N (%)	Missing N (%)
Ease of navigation around site	32 (80%)	8 (20%)	-
Interactivity of learning materials	32 (80%)	8 (20%)	-
Volume of material	26 (65%)	14 (35%)	-
Relevance of material	35 (87.5%)	4 (10%)	1 (2.5%)
Quality of material	36 (90%)	4 (10%)	-

Students were asked about factors that created difficulties which affected learning (Table 7). The greatest number (67.5%) highlighted 'limited ability to discuss material presented on-line' as a difficulty, followed by 65% highlighting 'reluctance to engage in on-line discussion'. More than half highlighted 'unable to open on-line materials' (57.5%); 42.5% highlighted 'dislike of on-line learning' as a factor that created difficulties and 40% highlighted 'no protected time'. 30% found 'limited IT skills' and a 'lack of confidence in using computers' to be factors that created difficulties.

Table 7 Factors that created difficulties that affected learning

	Yes	No	Missing
	N (%)	N (%)	N (%)
Unable to attend face-to-face session	10 (25%)	28 (70%)	2 (5%)
Limited access to a computer	4 (10%)	34 (85%)	2 (5%)
Unable to open on-line materials	23 (57.5%)	14 (35%)	3 (7.5%)
No protected time	16 (40%)	21 (52.5%)	3 (7.5%)
Limited IT skills	12 (30%)	27 (67.5%)	1 (2.5%)
Lack of confidence in using computers	12 (30%)	26 (65%)	2 (5%)
Dislike of electronic learning	17 (42.5%)	21 (52.5%)	2 (5%)
Presentation of content not appropriate	7 (17.5%)	30 (75%)	3 (7.5)
Limited ability to discuss material presented on-line	27 (67.5%)	13 (32.5%)	-
Reluctance to engage in on-line discussion	26 (65%)	12 (30%)	2 (5%)

Respondents were provided with a list of possible resources and asked to indicate if they had used these or not and whether or not they were useful (Table 8). This was an ambitious and perhaps overly complex request, attempting to allow for various circumstances on different modules. It is likely that some of the students did not tick boxes in the way hoped for. The most popular resource was links to other web material. This was followed by multiple choice quizzes. Other resources seen as useful by 50% or more respondents were: course information; introductory exercise; Pdfs; Powerpoints; 'drag and drop' self tests; image labelling exercises; images; 'fill the gap' exercises; case-studies; self test questions with example answers. Six items scored below 50% but in some cases, the students may not have understood the reference. The lowest scoring item was discussion boards. Others with less than 50% were navigation; 'pause and reflect' points; 'read and take notes' activities, use of icons to categorise icons and email.

Face-to-face learning

Respondents were also asked to rate the usefulness of available face-to-face resources (Table 7). Items rated as useful by 50% or more of the respondents included Master classes, seminars, and writing essays.

Table 8 Availability of on-line materials and their usefulness

On-line	Missing		Availability not stated N (%)						
material	N (%)	Used	Not used	Used & useful for learning	Used & not useful for	Not used & useful for	Not used & not useful for	Not useful for learning	Useful for learning
				TOT TEATTINING	learning	learning	learning	learning	learning
Course information	1 (2.5)	4 (10)	5 (12.5)	21 (52.5)	2 (5)	4 (10)	-	2 (5)	1 (2.5)
Introductory exercise	10 (25)	4 (10)	3 (7.5)	17 (42.5)	1 (2.5)	-	4 (10)	1 (2.5)	-
Links to other web material	1 (2.5)	2 (5)	1 (2.5)	30 (75)	1 (2.5)	1 (2.5)	1 (2.5)	-	3 (7.5)
'Read & take notes' activities	9 (22.5)	2 (5)	4 (10)	16 (40)	3 (7.5)	2 (5)	-	2 (5)	2 (5)
Discussion boards	3 (7.5)	4 (10)	7 (17.5)	9 (22.5)	8 (20)	4 (10)	3 (7.5)	1 (2.5)	1 (2.5)
E-mail	2 (5)	9 (22.5)	5 (12.5)	17 (42.5)	4 (10)	1 (2.5)	1 (2.5)	1 (2.5)	-
PDFs	11 (27.5)	4 (10)	1 (2.5)	20 (50)	1 (2.5)	1 (2.5)	-	1 (2.5)	1 (2.5)
PowerPoints	10 (25)	6 (15)	2 (5)	20 (50)	-	1 (2.5)	-	1 (2.5)	-
Use of icons to categorise web links	17 (42.5)	4 (10)	-	13 (32.5)	1 (2.5)	3 (7.5)	-	1 (2.5)	1 (2.5)
Text 'drag & drop' self-test	12 (30)	4 (10)	-	20 (50)	-	1 (2.5)	-	2 (5)	1 (2.5)
mage abelling exercises	12 (30)	2 (5)	-	21 (52.5)	-	1 (2.5)	-	3 (7.5)	1 (2.5)
Pause & reflection'	16 (40)	4 (10)	2 (5)	10 (25)	3 (7.5)	1 (2.5)	-	1 (2.5)	2 (5)
Images	10 (25)	1 (2.5)	2 (5)	22 (55)	-	2 (5)	-	1 (2.5)	2 (5)
Video	11 (27.5)	1 (2.5)	1 (2.5)	17 (42.5)	2 (5)	2 (5)	-	1 (2.5)	5 (12.5)
'Fill the gap'	9 (22.5)	1 (2.5)	1 (2.5)	22 (55)	2 (5)	1 (2.5)	-	2 (5)	2 (5)

On-line	Missing	Materials stated as available N (%)							Availability not stated N (%)	
material	N (%)	Used	Not used	Used & useful for learning	Used & not useful for learning	Not used & useful for learning	Not used & not useful for learning	Not useful for learning	Useful for learning	
exercises Navigation Case studies Multiple choice quizzes Self-test questions with example	21 (52.5) 10 (25) 4 (10) 10 (25)	2 (5) 1 (2.5) - -	1 (2.5) 2 (5) 4 (10) 4 (10)	9 (22.5) 21 (52.5) 25 (62.5) 21 (52.5)	1 (2.5) 1 (2.5) 1 (2.5)	2 (5) 1 (2.5) 1 (2.5) 1 (2.5)	1 (2.5) - - -	1 (2.5) 1 (2.5) 1 (2.5) 1 (2.5)	2 (5) 3 (7.5) 4 (10) 3 (7.5)	

Table 9 Available resources and their usefulness

On-line	Missing		Resources stated as available N (%)						
material	N (%)	Used	Not used	Used & useful for learning	Used & not useful for learning	Not used & useful for learning	Not used & not useful for learning	Not useful for learning	Useful for learning
Master classes	14 (35%)	1 (2.5)	1 (2.5)	20 (50)	-	1 (2.5)	-	-	3 (7.5)
Seminars	13 (32.5)	3 (7.5)	3 (7.5)	19 (47.5)	1 (2.5)	1 (2.5)	-	-	-
Networking	20 (50)	3 (7.5)	4 (10)	11 (27.5)	-	-	1 (2.5)	1 (2.5)	-
Clinical skills networking	25 (62.5)	2 (5)	2 (5)	9 (22.5)	1 (2.5)	-	1 (2.5)	-	-
Essays	9 (22.5)	3 (7.5)	1 (2.5)	22 (55)	2 (5)	-	-	1 (2.5)	2 (5)
Exams	18 (45)	3 (7.5)	-	18 (45)	1 (2.5)	-	-	-	-

Support

Respondents stated help was received in accessing on-line materials from a range of individuals including families, friends, colleagues and academic staff. Least used was on-line help and information (Table 10):

Table 10 Help received in accessing on-line materials

	Yes No		Missing	
	N (%)	N (%)	N (%)	
Family/ friends	17 (42.5%)	12 (30%)	2 (5%)	
University IT staff	16 (40%)	22 (55%)	2 (5%)	
University lecturers	20 (50%)	17 (42.5%)	3 (7.5%)	
Colleagues at work	18 (45%)	21 (52.5%)	1 (2.5%)	
Other students	14 (35%)	24 (60%)	2 (5%)	
On-line information/ help	8 (20%)	30 (75%)	2 (5%)	

Respondents were asked whether they agreed or disagreed with a series of statements (Table 11). Fifty-five percent of respondents agreed that they felt confident about on-line learning at the beginning of the course; this had increased to 75% of respondents by the end of the course. Grouping together those who indicated strong or mild agreement, students were fairly evenly split in their assessment of their ability to access the on-line materials without difficulty; with 85% of the respondents stating they knew where to go for help in accessing on-line materials and 60% agreeing that when they needed help it was available.

Although 65% of the respondents felt they would prefer to do all their studying face-to-face, 67.5% agreed that they would study with a blended approach to learning again. Respondents were fairly evenly split in their assessment of the proportion of face-to-face to on-line learning, and whether there was sufficient time to access the on-line material. Respondents were fairly evenly split over whether or not studying on-line helped apply theory to practice, 65% agreed studying on-line provided useful skills for continuing learning. 85% agreed that studying on-line is more convenient for part-time study.

70% agreed that there were a range of materials appropriate to different professional groups and 77.5% agree the on-line materials related well to their area of practice. A small majority agreed that the material provided on-line was too complex, with a bigger percentage (75%) feeling there were insufficient opportunities to discuss the on-line material. Respondents were fairly evenly split over whether or not the face-to-face and the on-line learning worked well together as an integrated whole. There was general agreement that the on-line discussion board did not benefit learning (75%); this was reinforced by a majority view (67.5%) that discussion boards were inhibiting.

Table 11 Beliefs and perceptions about on-line learning

Statement	Agree strongly N(%)	Agree mildly N(%)	Disagree mildly N(%)	Disagree strongly N(%)	Missing N(%)
I knew where to go for help with accessing on-	17(42.5)	17(42.5)	4(10)	1(2.5)	1(2.5)
line materials					
The proportion of on-line and face-to-face	4(10)	14 (35)	11(27.5)	10(25)	1(2.5)
learning was appropriate to my needs					
The material provided on-line was too complex	7(17.5)	16(40)	13(32.5)	4(10)	-
There were sufficient opportunities to discuss	6(15)	4(10)	19(47.5)	11(27.5)	-
the on-line material					
I was able to access the on-line materials	9(22.5)	12(30)	12(30)	7(17.5)	-
without difficulty					
I felt confident about on-line learning at the	7(17.5)	15(37.5)	8(20)	10(25)	-
beginning of the course					
I felt confident about on-line learning by the	11(27.5)	19(47.5)	5(12.5)	5(12.5)	-
end of the course					
I did not learn very much from the on-line	15(37.5)	14(35)	5(12.5)	6(15)	-
discussion board					
I had sufficient time to access the on-line	8(20)	13(32.5)	11(27.5)	8(20)	-
materials					
Studying on-line helps apply theory to practice	4(10)	17(42.5)	10(25)	9(22.5)	-
Studying on-line provides useful skills for	8(20)	18(45)	8(20)	6(15)	-
continuing learning					
Studying on-line is more convenient for part-	10(25)	24(60)	3(7.5)	3(7.5)	-
time study					
There were a range of materials appropriate to	5(12.5)	23(57.5)	7(17.5)	4(10)	1(2.5)
the different professional groups					
On-line discussion boards are inhibiting	10(25)	17(42.5)	10(25)	2(5)	1(2.5)
When I needed help it was available	9(22.5)	15(37.5)	7(17.5)	8(20)	1(2.5)
The face-to-face and the on-line learning	5(12.5)	16(40)	12(30)	7(17.5)	-
worked well together as an integrated whole					
The on-line materials related well to my area	10(25)	21(52.5)	9(22.5)	-	-
of practice					
I prefer to do all my studying face-to-face	16(40)	10(25)	10(25)	2(5)	2(5)
I would study with a blended approach to	8(20)	19(47.5)	10(25)	3(7.5)	-
learning again					

Findings: The Student Interviews

Students who returned their questionnaires were asked to indicate whether or not they were willing to be interviewed by telephone. Of the 168 questionnaires sent out, 40 were returned. Of those, 25 students indicated that they were happy to be contacted by telephone for this purpose. Attempts were made to contact everyone who had given preliminary consent to take part but not all were available or contactable during the time period for the interviews. Seventeen students were interviewed during March-April 2009.

In the telephone interviews, the focus was not on 'checking' the information given by the respondents in the questionnaire, but on encouraging them to describe and explain their perceptions and experiences in more depth, and to give concrete examples wherever possible e.g. things that had acted as barriers to their learning, their likes and dislikes with regard to the on-line materials etc. An interview plan was used, which followed on from responses in the questionnaire and probed these responses. It also set out more generally the topics to be covered in the interviews so that similar information could be sought from all the respondents, thereby to ensure parity across the interviews.

The interviews were audio-taped and transcribed. A set of codes was drawn up and the transcribed interviews were coded using computer software for qualitiative analysis (NVivo 8). A set of descriptive accounts of the codes mapping the nature and range of the experiences reported was prepared. This was felt to be necessary so that all opinions could be noted and acknowledged. These accounts form the framework for this section of the report.

Characteristics of the respondents

The 17 respondents were all women. All but one of them were nurses. In terms of age group, one respondent was in the 18-25 range; five were 26-35; five were 36-45 and six were 46-55.

In information provided on the questionnaire, of the 17 respondents, four told us they had no previous experience of e- or blended learning; 11 described themselves as having limited experience and a further two described themselves as having extensive experience. On the questionnaire they were also asked to indicate how confident they were about blended learning at the beginning of the module. Of the 17, 11 felt confident and six did not feel confident.

Modules attended

The respondents had attended a wide range of the CPD blended learning modules available at UWE. These included:

- Foundations of Acute, Critical and Emergency Care (10 of the 17 respondents had attended this module)
- Managing Long-Term conditions (four respondents)
- Principles of Critical Care (four respondents)
- Principles of Cardiac Care (three respondents)
- Principles of Emergency Care (three respondents)
- Principles of Neurosciences for Health (one respondent)
- Principles of Children's Emergency Care (one respondent)

Nine out of the 17 respondents had enrolled on two of the modules, either concurrently or consecutively and thus were able to compare their experiences of modules attended.

Previous experience of blended or e-learning

Of the 17 respondents, 12 said that they had had previous experience of either blended learning or e-learning. Seven of the respondents, who had qualified more recently, had previous experience through their pre-registration courses.

Of those with prior experience, six thought that their previous experience helped with their UWE modules:

'It helped me with the skills, the IT skills I needed, and also it did give me some experience of e-learning and using a computer for learning so, yes, it did help'

Four felt that it had not helped them:

'Not really. I mean that was five years ago when I did my original training and it was literally when UWE was starting to do on-line courses.'

Feelings about blended learning prior to the start of the module

Both positive and negative feelings prior to the start of the module were reported by the respondents. On the positive side, some of the respondents were enthusiastic about the module because of the flexibility it would give them and the opportunity it afforded to find their own way of working through the material:

'I was quite looking forward to it because I've got children...because I thought it would suit my lifestyle better.'

On the negative side, two respondents felt disheartened at the prospect of the blended learning modules, because of their age and the more traditional previous learning experiences they had had. Several respondents described other concerns they had felt prior to the start of their module. The fear of learning alone, feeling insecure and out of their 'comfort zone' and lack of confidence were mentioned. For one respondent, there was a more practical concern – the inconvenience of needing to go out and buy a new computer especially for the blended learning module.

Among other respondents, mixed feelings were also apparent. There was the possibility that blended learning might be convenient but still the uncertainty of what it meant for their learning.

Motivation and on-line learning

Students reported that attendance at the university for study days was an automatic motivator, insofar as they are expected to be present for the sessions. Working on their own at home or at another location such as work or university, with on-line materials was considered to be a greater motivational challenge. A number of respondents mentioned that doing the on-line work in other locations e.g. at home, the experience can be an isolating one:

"...when you get home and out of that classroom environment it's difficult to motivate yourself...that's what I did find quite hard about it."

There were also more distractions at home:

'I think you can possibly get preoccupied with other things...maybe people popping round, the ironing pile always looks more appealing, when you're sat on the computer.'

Access to on-line learning

Tying in with the ability and motivation, access to technology, in various ways, was a major issue among the respondents. The respondents commented that there was an assumption on the part of the university that all students have computers at home with Broadband access. A number of students commented that enrolling on the module did mean they needed to replace computers and change from a dial-up internet service:

"...a lot of people don't have access to computers at home...when we went for the first day they kind of assumed everybody had a computer. And one of the girls said, "Well I don't have a computer at home" and their faces were like..."Well what do you mean you haven't got a computer at home." ...for the first couple of weeks I only had dial-up and that was a nightmare!"

Even where respondents had computers in place at home, they sometimes found that their computer equipment had limitations, for example for downloading papers and accessing specific links. Also, use of a computer at home did not necessarily mean greater flexibility in when they studied. One respondent was competing for time and space with her children who relied on the family computer for doing their homework:

'Because we've only got the one PC and so it was tricky but because I had the time when they were at school that was when I just sort of sat down and cracked on with it really.'

There were also comments from respondents about issues specific to the computer systems used at UWE to deliver the on-line components of the blended learning modules. Several respondents questioned the reliability of the system because of their losing inputted data (in interactive quizzes etc.):

'I found that a couple of times I would do a quiz and I would submit them and you'd lose all your data.'

Respondents also reported difficulties with access to particular features:

'It happened numerous times at UWE because I was able to log on to the computer and everything but with Athens...I mean same password, same everything but I just couldn't log on.'

For certain modules, there were initial troubles with some on-line content. Sometimes it was possible for the problem to be fixed, at other times this wasn't the case:

'I mean there were a few teething problems, you know...you might have been reading about some material and it would give you a little link to click on to some research material or you know a test or something and you wouldn't be able to get that up...sometimes it...took a little while to sort out...'

Understandably, respondents found the amount of time sometimes taken for problems to be resolved frustrating, despite appreciating that when a problem occurred, they could move on to other material.

The respondents also reported on the technical support they received while enrolled on the modules. Some respondents perceived that any help they requested either took too long in coming or was not sufficiently tailored to their ability:

'There was a long wait. So if I was having my day off to do this quite often I would be going back in the afternoon looking and still no reply. So you'd kind of waste a day. You just had to get on with what you could do and then leave the rest.'

'They said there was an IT area but I phoned them up and I had to wait three days for them to phone me back...I mean the help was there but unless you're actually computer minded then forget it...'

Location of on-line work

The respondents chose to work in a number of different locations including home, work and the university.

Home provided a convenient, quiet and flexible environment for the majority of the respondents, but also had several considerable disadvantages which included:

- Lack of companionship and corresponding difficulties in motivation for some respondents
- A level of technology often less than elsewhere such as work and university
- A lack of help to sort out problems quickly
- The cost of printing off materials.

Likewise, for some respondents, work offered a favourable place for study, where they had a good level of technology available to them, support (and helpful interruptions) from colleagues when necessary, quieter times which offered opportunity for study and the ability to download some material free of charge.

Respondents mentioned university as a possible place for study but none of the respondents used it as frequently as home or work. For some of the respondents distance to the university was a factor and one respondent made use of university facilities only at a time when she was required to be there for lectures/seminars.

Types of on-line learning materials

The respondents' accounts highlighted the wide range of on-line learning materials that had been available to them on their modules.

On the positive side, quizzes and questionnaires were among the most popular of the learning materials. These were appreciated because they gave instant feedback and acted as a personal 'check' on what had been learnt:

'They were like little questionnaires to do to see how much you did know and then you could go back and do it again and see how much you had actually learned.'

Also popular were the on-line presentations which provided commentaries alongside PowerPoint slides. The respondents liked it that the slides were embellished upon by the speakers, as would happen in a face-to-face lecture:

'You had spoken text alongside slide shows, it was actually like being n a lecture...and I found those really good...it wasn't literally just reading what was on the slide. She would sort of give extra information and I thought it was really good...'

Similarly, video clips of procedures and patients were also praised:

'I think the interactive things...there were several links...that actually gave the patient experiences and would play a little video clip of an interview with somebody with that particular condition. That was really, really useful.'

Other resources mentioned were CDRoms which included material from interviews with pictures and text and websites, including one with songs to illustrate a particular physiological process.

There were a number of resources commented upon by the respondents which were viewed more negatively. Perhaps the least popular feature of the on-line component was the discussion boards. The majority of the respondents, even those who were confident with using technology, tended not to use them because they were not at ease with communicating with others in this way:

'I suppose it's down to personality really but I found it quite hard having discussions on the computer, you know with people you don't always remember who they are...I found that a bit weird and I thought you know I didn't feel completely comfortable with that.'

One respondent perceived that debate around a difficult topic like ethics should not have taken place on-line. Even though she did participate, the value of doing so was limited because few other people actually took part.

'And I was going backwards and forward to the computer [to check for postings on the discussion board] and it was quite a waste, really, and I think ethical topics are best when you're face-to-face with people because they were very emotive subjects and it would have been nice to have a lot more input...So I think a lot of people didn't bother.'

One respondent described herself as a 'lurker' – watching what was going on but not taking direct part:

'I don't know whether it's just my age again and whether it's because that's not something that I've grown up with...I just didn't do it...And I find

that doesn't enhance my learning at all because people are just offering their opinions and it's not substantiated by fact so you're really, you're just reading other people's opinions and what they think and you just think, well you don't know if that's right. So I suppose they do have a place but not for me.'

Also perceived negatively was the amount of articles for reading. While the respondents appreciated the way in which they could click on a link to go straight to a particular article, a number of them found the amount of articles rather daunting:

'A lot of it was...you were given quite a lot of articles to read, if anything that was another criticism that there were too many solid block articles, which you then had to reflect on within your sort of area of work and try and pick the bones out of, but then again it made it quite long-winded.'

Reading from a screen was found to be difficult, so some respondents found themselves printing out a lot of the written material:

'I printed them all off. I went through three ink cartridges because I found I couldn't sit in front of a computer and read an article and get out of it what I wanted...they were saying you don't have to print it off, don't print it off, just read it on-line. If they have got time to sit...you know...if they can do that, fantastic. I'm not a person who can do that.'

Quality of on-line learning materials

Many of the respondents appreciated the variety and interactivity of the on-line learning materials. In a similar way, the majority of the respondents were positive and enthusiastic about the quality of the on-line materials and considered them to be thorough, comprehensive and very informative. A few acknowledged the amount of work that must have been involved in developing them:

'The e-learning stuff that was on there was...must have taken hours to do.'

However, more negative views were also encountered. Very aware of the level at which they were working, two respondents felt that in some areas materials had been set at too high a standard for some students. One of these drew attention to an exercise in anatomy and physiology which went into specialised detail.

'It went into far too much detail, more detail than I did...at my degree level...and it was just extremely difficult...and everyone else just said, they just gave up, they didn't bother with it.'

Another respondent was dismissive of the more self-assessment type of activities online e.g. quizzes and crosswords as a means of learning

'I mean when you're already working full time, you've got so much on your plate you're not going to spend time doing crosswords...you know...on the internet.'

Another respondent commented that more interactive material would have been appreciated:

'I think I had expected more the sort of interactive type stuff and...some of the stuff they put on was quite good, not all of it interactive but just quite good...more of that stuff would have been good.'

Volume and relevance of on-line learning materials

A significant issue, highlighted by almost all the respondents was the volume of information/material contained in the on-line component:

'I think the thing that I found quite difficult was the quantity of information and actually whittling down what I actually needed.'

Some material also was perceived as being too complex for the level being worked, with too much information for current nursing role/level:

'I felt it was too much information and some of it was not terribly useful for somebody at my level of nursing.'

A number of respondents reported how the on-line sessions took longer than the time allocated for them and how they needed to skip material and to skim over certain topics, in short to be very selective, in order to prevent on-line sessions spilling over into personal time:

'Sort of articles or questions, if I thought that it didn't interest me or that's going to take a long time...then I would skip it.'

Respondents acknowledged the attempts on the part of module leaders to show the students what the priority material was but it was felt by some that more guidance was necessary:

'Because you can easily get side-tracked by reading all the stuff, really, because it was not completely focused and it doesn't give you a clear guideline as to what we should be focusing on.'

The respondents mentioned a number of other positive points about the relevance of the modules including improvements in their underpinning knowledge of theory:

'I think my theory has improved because I've got, I'm much better foundations in theory...'

Other respondents reported finding it harder to see the relevance of the module content when they worked in a different clinical setting or role:

"...if you weren't doing this particular role then yes, it may have been useful, but because of the experience and the role I was doing I didn't find it particularly helpful to be bobbing and weaving into other websites, really."

"...moving a patient from hospital to ...from an ITU to another ITU place was not relevant...because I'm a ward sister and I would never move a patient in the conditions they were describing to another hospital."

It appeared that the students had different ideas regarding how much of the on-line content they needed to engage with. One respondent mentioned that she thought it was necessary to do the whole thing:

'I'm sort of one of these people that...that's it, you do it...you know...so I sat down and did it, as required and thought it would be part of the course and I had to do it, sort of thing.'

Other respondents, however, expected to be more selective about the material and were. Two strategies for dealing with these twin pressures were either to skim over certain sections or to miss them out altogether:

'There's definitely the capacity within that module in there just for doing face-to-face and hoping that you could skim by the rest really, and there would be huge chunks if you made no attempts to access those at all, I don't know if anybody tried to get away with that guite honestly.'

'I did skip things...because I don't think you can do everything.'

Many of the respondents successfully exercised judgement to customise the module content for themselves and their situation. They sought out material that was particularly relevant to their practice and they ignored material that either did not appeal to them or which they felt would take up too much time. On-line content which fared worst in terms of being left out was research articles:

'I didn't read all of them because there was just so many and obviously a lot of it was kind of research papers and things so it was a lot to read.'

Respondents felt the on-line modules required more control to be exercised on the part of the student than traditional learning approaches. They appreciated module leaders who had explained to them that more material had been made available to them than they were expected to cover. One respondent perceived that material needed to be organised better to orientate students to the topics so that they could exercise more effective choice about what was particularly appropriate or necessary for them.

Face-to-face learning

The face-to-face sessions, and the opportunity they offered to network with others, were viewed as a very positive component of the modules. None of the respondents wanted the face-to-face time reduced in favour of on-line time, and most expressed their wish for more face-to-face contact:

'the face-to-face sessions we all felt were really good and personally I would like far more face-to-face...it's so much more beneficial when you see people face-to-face and you can actually when you read things on-line you think you may have grasped it but you don't necessarily know whether you have or not...'

Being able to leave the workplace and come into the university was an appealing aspect of the face-to-face sessions for respondents – a chance to be free of the responsibilities of their professional roles:

'I actually liked the relief of coming away from work and going to university.'

Face-to-face learning was also a reassuringly familiar format:

'I think I find face-to-face learning much easier anyway...probably because that's the way I've been traditionally taught'

The respondents spoke of speakers who engaged them with their depth of knowledge and passion:

'different people that came to speak to us who were really good, and as I said, the tutors were very passionate about what they were doing ...very passionate about what they did and very knowledgeable.'

They also viewed positively the interaction with lecturers that was possible during the face-to-face sessions:

'having somebody who is very expert in their area I did enjoy...and being able to ask them questions when they were there and being able to feed off them, that was good.'

Master classes and workshops in areas like neuroscience, transferring patients, suturing and trauma, were also evaluated well by the respondents:

'Yeah, the master classes actually did work very well and because I think it sort of enforced what they'd been saying and put it into a situation that you could understand a bit more.'

One respondent also valued the chance afforded by the face-to-face contact to be led through module content rather than having to find her own way through it, as in the on-line component:

'I think personally I just got more out of the group sessions we had, the teaching face-to-face pointed me in a better direction and equipped me better to do my assignment than this e-learning...'

Perhaps one of the most enjoyable aspect of the face-to-face sessions for the respondents was the experience of being together with practitioners from different areas, different specialisms and even different disciplines:

'...it was interesting to get colleagues' points of views and you could learn from each other as well which I'd not really experienced before...'

Face-to-face sessions enabled them, as one respondent put it, to see what others do, to compare working practices and environments and to derive reassurance from it:

'It's lovely to be with other people so you can have a...pass on information and experiences...and that, to me, is part of the lovely thing about doing a course...getting away from the hospital, having a good old whinge and then finding out that you're actually not doing things as badly as you thought.'

Using the sessions to learn more about others' professional roles was also seen as rewarding:

'It's not very often that we have time to sit down and discuss with nursing colleagues and our physio colleagues or our OT [Occupational Therapy] colleagues. And I do know in those sessions where we did, very often you know the nurses were quite surprised by some of the input we could offer...and conversely I was quite surprised by some of the things that were going on in the nursing world...so you know just to be able to share those perspectives, I think it's an important part of being able to manage the individual.'

Essentially, many of the respondents valued the social contact of the face-to-face sessions, as well as a vehicle for their learning. This is apparent in the way some made arrangements to meet up before the sessions began:

"...we met up sort of three quarters of an hour before the course started in the morning to have a cup of coffee and things like that, so we made the effort to meet at those times."

If the on-line component of the modules was sometimes perceived as isolating, then the face-to-face sessions helped to alleviate this:

'If I'd not had the contact... I would have felt quite isolated.'

However, in a crowded timetable, not all sessions were perceived as equally helpful or relevant:

'But I think they did one [master class] on death as well and I felt that was really not appropriate. I think all of us have dealt with death...I've been nursing for 25 years and have seen a lot of death.'

Also rued by some respondents was the limited time for discussion, particularly of online content, because of the full timetable:

'We didn't discus much of the on-line stuff really, because those sessions were designed specifically for the chosen topic...'

In a classroom situation, it was not possible for students to skip through something that either they felt was not relevant to them or that they already knew:

'You sort of sit there going, well you know I know this...but it had to incorporate the ITU and the cardiac and then there were some lectures that are specifically to them and I didn't have a clue what they were on about.'

The issue of mixed groups in terms of focus and level was perceived by some respondents as problematic. Sometimes the focus appeared to be general and the teaching aimed at lower level (3 as opposed to M):

'Because it was delivered to the larger element of the group I felt who were undergrad, but those who were doing it at masters level, we then

had to take it away and somehow...the information into something else...it's hard to say this, but the sessions were aimed at the slower end of the group...it could be quite frustrating as I say with many people, there was a tendency for it to become quite anecdotal.'

In spite of their obvious appreciation of the face-to-face content, everyday problems like organising study days with work and driving through busy traffic were still an irritation:

'I think also that we, although I was able to attend all of the sessions it's quite, it can be quite stressful organising that with work so...Making sure that you've got those days and oh goodness they haven't given you the Tuesday off, so you have to go to the person who does the off duty and you have to say, please can I...'

'I come from Bath and I had to sort of leave a good hour and a half to get there in the morning because the start, I think the start was about nine or something, so rush hour traffic and you know just normal stuff that's not you know by any means insurmountable but you know just a factor really.'

Balance of face-to-face and on-line learning

When asked about the balance of the modules between the on-line and the face-to-face components, the respondents were very evenly divided — seven of the respondents felt the balance had been right while another seven respondents did not. Six respondents mentioned that they would still have appreciated more face-to-face sessions.

Respondents were concerned that student isolation was very likely to come about if the greater part of a module is on-line. One respondent also commented that, where the length of time between face-to-face sessions is perceived as too long, that can also contribute to a sense of isolation:

'The first two [face-to-face sessions] were at the beginning, they were like the first two days and so I think the problem was that it then felt like a really long time before the next one...'

One respondent considered the balance between the on-line and the face-to-face content of the modules in terms of the nature of the topic covered. She felt that topics like inter-professional practice were inherently more appropriately dealt with in face-to-face sessions. Her point was that on-line coverage wasted a chance for staff from different disciplines to talk to each other:

'And I did find that the IP [inter-professional] working, to do it on-line was...it was a missed opportunity where we...because we had a mixture of nurses and physios and I think we had an OT as well in our group. So it might have been useful it have inter-professional working actually done in a group because we'd be naturally doing just that, whereas to do it insular it doesn't come over...'

A number of respondents felt there was a tendency to cover 'difficult' topics on-line:

"...some of this stuff could have been on-line instead of face-to-face, and the most difficult topics could have been taught in the classroom."

Integration of face-to-face and on-line learning

The respondents were invited to express their opinions on the integration between the on-line and face-to-face components of their modules. One respondent was positive about the integration of the two learning approaches but the perception of the other respondents, generally, was that integration of the on-line and face-to-face components was lacking. The chief concern was the lack of time to discuss on-line content face-to-face:

'There were some [on-line] sections that we really didn't discuss in a formal group at all.'

'Once you'd done the e-learning...you needed then to sort of, the following day, to sort of bounce ideas off people and say 'Well what did you think of that? Did that do anything for you? or what did you find about that? Did you think that bit...brought up some issues for you to discuss?' But there wasn't any group sessions immediately after it...'

Some respondents also questioned the positioning of on-line and face-to-face days, which again, in their eyes, served to restrict discussion of the on-line content:

'I think I would have been good to have done them [certain on-line topics] a little bit earlier in the course...I think it's something that you may need to do early on in the sessions so you can discuss it afterwards and have more time to discuss it afterwards.'

The on-line contents needed, according to another respondent, to be organised more transparently so that students could prepare better for face-to-face time:

"...it's very difficult to prepare yourself for the lectures unless you're told exactly what should be studied which is why I think there should be a weekly thing rather than an alphabetical listing for the topics to be covered...then you can read it before, you know you're confident that you've actually gone through it all and you can prepare yourself for the lectures that way."

These issues resulted in a perceived sense that the on-line and face-to-face contents felt quite separate and possibly disjointed. One respondent felt it would have been possible to do the assignment without engaging with the on-line content at all.

Study leave

The respondents generally agreed that, in order to do the modules, negotiated protected time for study from the workplace was vital. The majority of the respondents reported being given study leave by their employers for both the on-line component of their modules and for the face-to-face sessions.

This time was rarely sufficient:

'We did have designated study days but there was more work to be done that you could do just on the study days.'

One respondent mentioned being allowed time off for study, but also commented on the difficulties involved in organising study time with staff rotas and in times of staff shortages:

'I think also that although we, although I was able to attend all of the sessions it's quite, it can be quite stressful organising that with work...'

However, for some respondents workplace pressures meant that they were not given study leave:

"...because all of us were in the same situation been short staffed on the wards means that you are relied upon and unfortunately that comes first you know if somebody is at risk, that person takes precedence over any learning and that's the reality of it and that's how we all felt."

There was a perception that it was easier to get time off for study days at the university than for on-line work. However, time allowed for on-line study was considered extremely necessary because of the large amount of work involved. The respondents regularly mentioned that the amount of on-line activity required of them, highlighted earlier, meant that it spilled over into time off:

'I mean they did give me a few days but they were not sufficient because the course was quite intense. So what I did, I did take a week of annual leave and here and there had a few days off and just worked within that time scale, to tell you the truth.'

Some respondents felt that on-line learning had the potential to intrude into their home life, because of the presence of the computer there:

'I think the reality of blended learning is in many ways it's far more intrusive because it just take over your life...it's always there in the corner and you sort of, every spare minute I had it's like oh God I've got to be doing the course...I found for the six months that I did over the two courses, all I thought about was course all the time and it certainly didn't, my life work balance nearly tipped over.'

During the time they were doing the modules, the respondents usually organised the bulk of their study time into half-day or day blocks, either at home or at work. One respondent regretted the amount of time she spent looking at the on-line content of her module and wished she had directed herself more towards preparing the assignments and reading material around that:

'I think maybe I'd have been better spending my protected study day doing the assignment and looking into aspects of my assignment that would interest me more than doing this.'

Support

The respondents painted a mixed picture of the support available to them while they were on their modules and the use they were able to make of it. They differentiated between support for their academic work and support with using the technology.

Academic support, which they received from the module leader and tutors on the module teams, was rated highly:

'[The module leader] was also very good at getting back to you, so if you raised any queries she answered them...quickly and was very good at pointing you in the right direction.'

'If there were things that I didn't understand, I did e-mail the module leaders and they did get back to me and they were quite good in saying that we could phone, leave messages and they would get back to us, which they did in fairness.'

To access technical support, the respondents reported using the IT support/learning technologies team, the Library and the module teams as well. With regard to IT support, a range of experiences was described. A few respondents experienced no technical difficulties at all while other respondents had needed IT support for minor problems and this had been forthcoming:

'Initially I did have trouble but the library certainly helped...there were too many digits in the password and things which needed sorting out...so that took...I don't know...about two days to sort out but it was eventually sorted.'

'Yes, I did feel support was there. I had no problems. I had a little problem with IT and I contacted UWE and that was sorted out quite quickly...'

Others perceived the delays in being contacted by IT once they had reported a difficulty as lengthy:

'if I e-mailed somebody on the day that I was on-line sometimes it would be two or three days before I got a reply and by then I would hope to have done my work, you know, so it kind of held me up in that way.'

A number of respondents relied on support from the Library and from module staff for dealing with technical problems:

'Yes, the library, the people in the library were very helpful. I went in there quite a few times, yeah very helpful. Also...the leader of the course, she was very good, she was always available for your e-mails, she was a very busy woman, but she would always reply within a day, two days.'

Some of the respondents also reporting accessing help with technology from external sources, including work colleagues and family members but on the whole the UWE systems were the main provision of support for those on the modules.

Conclusions

The curriculum development project has clearly been effective in achieving its aim to develop a blended learning model for CPD delivery. At the time of the evaluation, seven modules within the two pathways of Long Term Conditions and Acute, Critical and Emergency Care had been reorganised for blended learning delivery. Since that time, development continued with further modules.

The development project has successfully created quality on-line materials with high degrees of interactivity and variety. Alongside the development of on-line materials there have been exciting changes in face-to-face delivery, moving away from traditional lecture and Powerpoint forms of teaching to the establishment of master classes and greater emphasis on practical and other groupwork.

The curriculum development project successfully established an infrastructure which gave project status to the work, established a steering group and a project leader for each of the pathways, provided funding and accessed technical support. This is a particular model of change, different to that more often used in higher education, and different to the way most of academic work is managed. The model provided strong leadership, drive and resources to effect change. It was effective in driving forward change, despite difficulties where this model clashed with more dominant cultures and practices in academic work, and can be compared to weaker models in which blended learning developments rely on the enthusiasm of individual staff to develop and sustain change. The status of the work as a project with an infrastructure was valued by staff and no doubt key in the effectiveness of the development.

The starting point for many of the staff was one of scepticism regarding the value of blended learning. The development was a learning curve with considerable anxiety and difficulties along the way. Most were however pleased with the end result and some of the anxieties regarding students' ability to manage blended learning proved unfounded.

Anxiety about change is probably inevitable and sometimes staff were looking for answers which could not be given and seeking certainty where it was not possible. There was a sense however in which the support which was needed was several steps back from that which was available. Some of the academics, with no experience of blended learning, did not know where to start, what was possible, what could be asked for and how to ask for it. Support and guidance was needed with pedagogic issues, as well as technical issues.

In terms of the student experience, it should be acknowledged that the respondents were among the first to experience the modules in their new blended learning format. Any new module, whatever the style of its delivery, is likely to encounter difficulties, unforeseen consequences and areas where misunderstanding can develop when it is first launched. As a module progresses, early hitches can be recognised and corrected. It is likely that students experiencing the modules later on would reap the benefits of this.

The students' accounts did not fit a simple 'love it or loathe it' view of blended learning. Views were qualified and most students pragmatically accepted the need to adapt to blended learning as a significant part of their futures.

The interviews revealed that many factors affected the students' experience of the blended learning modules they attended. These included:

- Factors to do with the students themselves, including their previous experience of e- and blended learning, their own feelings prior to the start of the modules, their ability and motivation and their access to technology
- Factors to do with the modules, including the type, amount and quality of the on-line material, the relevance of the materials, the assignments.

In the interviews it was also possible to see how those factors interacted with each other. For example, older respondents who were more used to traditional classroom-based learning (student attributes) sometimes made the on-line aspects of the blended learning modules a challenge (module attributes).

Intervening between the students and the modules was the issue of support and how students were able to respond to the help that was on offer through the Library, the module teams and the IT support/learning technologies team.

While they may not have been instants converts to, or hugely enthusiastic about, blended learning, many recognised the way in which their Continuing Professional Development is likely to be delivered and undertaken in future and therefore perceived the need to move forward with the new developments. They demonstrated a pragmatic acceptance of the reality of CPD provision and how more and more courses will be switching to formats where some form of e-learning is present. They regarded their experience on the modules as useful for future on-line or blended learning.

The process of the curriculum development project has demonstrated much good practice to inspire future developments in the Faculty and across the University, as well as some lessons which can be learned to improve future curriculum development.

Recommendations

- The project model and infrastructure providing leadership and funding is key to successful change and is needed for any future development of this type.
- Communication needs to move in both directions, with discussions and decisions of steering groups made transparent and accessible to all.
- Project management needs to ally with the culture and working practices of higher education.
- Staff training needs identified include understanding of pedagogical as aspects of e-learning as and project management.
- Change is stressful and it may help to make this explicit, acknowledging that radical curriculum development involves some loss, much anxiety, many unknowns and takes a lot of time.
- There is a need for a database of expertise with the Faculty, the University
 and also in the wider HE networks to enable people to learn from and benefit
 from the experience and knowledge of others. The database could include
 information on what staff are willing to share in terms of expertise in teaching
 and learning.
- There is a need to think through assessment issues of blended learning and provide guidelines.
- Copyright issues need to be understood from the beginning and ways of dealing with copyright factored into the development of on-line or blended learning
- Frontline staff need to be brought into any future development as soon as possible to enable all to understand what is being done and why and to input into early plans
- The energy, enthusiasm, leadership and funding for the initial stages of development needs to be maintained to enable the on-line materials to be updated and revised and to support new module teams coming in later.
- Employers need to provide protected time for on-line study, as well as for attending face-to-face sessions.
- Mentor support in practice would be valuable in helping students make decisions for prioritising learning and relating learning to practice
- Student input is important in deciding what should go on-line and what should be taught in face-to-face contexts.
- Materials on-line should be integrated into classroom sessions with opportunities to discuss work done on-line.
- There is a need for careful editing on on-line materials to ensure students are not overwhelmed by too much material. Students cannot be expected to know

what is relevant and most important without guidance. Students need a clear message that they are not expected to cover all the material.

- Students' expectations regarding immediate and 'anytime' access to support need to be managed.
- Consideration should be given to experimenting with alternatives to asynchronous on-line discussion boards, such as synchronous discussions at an agreed time.

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Appendices

- 1 Topic guide for staff interviews
- 2 Student questionnaire
- 3 Student interview guide

CPD Blended Learning Evaluation Project Staff interviews June – September 2008

Topic Guide

Background to development of new blended learning modules

- Previous module deliveries how regarded by staff and students/advantages and disadvantages
- Impetus for blended learning approach where from?
- Perceptions of blended learning –advantages/disadvantages
- Views of other stakeholders e.g. Trusts on previous modules /new format

Process of developing modules

- How was process managed/co-ordinated?
- How long did it take?
- How did development proceed meetings etc?
- How was it kept on track good things/bad things
- Key staff involved in the process how did it all fit together?
- How was process for those involved? Good things/bad things
- Example of successful aspect of the work
- Example of less than successful aspect of the work
- Managing the interface between academics/LTDU
- Support required to keep project on track

Delivery of the modules to students

- What were students' perceptions of the new modules?
- Previous exposure to blended learning
- Particular challenges encountered by students
- Particular positive experiences of students
- Students' use of materials/engagement with tasks and activities
- Need for facilitation/support for students with this approach
- The process for staff similar issues to above

Outcome of modules

- Interface with practice staff and students perceptions
- Rates of success/failure- perceptions of these
- Students' acceptance/rejection of new modules good /bad stories
- Engagement of staff good/bad stories to tell
- Recommendations for the future things that should be done.
- Advice to module/programme leaders setting out on the same path what would you say?



Questionnaire for students enrolled on CPD blended learning modules at Bristol UWE 2007-8

This questionnaire is part of UWE's evaluation of the CPD blended learning modules you attended last year. All students have been sent a copy. Your support in completing it will help improve the provision for future students. It should take around 15 minutes to complete and as a token of appreciation, you will receive a £10 voucher to spend at Marks and Spencer. The accompanying information sheets explain the project and give assurance of confidentiality.

If you have any queries please contact Pat Young (Evaluation lead), e-mail Pat2.Young@uwe.ac.uk or telephone 0117 32 88815.

Instructions for completion

Where questions have boxes for your response, please tick appropriate box. In other cases, please write your answer.

Gender	Male									
	Female									
Age	18 – 25									
	26 – 35									
	36 – 45									
	46 – 55									
	56 +									
Profession										
E.g. Nurse, Physiotherap	oist									
Female ☐ Age 18 – 25 ☐ 26 – 35 ☐ 36 – 45 ☐ 46 – 55 ☐ 56 + ☐ Profession										
Employmen	t Status Pa	art-time	Full-time							
Years of exp	perience									
(a course course of the ir combines fa	ompletely presenternet, CDRom nce-to-face and	nted and studied) or blended learn	electronically e.ç ing (a course wh	g. through nich						
			e-learning							
Pre-qualifyin	g									
Post-qualifyir	ng (Level 2)									
Post-qualifyir	ng (Level 3)									
Masters										
Doctoral										

Other e.g. mandatory training	

Do you use a computer with internet accessapply to you.	ss? Please tick all	boxes that
	Yes	No
At home		
At work		
Elsewhere e.g. Library / Internet Café		
Do you use computers for any of the followapply to you.	wing? Please tick	all boxes that
	Yes	No
E-mail		
Word processing		
Database management		
Accessing information on the internet		
Accessing patient / client information		
Social networking e.g. Facebook		
Other e.g. gaming / shopping		
Did you access the online material for the last year? No Is there a reason why you didn't?	modules you stu	died at UWE
Yes		
Where did you access the online material for last year? Please tick all boxes that apply to y		studied at UW
Home Libra	ıry 🗌	

Work	Mobile	
Internet Café	Other	
University		

Please indicate which parts of the online materials were available and used on your module and whether or not they were useful for learning? Please tick all boxes that apply to you.

	Available	Used	Useful for learning	Not useful for learning
Course information e.g. module handbook				
Introductory exercise				
Links to material on other web pages				
'Read and take notes' activities				
Discussion boards				
E-mail				
PDFs				
PowerPoints				
Use of icons to categorise web links				
Text 'drag and drop' self-test				
Image labelling exercises				
'Pause and reflection' points				
Images				
Video				
'Fill in the gap' exercises				
Navigation				
Case studies				
Multiple choice quizzes				
Self-test questions with example answers				

How would you rate the online materials in terms of ... ?

	Satisfactory	Unsatisfactory
Ease of navigation around the site		
Interactivity of learning materials		
Volume of material		
Relevance of material		
Quality of material		

Please indicate which of the following resources were available and used on your module and whether or not they were useful for learning? Please tick all boxes that apply to you.

	Available	Used	Useful for learning	Not useful for learning
Master classes (led by someone who is an expert in their field)				
Seminars				
Networking				
Clinical skills networking				
Essays				
Exams				
Did any of the following factors learning?		ch affecte		
		Yes		No
Unable to attend face-to-face sess	ion			
Limited access to a computer				
Unable to open online materials				
No protected time				
Limited IT skills				
Lack of confidence in using compu	iters			
Dislike of electronic learning				
Presentation of content not approp	oriate			
Limited ability to discuss material ponline	presented			
Reluctance to engage in online dis	cussions			

Did you receive help in accessing the online materials from any of the following?

		Yes	3	No								
Family / friends												
University IT staff												
University lecturers												
Colleagues at work												
Other students												
Online information / help												
Do you agree or disagree with the following statements?												
	Agree strongly	Agree mildly	Disagree mildly	Disagree strongly								
I knew where to go for help with accessing online materials												
The proportion of online and face- to-face learning was appropriate to my needs												
The material provided online was too complex												
There were sufficient opportunities to discuss the online material												
I was able to access the online materials without difficulty												
I felt confident about online learning at the beginning of the course												
I felt confident about online learning by the end of the course												
I did not learn very much from the online discussion board												
I had insufficient time to access the online materials												

Studying online helps apply theory to practice		
Studying online provides useful skills for continuing learning		
Studying online is more convenient for part-time study		

Do you agree or disagree with the following statements?

	Agree strongly	Agree mildly	Disagree mildly	Disagree strongly						
There were a range of materials appropriate to the different professional groups										
Online discussion boards are inhibiting										
When I needed help it was available										
The face-to-face and the online learning worked well together as an integrated whole										
The online materials related well to my area of practice										
I prefer to do all my studying face-to-face										
I would study with a blended approach to learning again										
We would like to contact you and up the issues addressed in this of	questionna	ire.	e interview	to follow						
Do you agree to be interviewed over	er trie telepr No	ione?								
1es <u></u>	INO									
If yes, please give the telephone no	umber you v	vish to be	contacted o	n.						
On which days and at what times v	vould you pr	efer to be	called?							

Thank you for completing this questionnaire. As a token of our
appreciation we would like to send you a £10 Marks and Spencer
voucher. Please give an address to which we should send the voucher.

Name	-	-	-			-		-	-		-					-	-						-	-	
Address	•			•	•						•														
		•							•			-			•	•									
Postcode																									

We would like to send you a copy of the summary of the final report, together with the website address for the full report. Please tick

BLENDED LEARNING CPD EVALUATION PROJECT Student Telephone Interviews

I am ringing you now to ask you some questions about your experience on the module and to find out a bit more about your questionnaire responses. This will take about half an hour. Is it OK for you to talk now or would it be better if I called back later?

If not OK, can we agree a time that would be better for you?

Otherwise, Are you happy to take part? It is perfectly OK for you to say No, I don't want to or if you do say yes now, to change your mind later on.

When I talk about blended learning and e-learning are you happy with those terms and what they mean? (Explain if necessary)

What you will be telling is very important so I want to make sure I get all of it. For that reason, I would like to tape-record the interview.

Would be happy for me to do that? You can ask for the tape to be stopped at any point. The only people who will listen to the tape are myself, the project leader and the person who will be transcribing it. Our results will be published in reports and papers and nothing that identifies you would ever be made public.

OK, to go ahead? I'll just ask you that again for the tape. Switching it on now.

Do you agree to go ahead with the interview and to be taped?

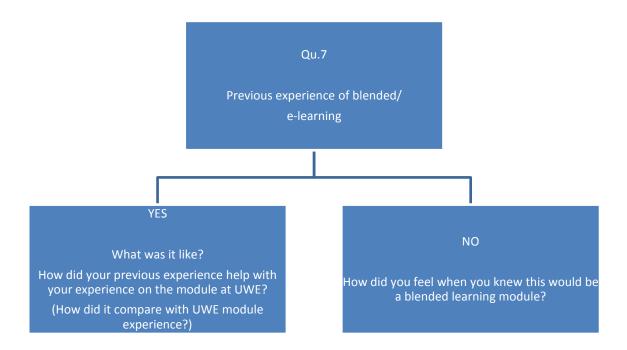
INTERVIEW

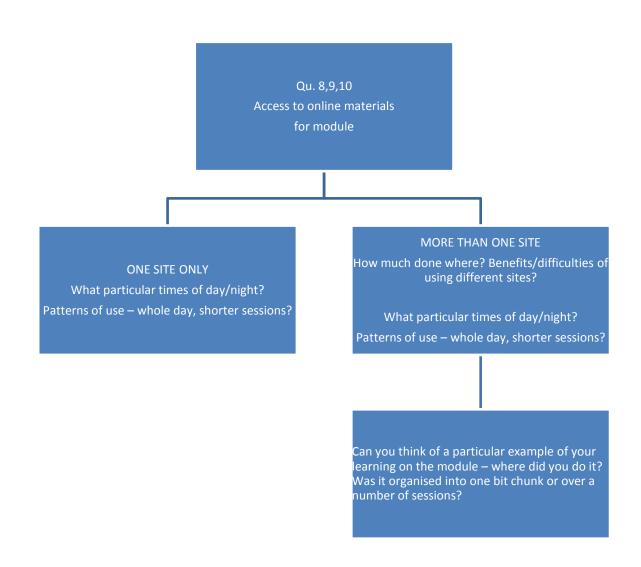
Any questions or any thing else you want to mention?

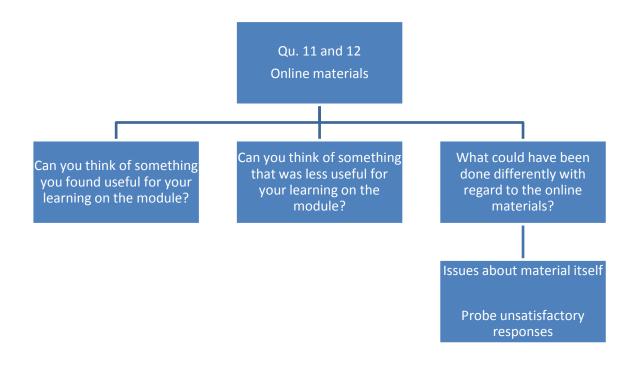
Thank you so much for your time and your help. We really appreciate you helping us and the information you give us will be really valuable. You should also receive your

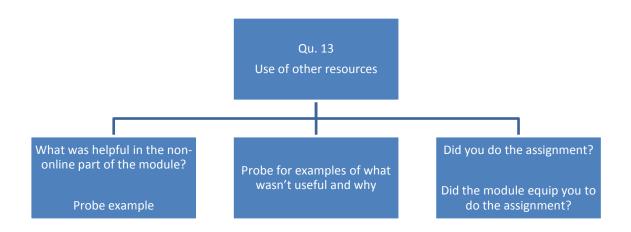
Marks and Spencer voucher in the next few weeks or so. If there are issues that you want to talk more about there is a phone number you can ring, to talk to Pat Young, the project leader. The number should be on the info. Sheet you received with the letter or I can give it to you if you don't have it. It is 0117 328 8815.

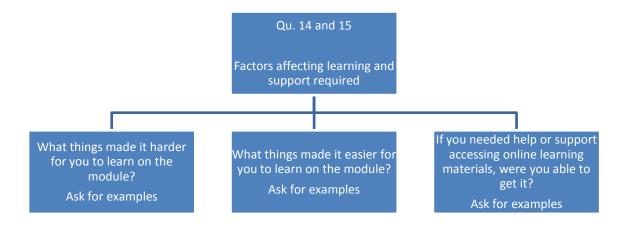
Thanks again for your help

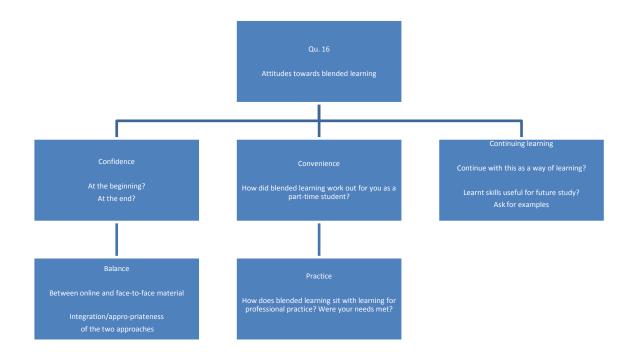












Areas to be covered in interviews	✓
Previous experience	
•	
Site(s) used for access to online	
materials	
Time(s) of access to online materials	
Pattern of access to online materials	
Useful aspect of online materials	
Less useful aspect of online materials	
Ideas for changing online materials	
Unsatisfactory aspects of online	
materials	
Useful other resources	
Less useful other resources	
Assignment issues	
Barriers to learning – harder to learn?	
Easier to learn?	
Getting help/support with accessing	
online materials	
Confidence levels before and after	
module	
Convenience – part-time study	
Balance/integration of online and face-	
to-face approaches	
T	
Learning for professional practice	
Future use of blended learning	

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