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Working Paper

Overcoming isolation in distance learning: *Building a learning community through time and space*

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February 2010



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Abstract

The rise in popularity of distance education programmes, taught through web-based media, belies the difficulty in preparing, delivering and studying on such programmes. Preparing and providing quality material and a rich learning experience are key challenges. The physical and temporal separation of tutor and student, and between students themselves, can lead to feelings of isolation. The lack of interaction and discussion between students lessens the richness of the learning experience and omits a significant element of the constructivist approach to learning. These problems are exacerbated for flexible, asynchronous courses where students register and study at a time of their own choosing: the courses have no cohort.

This research investigates this pedagogic problem through identifying the experiences of distance learning students studying on four non-cohort, distance learning programmes at the University of the West of England (UWE). The issues and barriers to collaborative study and aspects of student isolation are explored. Recommendations are generated for building a learning community, particularly on a non-cohort asynchronous programme of study, including: providing service level agreements to clarify expectations; designating 'staging points' to encourage and motivate; developing student generated content as footprints 'buried' in the material; humanising the material; and introducing mechanisms to provide students with their peer's thoughts/views on course material.

Keywords

Distance learning; isolation; student community; online education; e-learning

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1. Introduction

This section outlines the background to the research. It discusses distance learning in higher education, distance learning as a means to help address skills shortages in the built environment sector, and the student learning experience. It provides an overview of the barriers and challenges for distance learning and potential solutions to overcome these, based on a review of the existing literature in this field. It then outlines the purpose of the study and the associated research questions that were addressed.

1.1 Distance learning in higher education

Distance learning can be defined as a process whereby tutor and student are separated spatially and by time (Liu, 2008). It relates to programmes of study which are delivered entirely off-campus. Prior to the use of the Internet, two approaches to distance learning were developed and used alone or by combining the two. One is a paper-reliant approach, where the student receives a package of material through the post; completes the package and returns it via the post and then receives feedback. The other approach uses instructional videos or television programmes, when the student views a pre-recorded lecture usually enhanced with documentary style material and visual aids; completes the task; returns it via the post and then receives feedback (Nipper, 1989). More recently distance learning is being delivered through placing course material online, using e-mail and social networking media as support.

Lake (1999: 14) notes that 'technological change has enabled the materials of education to be dispersed economically in new ways with fewer temporal and spatial constraints'. Students therefore no longer need to attend regular lectures delivered in theatres alongside other students at a predetermined time and location, and they encounter a different learning environment. Universities have embraced this opportunity, given its potential for increasing student numbers without having to physically accommodate them. Distance learning is thus becoming an increasingly popular way to deliver higher education, which is illustrated by the range of distance learning courses provided in higher education establishments (Liu *et al*, 2006).

The term 'distance learning' has been used in the literature to incorporate programmes that are based online but which also include face-to-face contact sessions. Such programmes are referred to in this working paper as 'blended learning' programmes.

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Education delivered at a distance is also variably referred to as 'e-learning', 'on-line learning' and 'distance education' (Liu, 2008). This study relates solely to distance learning whereby the courses are delivered remote from the university (and any hired off-site facility) and whose students and staff never meet face-to face.

1.2 Distance learning for built environment professionals

According to an Academy for Sustainable Communities report in 2007, recruiting suitably qualified personnel is a problem in many built environment professions, including planning, architecture, regeneration and sustainability sectors. The current crisis in recruiting planners, and in 'up-skilling' existing staff, has been widely acknowledged (RTPI, 2005; Audit Commission, 2006; Sector Skills Council, 2006; Croft, 2007). Professionals in these sectors may be required to undertake continuing professional development (CPD) as part of their role. CPD is defined by the Royal Town Planning Institute (RTPI) as:

'the means by which members of professional associations maintain, improve and broaden their knowledge and skills and develop the personal qualities required in their professional lives.' (RTPI, 2007)

Distance learning has the potential to address the skills shortage in a range of sectors, through providing targeted flexible training, addressing the realities of work/life pressures (Wall et al., 2006). Maintaining appropriate levels of CPD can be difficult: for RTPI members, this equates to fifty hours in any given two year period. The learner is likely to be 'mature' (over 21 years of age according to Directgov (2009)), with family commitments, and in full time employment. Distance learning methods of study are therefore potentially attractive to those who face significant work/life pressures and for whom regular attendance at a higher education institution for a traditional form of delivery is neither practicable nor desirable (Gammie et al., 2002).

Further benefits of distance learning can be identified for both the students and the institution. For the student these include the opening up of new opportunities for those who were previously excluded or disadvantaged due to geographic and social issues: location (rural or isolated); transport; family/caring needs; and time constraints can also be overcome through flexible delivery (Lake, 1999). Gaining certified qualifications can be a route to improved job prospects (ibid) and potentially increased job satisfaction. The advantages for higher education establishments in providing CPD consist of

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providing closer links with industry and professional bodies; potential funding for research; and cascading information down into undergraduate programmes to keep them up-to-date with the latest industry position (Thomas, 1995).

1.3 The student learning experience

Many different factors contribute to the student learning experience. These vary according to the individual circumstances of each student, including: their learning style; personal situation; ICT skills, confidence and attitude (Webster and Hackley, 1997) and familiarity (Mason and Bacsich, 1998); background subject knowledge; motivation; effectiveness of teaching; communication with staff and between students; time to study; access to ICT support; and group working encounters (Alexander, 2001). A good learning experience, according to Eastmond and Ziegahn (1995: 59) is one where a student can,

‘...master new knowledge and skills, critically examine assumptions and beliefs, and engage in an invigorating, collaborative quest for wisdom and personal, holistic development.’

Understanding how the student learns is crucial for understanding how distance learning courses should be delivered. Weller (2002) states that constructivism is probably the principal pedagogical approach used in designing online courses. This approach is based on students actively constructing their own knowledge, based on personal experience (Quilter and Weber, 2004; Weller, 2002; Gulati, 2008). A ‘resource based’ approach to teaching requires students to consult and engage with a wide range of materials and sources independently of the tutor, providing the freedom to explore information that best suit their learning style (Weller, 2002). The Internet allows access to extensive data and literature that students can be encouraged to explore. It is noted that although technology can enrich the experience (Carswell et al., 2000), the use of technology in itself does not necessarily make learning interesting or engaging (Cleveland and Bailey, 1994) and it does not necessarily ensure academic success (Wegner et al., 1999). Further requirements of constructivism include experiential learning (Kolb, 1984), interaction with other students, colleagues and academic staff (So and Brush, 2008; Stacey, 1999) and collaborative learning (So and Brush, 2008).

This has been used effectively in traditional learning, but ‘its effectiveness in distance education contexts has yet to be firmly demonstrated’ (Bernard et al.,

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2000: 7). Bonwell and Eison (1991) note that for students to learn they need to experience a more 'active learning' environment, where they engage in reflective interaction with other students. According to Bernard et al. (2000), for collaborative learning to be successful a 'learning community' needs to be created so that the student feels part of a wider group. If the Internet is acknowledged and developed as a communication tool, the 'collaborative learning' mode can be promoted (Weller, 2002), so embodying the social aspect of learning by encouraging students to interact with one another.

1.4 Challenges for distance learning

1.4.1 Delivery

The delivery of course programmes is a significant challenge for distance learning. The traditional lecture comprises the most common method of providing higher education learners with information (Fry et al., 2003); however, this does not generally translate well into online learning (Weller, 2000). Placing material on the Internet and merely providing materials for tuition is not sufficient for learning: better use must be made of technology (Chee, 2002). In addition, the needs of the learner must be addressed otherwise online learning will not produce successful results (Wills, 1994; Hamid, 2002). The tutor is responsible for 'preparing the instructional environment' (Wegner et al., 1999: 104) which guides student learning; however the student may experience difficulties in undertaking their own knowledge construction (Alexander, 2001). Providing online activities has particular challenges, including difficulty of encouraging participation (Gibson et al., 2001), anxiety of students (Hughes and Daykin, 2002), difficulty of creating successful critical/analytical dialogue (ibid), potential for mistaken beliefs to be generated and shared (Weller, 2002), difficulty of tutor facilitation of online debate (Hughes and Daykin, 2002) and ability of the tutor to promptly answer queries.

1.4.2 Material and content

According to Connolly et al. (2005: 66), 'developing appropriate materials is a major challenge' for distance learning. Substantial time is required for preparing and delivering material (Willis, 1994), and this requires continual updates and maintenance. Material must not infringe copyright; material must be up-to-date yet it is 'costly to make constant changes'; and the material must be in an appropriate format (ibid: 66). On the other

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hand, the availability of material through the Internet provides learners with flexibility and a wide range of information sources and different media. This can however present difficulties for tutors in terms of addressing the tension between rigid structure and responsive flexibility in terms of designing online material that meets learners' changing needs (Stodel et al., 2006).

1.4.3 Student diversity

The availability of distance learning has led to a greater diversity in student type, which is a key challenge for delivering online programmes (Connolly et al., 2005; Lorenzetti, 2005; and Lake, 1999), as students in higher education use a wide variety of learning styles. Lynch (2004) suggests that aural learners perform well in traditional lectures whereas those with a visual learning style would favour the Internet. However, much online teaching may 'fall into the trap of "one-size-fits-all" approach' (Wall et al., 2006: 1). The skill of course design for teaching adults is therefore in 'finding alternative ways of conveying information and ideas' (Rogers, 2001: 22). This is of particular concern in a distance learning environment where there is potential for a student's intellectual isolation through the lack of a cohort to progress ideas.

1.4.4 Student motivation

Motivation is the most important factor for effective learning according to Rogers (2001). Students studying whilst in related employment should be motivated from the outset by recognising the rewards from their education (increased salary, more responsibility, better job prospects and so forth) (ibid) or fear of a penalty (having to repay course fees). For students that are studying on their own, learning can be time-consuming and consequently requires heightened levels of motivation. Self-discipline, careful planning (Liu, 2008) and time management (Alexander, 2001) are skills which need to be embedded into the course. Physically attending lectures demands accountability from students (Dickey, 2004), which in turn may assist motivation: distance learning does not have this benefit.

1.4.5 Information and communication technology (ICT)

The technology (ICT) used to facilitate distance learning requires an increased level of learning discipline and motivation, particularly as using new technology at the same time as engaging with new subject material can be difficult. Students can experience ICT

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related problems including: incompatible software; incorrect hardware; inability to use software correctly; and computer viruses. These can lead to frustration and anxiety (Salmon, 2000; Connolly et al., 2005). Belief in their own abilities influences students' willingness to use technology (Compeau and Higgins, 1995), and their success at doing so (Webster and Hackley, 1997). Success is also more likely if students feel the outcomes of their efforts are important (Compeau and Higgins, 1995: 191). Hughes and Daykin (2002) found that once the students had gained a feeling for the 'new' experience, their early fears regarding ICT subsided.

1.4.6 Student expectations

Students beginning distance learning programmes may feel uneasy about what to expect or the standard of work required. This anxiety may adversely affect students' ability to learn (Rogers, 2001). Students undertaking a formal education process expect their learning to be structured (Gulati, 2008). Without physical attendance students cannot observe the input being given by their peers or understand what constitutes an appropriate amount of study (Lake, 1999). Therefore, 'instilling appropriate expectations among all participants' is a key element to success (Carswell et al., 2000: 45). Student expectations regarding online communications may be high, yet issues of time-lag between emails, timeliness of contact and availability of participant may limit levels of discussion and support (Lake, 1999).

1.4.7 Contact and isolation

Research by The Higher Education Academy (2008: 16) found that 22% of distance learning students mentioned 'the risk of feeling isolated' as a challenge, reflecting findings that personal interaction is important for student learning (Ipsos MORI, 2007). Psychological isolation may result from the physical and temporal isolation experienced by learning at a distance (Lake, 1999). This issue is also raised by Wegner et al. (1999); Barrett and Lally (2000); Hartley et al. (2001); Rovai (2001); Dickey (2004); Lorenzetti (2005); and Stodel et al. (2006).

Isolation can be understood as being in terms of such dimensions as time (concurrent study); space (geographic dispersal); social (awareness of others), intellectual/experience (academic ability and life experiences); profession (subject related expertise); ICT knowledge; sensory (ability to see/feel/hear peers); cultural; and subject (if anyone else is studying the same topic).

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The breadth of professions involved in built environment disciplines means that students studying on a programme may be from different backgrounds; may be working to different regulations (for example England, Wales and Scotland have different approaches to planning); or have very different issues facing them in their professional work, for example in urban, rural and coastal areas. The course material, in particular the language used, is important if students are not to be inadvertently isolated through esoteric phraseology.

Reassurance and peer contact (Venter, 2003) as well as appropriate support (Lake, 1999) is required to overcome this isolation, yet this is a challenge without face-to-face contact. Student's individual learning style and motivation for studying may affect their willingness and need to interact with others (Liu, 2008), and therefore their experiences of isolation. Encouraging student participation in online discussions and therefore interaction with peers may help to reduce isolation, however making this compulsory may not be effective (Gulati, 2008) and discussion may not always be appropriate for learning (Hughes and Daykin, 2002).

1.4.8 Student retention

Distance learning courses experience high drop-out rates for many of the reasons identified in the sections above, with isolation being a significant contributory factor (Lake, 1999; and Hartley et al., 2001). If appropriate support is not provided for students, student withdrawal from the course may be more likely (Gammie et al., 2002). Notwithstanding the impact on students and their peers, withdrawal from courses has 'economic and social concerns for the university' (ibid: 16) and is something that needs to be considered.

1.4.9 Non-cohort learning

A particular challenge is with a specific mode of distance learning: the non-cohort course. These courses, delivered entirely online at a distance and asynchronously, face all of the challenges outlined in this section, with the additional difficulty of students being at different stages and progressing at a different pace throughout the programmes. Whilst this provides maximum flexibility for students to study a subject of their choice in their own time and speed it means there is an absence of students who are at the same point in the course, removing the opportunity for direct communication with a relevant peer group. This presents a problem, particularly as sharing ideas helps

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students to improve their learning and understanding and is a necessary part of an individual's cognitive development (Vygotsky, 1978). Technology therefore must overcome a temporal as well as a spatial distance. The issue therefore is how to deliver distance-learning programmes that successfully maximise the student learning experience and to provide a sense of 'community' to students who do not have a natural course cohort.

1.5 Solutions to overcome barriers in distance learning

Potential solutions to overcome the challenges and difficulties of distance learning, and to maximise the student learning experience, have been suggested and discussed in the literature.

1.5.1 Contact, interaction and creating an 'online community'

Various methods can be used in distance-learning courses to 'reduce feelings of alienation' (Dickey, 2004: 290). The notion of building an online community for learning has been explored, suggesting that this can overcome the absence of physical contact between students (Liu, 2008) and improve teaching (Thomas, 2002) by allowing for structured interaction (Garrison et al., 2000) or as a peer support network (Hartley et al., 2001). A virtual cohort may therefore be created. In order to facilitate the creation of an online community, a range of solutions have been applied. Blogs have been shown to create a sense of community among students which may reduce psychological isolation (Dickey, 2004). These are preferable to other web-based tools such as 'Blackboard' (a proprietary dedicated teaching and virtual learning environment), which may be confusing (ibid). Online discussion forums may result in 'increased student engagement, critical analysis and reflection, and the social construction of knowledge' according to a review by Thomas (2002: 352), provided the expected outcomes are explicitly stated (Stodel et al., 2006). However, issues of asynchronicity, the 'artificial' structure of the conversation and the uneasy nature of written communication continue to present problems (Thomas, 2002). Other issues include the permanence of postings; the creation on social relationships between people; the perceived usefulness of the activity; the fluency of online dialogue; students' desire not to offend others with their comments (Stodel et al., 2006) and may prevent learners' from learning alone where desired (Gulati, 2008).

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The use of personal tutors, online/telephone assistance, work place mentors, peer learning, group induction sessions, study skills workshops and access to local libraries have been suggested by Talbot (2007). These mechanisms are used in the Government sponsored e-learning initiative, the Foundation for Government (F4Gov) programme, which is for improving individual and organisational performance in the Civil Service (ibid). It is noted that these measures seek to overcome isolation not by technological innovation, but by introducing a degree of personal contact, either between peers, with work colleagues and between students and tutors.

1.5.2 E-mentoring

Mentoring can be used as a way of providing advice and guidance to new students starting a particular course. Barrett and Lally (2000: 7) proposed a 'peer mentoring' approach to overcome isolation through the creation of a 'student community'. Student experiences were recorded on CD ROM and circulated to subsequent cohorts to provide 'supportive voices' for students, which were described as 'interesting and motivating' by students (ibid: 7). This was advocated by Miller et al.'s (2008) research into nursing practice, suggesting that students need to form two relationships, one with their tutor and then another with their mentor (ibid: 395).

1.5.3 Role of the tutor

Tutors must play a significant role in providing advice, support and guidance to distance learning students (Wegner et al., 1999; Lynch, 2004). Hughes and Daykin (2002) found that distance learning students preferred to contact the module leader, rather than fellow students or a 'frequently asked questions' option on the website. Venter's (2003) concept of 'surrogate teacher' for the tutor to guide and assure students is pertinent. Timely and accessible tutor feedback on queries is crucial, as the immediacy of tutor response is important to address issues at an early stage (Lake, 1999). Creating a sense of belonging and care as part of the relationship between student and tutor is essential (Venter, 2003). Increased dialogue is necessary in order to reduce perceived distance between student and teacher (Dron, 2006; So and Brush 2008).

1.5.4 Material and delivery

Various measures relating to the material, content and delivery of distance learning courses can be used to help the student learning experience. The standard of the

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material on the website must be appropriate and sufficiently maintained as it is the principal point of contact with the student. Assignment expectations and requirements need to be explicitly stated online (Lake, 1999). Regular assessment tasks encourage engagement with the material (Rust, 2002: 154) as do embedded activities throughout the online modules. It may be appropriate to include videoed lectures online to introduce the topic and create a more personalised approach. Collaborative learning and student interaction is facilitated by the design of the distance learning course (Hughes and Daykin, 2002; Alexander, 2001; Liu, 2008), and the tutor has to stipulate that the final mark will reflect that interaction (Liu, 2008).

1.6 Research problem

The University of the West of England (UWE) have designed, built and are delivering online programmes providing both targeted CPD and flexibly delivered Masters level qualifications. Four programmes are studied purely by distance learning, consisting of a series of topics which can be studied in any order and independently. Students register whenever suits their personal circumstances and thereafter study at their own pace: the courses are therefore asynchronous and have no cohort. The programmes seek to adopt a constructivist approach to learning, encouraging students to use personal experience to provide reflective interpretation. The pedagogic platform, termed Flexible Learning in Context (FLIC), encourages student learning in the *context* of their organisation. This makes learning relevant to the work students are engaged in, more interactive and more engaging, encouraging debate and reflection (Bryan, 2003a; Bryan, 2003b; Garnet, 2005). This is particularly relevant where there is no course cohort for face to face discussion.

Due to the asynchronicity and lack of cohort on the four distance learning programmes, it is likely that only one person will be studying a particular topic/module at any one time. Students are therefore unable to communicate directly with others at a similar stage to themselves, and they may never meet the tutor or other students. As a result, some students can feel isolated during their studies, which potentially devalues their learning experience. To date, there has been no research on isolation issues with non-cohort distance learning, so this subject is not fully understood. Challenges and barriers to learning need to be understood from the perspective of the learner, in order to develop relevant solutions and to advance this debate (Dickey, 2004). Potential solutions need

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to be developed then tested for viability and usefulness in overcoming feelings of isolation and other barriers to learning. Methods of building a learning community, to overcome the constraints of time and space, need to be explored. The student learning experience could be enhanced following further investigation into this pedagogic problem.

1.7 Research questions

The research question being addressed by this report titled 'Overcoming isolation in distance learning: Building a learning community through time and space' is:

'How can the student learning experience on a non-campus based programme, where there is no course cohort, be enriched through reducing the potential for isolation?'

Three sub-questions that are generated from this:

- What are the experiences of students on the four non-cohort distance learning courses at UWE?
- What are the barriers and challenges to improving the learning experience for these students?
- What solutions could be used to overcome these barriers and challenges?

It is acknowledged that methods of delivering online learning must be continuously improved and monitored, especially in response to student concerns. As such, this research has sought to understand what factors contribute to isolation, what barriers to learning exist and in turn what measures can be put in place to overcome them.

2. The research

This section provides an account of the approach that was taken to answer the specific research questions stated in section 1.7. It provides information about the researchers and the research participants, outlines the stages of the research, and gives an account of the data collection. Details of the ethical review conducted prior to the collection of data are provided.

2.1 The research team and study participants

The research was undertaken by a team steered by Marcus Grant: Senior Research Fellow and MA Spatial Planning programme leader. The team included Nick Croft: Senior Lecturer / Chartered Town Planning Practitioner and programme leader for blended learning foundation degree in Planning Practice and Development Management; and Dr Alice Dalton: Research Associate.

In order to provide wider experience a project group was convened. This group comprises academics and support staff from across departments in the Faculty of the Built and Natural Environment, including Debra Boyask: Educational Development Facilitator; Ian Collins: UWE Federation Librarian (Distance Learning Support); Carol Graham: Learning Support Manager; Sarah Howell: Student Advisor (Distance Learning); Nick Plant: Lecturer in Information Technology. Additional input in the participatory stages came from product design tutors and students, ICT community systems tutors and students and staff learning support specialists.

The population of interest were students who were enrolled on pure distance learning Masters level courses with no cohort at the University of the West of England, Bristol (UWE). This included students who had completed, or were currently studying, for courses for the purpose of a full Master's degree or as continuing professional development (CPD). A total of 154 students registered on the following programmes:

- MA Spatial Planning (47 students)
- MSc Countryside Conservation and Management (22)
- MA Community Safety and Crime Prevention (41)
- MSc Urban and Rural Regional Regeneration (44)

2.2 Research methods

2.2.1 Sampling strategy

Under the Data Protection Act, the information held on students including contact details, can only be accessed by the Student Advisors, unless permission is specifically granted by the student. Therefore, permission had to be sought from the students for the research team to contact them. The Student Advisors emailed all students on the four programmes to introduce the subject, obtain their permission to use their data and discuss willingness to participate. The email highlighted the importance of individual student input for the research, used personalised (first name) contact and emphasised the interview as a chance to give feedback on courses. These measures were used to achieve higher response rates. The students were provided with contact details and informed of the next stage. Voting buttons were used where possible in order to make sure that the process was as simple as possible for the student to give consent.

Twenty three students responded to this email (15% response rate). The Student Advisors did not re-send the initial email to achieve a larger number of responses as the time constraints on and work commitments of the Advisors made arranging a follow-up invitation difficult. It was noted that the students did have regular contact with the advisors and had built up a relationship with them, therefore meaning that they would most likely reply if they were happy to be involved with the research. The nature of the students electing to participate was broadly reviewed (in terms of age, course and geography) and the sample was deemed to be large and varied enough to explore a sufficient range of student experiences for the first stage of the research. The sampling strategy was therefore one of self-selection, with all students given equal opportunity to participate.

2.2.2 Research design

Following a review of the academic, theoretical and policy literature, a three-stage mixed method approach (Bergman, 2008) to the research was adopted, guided by the three research sub-questions outlined in section 1.7. The first stage sought to gather qualitative information about the range of distance learning experiences from a diverse range of students enrolled on the courses listed in section 2.1. This followed a grounded theory approach (Glaser, 1992) to collect information inductively by exploring student experiences rather than testing existing theory. This was analysed to identify key

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themes regarding student experience, problems with distance learning, and to begin to identify potential solutions to overcoming the barriers to learning. The second stage used a creative participatory inquiry technique to generate potential solutions involving both staff and students. The outcomes from this were analysed to inform the design and content of Stage Three. The third stage sought to elicit reactions to these potential solutions with students on distance learning courses, to understand how they would be received, to improve details of the solutions and to explore the potential implementation.

The whole approach was to use empirical research to identify problems in distance learning, focusing on non-cohort courses at UWE, to use creative inquiry to develop solutions to overcome these problems and to then obtain students' views on possible mechanisms that could be used to improve the student learning experience on distance learning courses. The final conclusions come from the developing narrative and iterations between all three data collection stages and the literature review.

2.2.3 Data collection and analysis

Each stage of the study was associated with data collection. The three phases of data collection were as follows: interviews with distance learning students to explore potential problems and barriers to distance learning, and to identify potential solutions to overcome this; a participatory workshop to develop potential solutions; and a questionnaire survey to test and explore the feasibility and usefulness of the potential solutions with current distance learning students (Figure 1).



Figure 1 The three-stage mixed method approach to the research

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As outlined above, data from Stage One was collected and analysed to inform Stage Two and the outcomes from Stage Two were analysed to inform the design of Stage Three. Between each stage reports were written-up and the research steering team met to consider the findings and to determine the next stage of the research.

Stage One: interviews

It was decided that all twenty three students enrolled on non-cohort distance learning courses at UWE and agreeing to take part in the research (as outlined in section 2.2.1) should be interviewed. These interviews were conducted for the first stage of research in order to explore student experiences of distance learning. Participants were sent further information about the research, including the Participant Information Sheet and Consent Form (see section 2.3). A total of twenty agreed to be interviewed.

Following an extensive review of the literature and discussions within the research team, an interview sheet was devised to guide the interviewer through each interview conducted (Appendix A). In order to pre-test the survey prior to commencing the interviews, the survey was sent to a variety of reviewers for evaluation and comment. Reviewers included the research team, university colleagues, friends and family. A series of recommendations were made to refine the interview sheet, including: layout and formatting, question definitions and explanation. The following areas were explored in the interview:

- the course enrolled on: name, motivations, date started, topics completed
- experience of the course: positive and negative
- methods of communication: experienced and potential
- employment situation when commencing the course and currently.

By using this semi-structured approach, interviewers ensured that all aspects necessary to answer the research questions were explored. This also allowed comparability of responses, particularly as more than one researcher undertook the interviews. This style of interviewing allows the interviewer to change the order of questions or to add/omit questions when appropriate (Robson, 2002).

Asking for personal information or specific figures, such as dates and time periods, was avoided, as questions that require respondents to reveal personal information or to have knowledge of specific records are less likely to be successfully answered (Dillman,

2000). No personal information was requested from the students apart from employer information, and this was reserved until the end section of the interview.

Students consenting to their involvement were interviewed over the telephone. Face-to-face interviewing was impractical due to the geographical dispersal of the students enrolled on the distance learning courses, but research suggests that there are no significant differences between face-to-face and telephone interviews (Sturges and Hanrahan, 2004). The interviewers contacted each other after their first interview, which allowed reflection on the interview process and additional guidance. No further amendments were deemed necessary to the interview sheet. The interview sheet was used as a guide and interviewees were probed as appropriate to elaborate on their experiences of being a distance learning student.

A total of nineteen interviews were conducted by four researchers (one scheduled interview could not be conducted). Interviewers made notes on a hard copy of the interview sheet as they progressed through the interview. Each interview lasted between twenty and thirty minutes and was recorded using a digital recorder and telephone coil attached to the telephone handset. The interviews were transcribed by an external transcription organisation (as verbatim, excluding 'ums and ahs') and then checked by the researchers for accuracy. The researchers tasked with carrying out the analysis familiarised themselves with the transcripts by reading through them all and noting any initial thoughts about the findings of the interviews.

The data was analysed using a process of thematic analysis (Boyatzis, 1998) in specific qualitative analysis software (NVivo). Codes were assigned to categorise particular pieces of text taken from interview scripts. Theme headings were created using themes arising from the interview sections. Sub-headings were created as appropriate to include aspects such as positive and negative experiences and suggested improvements. This process was repeated several times and the theme headings were refined accordingly. Two different researchers coded the interviews then discussed findings in order to ensure consistency of coding and agreement on the final themes. Following this analysis, the findings from the interviews were written up by categorising responses under the given themes.

Stage Two: 'sandpit' workshop

The aim of the second stage of research was to develop a series of ideas that would represent potential workable solutions to deficiencies in the student learning environment, particularly in relation to dimensions of isolation. In order to generate solutions to the pedagogical issue in a creative manner, a 'sandpit' participatory research session was convened at UWE, using workshop ideas developed by the Engineering and Physical Sciences Research Council (EPSRC). The EPSRC defined a 'sandpit' workshop as 'a place for adventurous, playful solution construction' in order 'to look at the issues in creative, multidisciplinary ways' (Jones, 2006: 16); to 'dig and delve' into the subject. This uses a brainstorming process, allowing for investigation of experiences and exploration of solutions to a particular problem.

The objectives of the workshop were:

- To address the dimensions of isolation experienced by students on distance learning courses at UWE.
- To investigate possible and innovative solutions to overcome these dimensions and enhance the learning environment.

Posters advertising the event were displayed around the campus, inviting all staff and students to participate, using the incentives of portfolio material (students), learning and teaching skills (staff) and lunch. Through the involvement of the relevant staff members, third year product design students were invited verbally as were third year systems analysts. Both were deliberately selected to include, students from a different department, for their disciplinary working methods and as a contrast to the background of the students who were interviewed in the first stage of the research.

A total of nineteen staff and students attended the event. The session design was led by an experienced facilitator and designer of participatory workshops who was a core member of the research team and lasted about fifty minutes. The basic class room used had been prepared to support best creative working, imagination and right brain thinking modes. As such an informal 'cabaret' layout was used for the tables; the walls were highly decorated with visual aids (graphic templates to capture group working); the tables were covered with hundreds of postcard sized cards depicting a random selection of images; and a central table contained a finger buffet set-up for a working lunch.

Overcoming isolation in distance learning: *Building a learning community through time and space*

Following an introduction to the workshop programme, the session comprised four activities, mainly undertaken as small group work. The four components to the sandpit session were:

- A. Understanding and exploring a dimension of isolation: Using a wide range of images on cards provided, participants were first asked to select those images which best depicted components of their allocated dimension of isolation, to attach these images to a prepared wall poster template, adding text in order to make an 'isolation cloud'.
- B. Proposing conceptual solutions: Participants were then asked to propose some basic conceptual solutions to overcome the component of isolation they had been working on. They were to capture and communicate their group thinking through again selecting images and adding text as appropriate.
- C. Selecting solutions on which to focus: Having found some conceptual solutions, participants were then asked to select three of these as 'big ideas' for further development, exploring mechanisms for implementation.
- D. Identifying common threads across the solutions: A plenary activity was held at the end of the session, where each group gave their findings of the three 'big ideas' identified to overcome their allocated dimension of isolation, and commonalities were identified between the groups.

Five dimensions or 'axes' of isolation that affect distance learning students were discussed. These were introduced as: chronological (time delay), communication (alternatives to face-to-face contact), geographical (distance), professional (understanding) and technological (using IT). Participants were invited to discuss each of these axes and were therefore distributed across five topic tables. Each topic table consisted of one anchor person (from the project team) to act as chair. Objects were provided to stimulate the discussion of each dimension of isolation and included photographs, oval sticky notelets, paper, felt pens and Lego. The workshop was facilitated throughout and conducted in a deliberately planned rapid style in a visually rich environment. Images from the event are set out in Figure 2.

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Figure 2 Images of the research ‘sandpit’ participatory workshop held at UWE to explore problems of isolation on distance learning courses and develop potential solutions

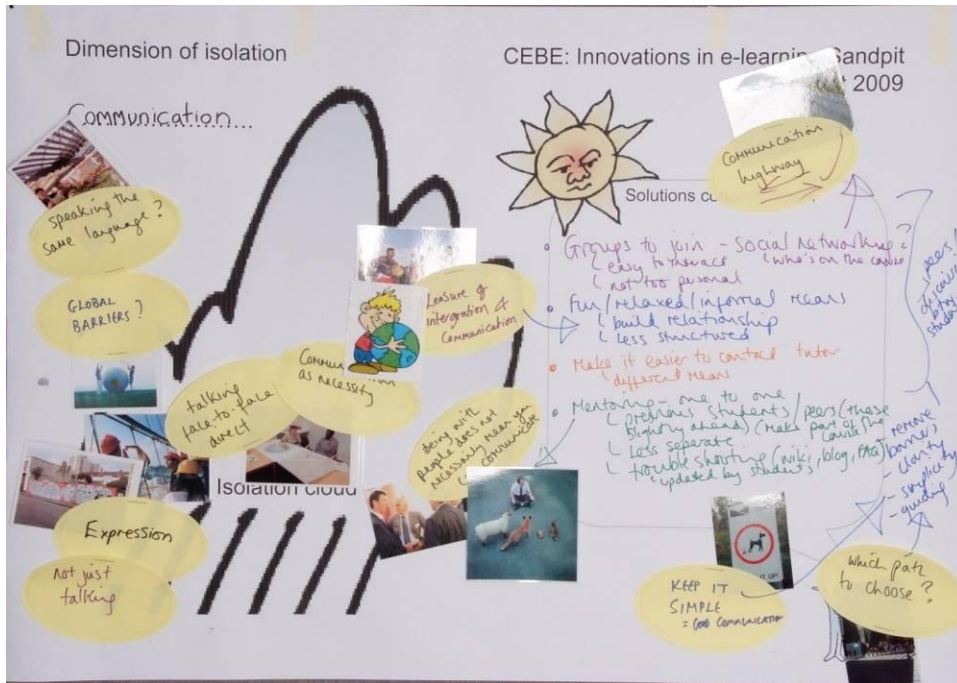


a) Participants discussing the issues as they complete a wall template



b) Small group table work, note the image cards

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c) The first template used for capturing the isolation and conceptual solution image clouds

Dimension of isolation

CEBE: Innovations in e-learning Sandpit
16 Oct 2009

GEOGRAPHICAL

Solutions applied to the learning environments

The big idea	How it works	What next
CREATE ONLINE COMMUNITIES	- POST ON DISCUSSION BOARDS / WIKIS - SHARE CVs & PHOTOS - REGULAR ELECTRONIC NETWORKS	GET STUDENTS TO SIGN INTO THIS CONCEPT + GIVE PERMISSION - STUDENTS TO WRITE SHORT DESCRIPTIONS OF THEMSELVES + PHOTOS
USE HUMAN-FOCUSED COMMUNICATION TECHNOLOGIES	- USE VIDEOS IN COURSE MATERIALS - USE AUDIO FILES - GOOGLE MAPS TO SHOW WHERE STUDENTS LIVE	- TRAIN TUTORS TO USE THIS TECHNOLOGIES
INTERNATIONALISE THE MATERIALS	- USE INTERNATIONAL CASE STUDIES - GLOSSARY FOR COMMON TERMS	- EDUCATE AUTHORS + TUTORS TO BE AWARE OF ISSUES + PUT INTO PRACTICE

d) The second template used for capturing aspects of detailed solutions

Stage Three: questionnaire

The research 'sandpit' identified a number of 'big ideas', that is, potential solutions that could be used to overcome the barriers of distance learning. These required testing for feasibility, usefulness and potential to be applied to distance learning courses. A survey was therefore carried out to gain the feedback of students studying on distance learning courses at UWE.

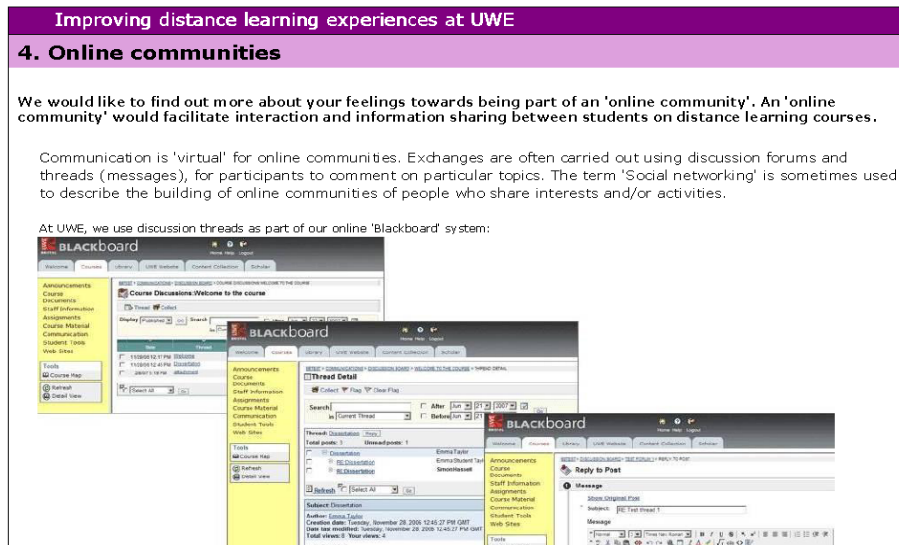
Due to the geographically disparate nature of the students and the need to obtain and compare participant preferences, a questionnaire survey method of data collection was deemed most appropriate. As the courses are delivered online, an online questionnaire was created. Advantages of this method include low cost of creation, delivery and reminders (via email); eliminating the need for manual input of data; producing clean data; allowing functions not possible with other questionnaire formats, such as skip logic, mandatory questions and reminders; user friendly, simple and appealing appearance; and the ease of downloading responses into a format suitable for use in a database (Wright, 2005). Research suggests that response rates are comparable with other means of delivery of questionnaire survey, and that this mode of delivery may be beneficial to populations with good access to the Internet (Kaplowitz *et al*, 2004). This method was also most suited to the time, resource and cost limitations of the project. The instrument needed to be user friendly (Dillman, 2000), and this format allowed the application of an intuitive environment with bold type face, large font, clear instructions, headings and appropriate graphic imagery.

The survey obtained quantitative information to evaluate preferences and priorities regarding the 'big ideas' as potential solutions to overcome barriers in distance learning. It aimed to understand what would be useful and why; what the students felt they would use and contribute to; and what the potential issues/logistics/concerns regarding implementation would be. It also requested qualitative information and offered respondents the opportunity to provide feedback to the ideas and explanation for their preferences. This permitted a feasibility assessment of the potential solutions.

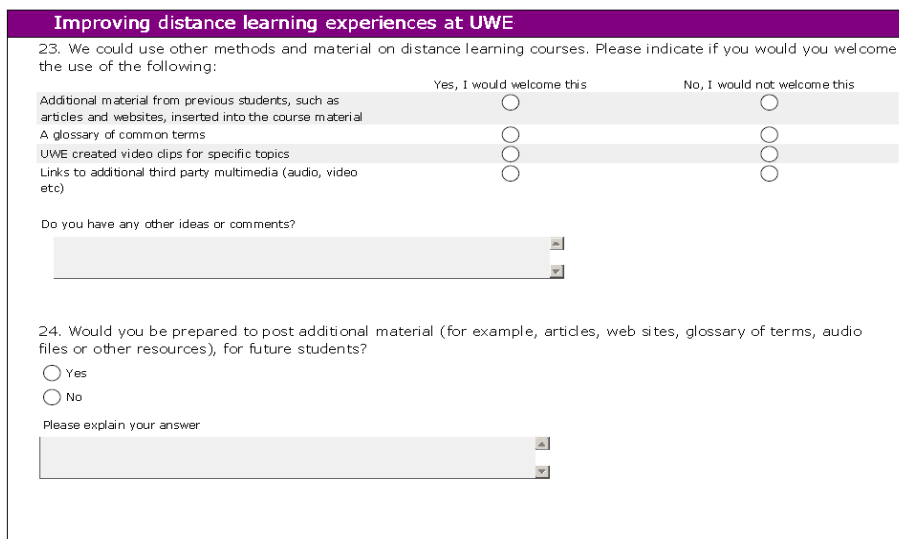
The questionnaire survey consisted of seven different sections, based on findings that had emerged from an analysis of the sandpit outcomes, exploring potential solutions to improve the student experience on distance learning courses: tutor contact; peer mentoring; online communities; student profiles; student location information; course material and delivery; and overall preferences (Appendix B). There was also a

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'welcome' page introducing the project and providing contact details of the research team, and a 'thank you' page. Please see Figure 3 for images from the questionnaire.



a) A section introducing the concept of an 'online community'



b) A section asking about potential improvements to methods and material

Figure 3 Images of the questionnaire survey exploring methods of improving distance learning experiences at UWE: exploring the creation of online communities (page four)

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The nineteen interview participants plus an additional four who expressed an interest in the research were contacted by email by the research team and invited to complete the survey. Due to data protection issues, the research team could not contact the other students on distance learning courses at UWE as they did not have access to email addresses. One of the Student Advisors was able to contact a further twenty-four students on the MA Spatial Planning course. A total of fifteen students fully completed the questionnaire, a response rate of 32%.

Following this third stage of research, the feasibility of potential solutions to overcome the problems of distance learning was assessed. Using student feedback from the survey as well as from the interviews conducted during Stage One of the research, enabled recommendations to be made regarding the future delivery of distance learning courses.

2.3 Ethical review

Prior to commencing the research, a full ethical review was carried out in accordance with UWE procedure with the University Research Ethics Committee. This was to ensure the any potential risks were identified and that the research team adopted required procedures. This considered the ethical implications of carrying out the research, exploring in depth the following areas: type of participant; participant recruitment; risks to participants; obtaining informed consent from the participants; the health and safety concerns of the participants; how confidentiality would be maintained; the storage of information; reporting and dissemination of results. Ethical approval was granted by the Committee.

All students agreeing to participate in the interviews were sent a Participant Information Sheet and a Participant Consent Form via email, which they were asked to complete and return. Students were asked to suggest dates they were available for interview and to provide a telephone number. The contact details of the research team were provided in order that participants could raise any queries or concerns. Those participating in the sandpit workshop were informed that photographs would be taken of the event, and were given the opportunity to object to the images being used subsequently. Students participating in the questionnaire survey were assured that their responses would be treated confidentially and anonymously. They were not asked to provide names or contact details, only the title of the course they were studying on.

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Data from the telephone interviews was recorded onto Secure Digital (SD) cards (small memory devices), transferred to audio DVD as MP3 format and then transcribed into electronic MS Word document format. The transcribed data was stored on the researchers' password protected computers and on a password protected area of the UWE computer network. The questionnaire responses were stored in electronic format similarly on the researchers' password protected computers. Both of these data sets will be destroyed once the research is complete. The data held on the SD cards was deleted immediately following transferral to audio DVD. A photographic record was kept of the sandpit workshop (the event and completed sheets) and will be retained by the researchers as illustrative material for future events.

3. Findings

This section presents the findings from the research, including the distance learning experiences explored using interviews with students (Stage One); a discussion of the potential solutions developed during the 'sandpit' workshop (Stage Two); and the feasibility and use of these solutions assessed using a questionnaire survey (Stage Three). These findings address the overall research question: 'How can the student learning experience on a non-campus based programme, where there is no course cohort, be enriched through reducing the potential for isolation?'

3.1 The experiences of students on distance learning courses at UWE

Reasons for choosing distance learning included flexibility, convenience, time and cost. Many respondents stated that learning by distance suited family, lifestyle and work commitments. The lack of availability of relevant courses near the home location of students was also a factor in deciding to enrol on a distance learning programme, as was the course content, suitability and uniqueness. Motivation for enrolling included improving skills, financial, professional progression, knowledge/CPD and personal satisfaction.

Experiences of learning online and using Internet-based material varied according to previous experiences and familiarity with technology. Some struggled to access material initially, but this improved over time. Others found it easy to access material and felt that they were able to retrieve information that they would have problems finding without the Internet.

The ability to discuss ideas with fellow students was an aspect of learning that may be absent in online learning. One student stated that 'A lot of the more conceptual stuff is hard to learn or to get excited about when you're on your own; whereas talking about it is easy to argue and debate.' It was felt that verbal/written communication could not be a complete substitute for hearing a human voice or seeing another person. However, online discussions had helped one student's learning experience in the past by 'gaining information from people with different experiences, different perspectives'.

In terms of contact with the university, it was apparent that there was a divergence in terms of consistency of feedback that tutors were providing on their respective

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modules/topics. Variations were not only found in the quality of feedback but also in the speed of response. The importance and quality of support provided by the administrative team (Student Advisors) was found to be high. This is particularly important as the Student Advisor was often the main, or indeed only, point of contact. It was also mentioned that interaction, both with peers and tutors, was an important component of adding 'value' to the student learning experience.

Respondents generally did not feel physically connected to the university, with many having never visited the campus, even though one respondent lived close geographically.

Specific problems experienced by students included: feelings of isolated or loneliness, the quality/frequency of tutor contact, a lack of interaction with peers, motivation and self discipline, course material (datedness, content and delivery) and unclear expectations (Figure 4). These are explored in the following sub-section, as challenges to delivering distance learning programmes.

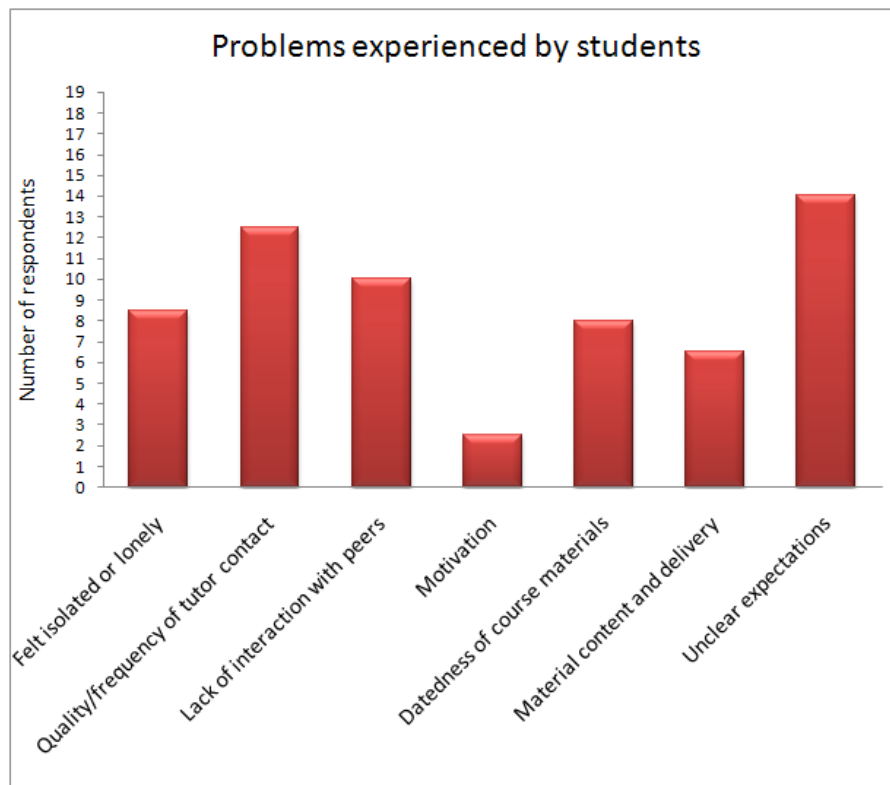


Figure 4 Problems experienced by distance learning students on non-cohort courses at UWE: responses from the interviews

3.2 The challenges for distance learning courses at UWE

3.2.1 Isolation and connectivity

Psychological feelings of isolation may arise from the geographical separation and lack of contact with fellow students. Several students mentioned the term isolation specifically and felt it was a problem for their learning, with one describing their learning as 'weird' and a 'solo mission'. However, not all students felt isolation to be a problem as they expected not to have face-to-face contact with the university or their peers, as they selected a programme which meant studying alone. Therefore, addressing negative feelings associated with isolation is a challenge, particularly as students' have different needs and experiences.

3.2.2 Tutor contact

Maintaining appropriate levels and methods of contact between student and tutor is a major challenge for distance learning. Student experience of contact with tutors was hugely varied; some feeling that the tutor was there when needed and that contact had been very good, but others feeling that the tutor was not available yet they had needed someone to discuss an issue with. The need to 'build up the relationship' was apparent, as was knowing that someone was available if help was needed, particularly as help elsewhere may not be available: 'it was very difficult to actually discuss with anyone what I was doing'. All but one student believed more contact with the tutor would have improved their experience.

Inconsistency in the quality ('it's varied hugely, depending on who my tutor has been') and brevity of feedback was raised. The lack of proactive tutor involvement was also thought to be a problem, raising a concern regarding level of service and student expectations. Speed of response was a further issue, with students commenting about out-of-office email acknowledgements not being switched on; the synchronicity of communication; frustration with lack of response; and immediacy of response ('you send an email and you could really do with a bit of a response straightaway...and sometimes it'll be a couple of days.'). It remains a challenge to provide appropriate methods of contact when students have varying preferences and expectations: most respondents preferred email but some wanted to be able to telephone tutors and obtain an immediate

response. Alternative technologies are available but it was felt that 'you need to get the basics right rather than upgrade the technology', for example, ensuring that emails are responded to promptly.

3.2.3 Interaction with peers and colleagues

Experience of having contact with other students was extremely limited. Some respondents wanted to study alone but others felt they were not able to interact with others due to distance/location; not knowing if others were doing the course; and not having the contact details to get in touch. Some saw interaction with other students as being a 'social' activity which was not of interest to them, but others appreciated the help and assistance that such interaction could provide: 'when I was at university you could bounce ideas off each other and say, well how did you do that one?'. The lack of cohort contact was not necessarily viewed as an issue by some students. It was unclear from the interviews whether the respondents appreciated the potential benefits that discussions with fellow students can yield. Support from work colleagues during studies was varied. Some students actively integrated the course into their work to tie their studies directly into their professional situations, which in turn was thought to provide extra motivation and purpose for the learning. Other students had not sought or were unable to obtain help from work colleagues. It is a challenge firstly to make students aware of potential benefits of interaction and collaboration, such as enriching breadth/depth of thought and testing out ideas, and secondly to facilitate this.

3.2.4 Motivation and self-discipline

Motivation poses a problem for distance learning students in particular as they do not have regular contact with other students, staff or the university to maintain momentum. Self discipline is clearly important, particularly when family and work commitments present challenges and perhaps unexpected pressures (such as caring for sick children when assignments are due). Concerns were expressed regarding motivation and the computer-based nature of the course. Students cited meeting time deadlines, having targets to work towards, setting personal goals and remembering the purpose of undertaking the study (a qualification or as professional development) as being important motivational factors. It is clear that strategies and learning styles vary. One student preferred to undertake work in small segments but another favoured studying in large chunks to avoid approaching the study in a piecemeal or ad hoc manner.

3.2.5 Material and delivery

It is essential to ensure that the material has practical relevance and can encourage students to develop their understanding. Some interviewees believed that the course was too academic and not practically related to their work (too few case study examples). On the other hand, another felt that the course they studied 'makes you think in different perspectives', a vital element of the concept of spatial planning. The datedness of material was raised as an issue by some students, highlighting that whilst distance learning material can use the power of Internet search engines and recent sources, it can also date quickly as it is written at a point in time. Personal preference and learning style represents a challenge for the format of delivery. Some students wanted paper based material to 'offer people the opportunity to opt out of online study' and 'because I'm somebody who doesn't like working off the computer all the time'. On the other hand, others commented that there was too much paper involved, that postal delivery means there is 'no real ability for a proper dialogue' and that there are significant time delays if material is mailed. Therefore, there was no universal agreement over the most appropriate methods to deliver course material. One student felt that paying course fees, reading online material and then submitting a subsequent piece of work was not sufficient on its own to provide a good learning experience, citing that 'I felt more as a customer'. This highlights the need for wider aspects of learning that go beyond a pure money-for-qualifications transaction, to be embedded in the distance learning package. This requires the learning experience to be enriched.

3.2.6 Student expectations

The students that were interviewed had differing expectations as to university requirements and different experiences in the delivery of their courses. Uncertainty included: the amount of time to spend reading; the quantity of material to access; the quality/style of assignments; the opportunity to contact staff for guidance; and the opportunity to receive formative feedback. Receiving such feedback from students is an important element of developing solutions to overcome the challenges presented for distance learning.

3.3 Solutions to overcome barriers and challenges of distance learning

The interview stage of data collection (Stage One) asked interviewees what could be done to improve their learning experience on distance learning modules at UWE. The interviewees were asked for their opinion on a variety of potential methods that could be used to overcome barriers and problems of distance learning, including increased university support; motivational elements; setting out expectations; mentoring; and more student-student contact. The interviews therefore represent the first attempt at identifying potential solutions.

The 'sandpit' exploratory session (research Stage Two) used interactive group discussion and debate to generate potential solutions to the barriers of distance learning. This workshop session was designed to build on the information gathered from the interviews, developing and working-up identifiable solutions, or 'big ideas', that had the potential to improve the student learning experience on non-cohort distance learning modules. The solutions identified from the workshop included: tutor contact; mentoring; creating online communities; student profiles; student location mapping; and material format and content (Figure 5).

The final phase of data collection and analysis, the questionnaire, evaluated these potential solutions for overcoming problems and feelings of isolation on purely distance learning courses, with no cohort at UWE. This final stage of the research aimed to help shape and identify the solutions that would be most appropriate to improve the student learning experience.

The potential solutions for overcoming the barriers and challenges of distance learning are presented in this section.

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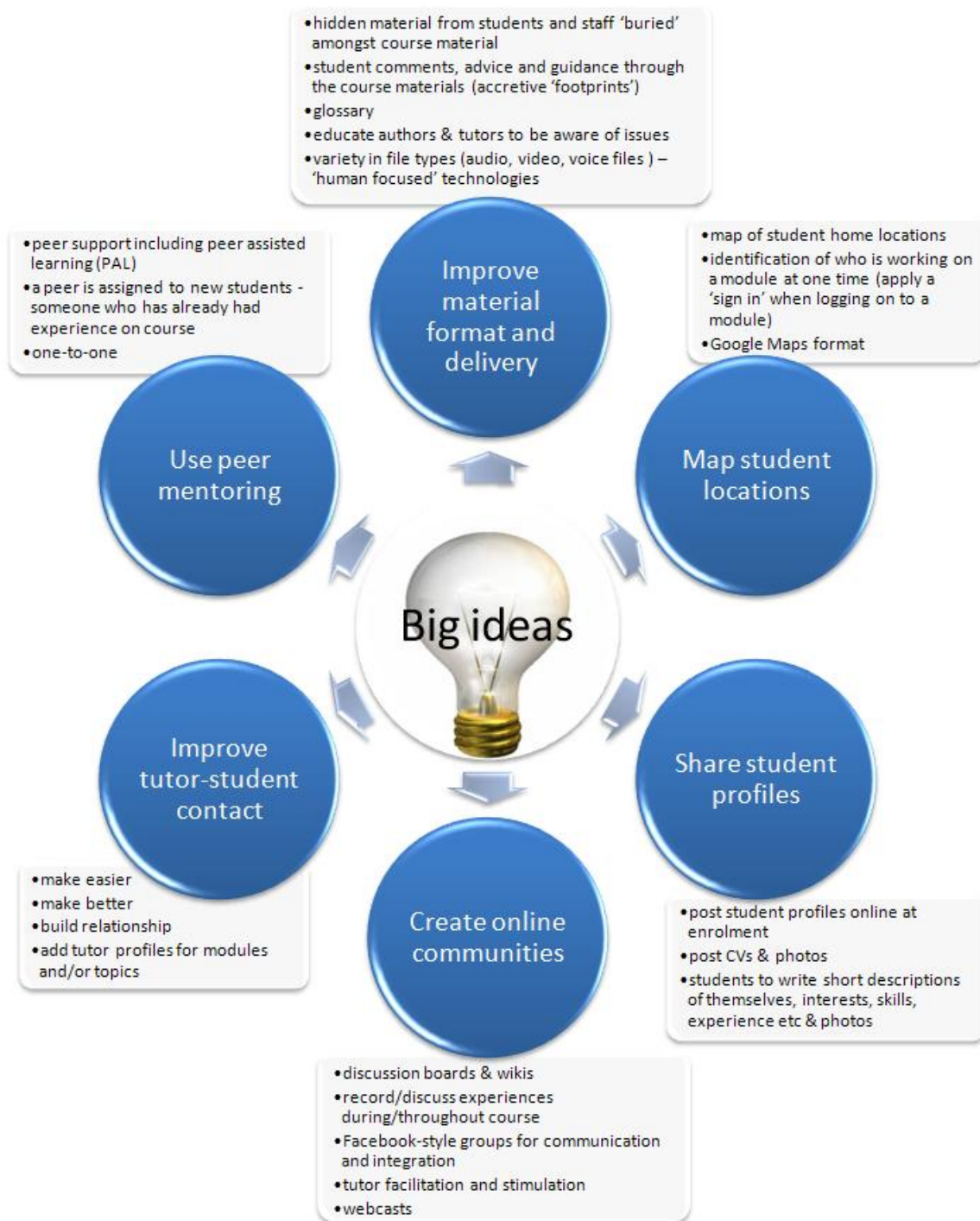


Figure 5 Potential solutions for overcoming feelings of isolation in distance learning: the 'big ideas' developed during the sandpit workshop at UWE

3.3.1 Improving tutor-student contact

The research interviews and the 'sandpit' suggested potential solutions to improve tutor-student contact. Contact should be made easy, simple and reliable, improving on current contact. It is important to set out expectations of the student/tutor relationship (some form of service level agreement) and for assignments (including comparative material and past essays: 'it kind of gave me an idea of how they wanted it structured and it was really helpful.') at an early stage. Increasing frequency, quality, availability and timeliness of contact and feedback was seen as essential (for 'reassurance that they're heading in the right direction'). Providing the opportunity (voluntary) for face-to-face contact by visiting the campus and/or meeting other students was a suggestion by some. The provision and use of support mechanisms needs to be a two-way process between staff and students: students need to be able to raise concerns if and when they arise, but tutors should actively use 'staging points' at which students are contacted concerning their progress. Increasing familiarity between student and tutor is an important goal that should be instigated at course commencement with a tutor welcome address and perhaps an online profile. Students should be provided with the option to opt-out of discussions to meet individual preferences and learning needs.

According to the questionnaire survey, improvements to student/tutor contact should be directed to the nature of the contact rather than the methods used. (Two thirds of questionnaire respondents were happy with the amount of contact they have with their tutors and all but two were happy with current methods available, with a request to incorporate telephone discussions). Frequent prompts/encouragement from tutors was seen as a proactive measure to make students feel like they were not studying alone, to help with motivation and to encourage a dialogue between tutor and student. This could be improved by the following: quicker response to queries; an initial welcome, outlining how the student-tutor relationship works (tutor availability, online diary, anticipated level of contact, expectations); notification/agreement of availability for contact (email, telephone); frequent encouragement/support emails (start, middle and end of modules); more detailed feedback; notification of absences (holiday, sick periods); acknowledgement of submissions and to provide opportunity to meet in person.

3.3.2 The use of e-mentoring

Increasing peer support online was seen as an important method for overcoming feelings of isolation in distance learning programmes from the 'sandpit' session. Peer

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assisted learning (PAL) was proposed, where a mentor in the form of a peer would be assigned to new students, someone who had already had experience of the course. The purpose would be to ensure students had more informal contact with someone who could help and advise on a one-to-one basis.

There was a mixed response to the idea of mentoring from the interview stage of the research, illustrating the different approaches to learning that students employ. Most of the respondents thought peer mentoring would be 'good' or 'useful', for encouragement, discussion and support. Those that did not wish to involve others in their studies expressed concerns such as 'I don't think I'd have the time for that, to be honest'. Some were keen to use work colleagues whilst others sought family help, feeling that their family often fulfilled a mentoring role in respect of keeping them enthused and active with their studies.

Eight questionnaire respondents suggested they would like a mentor with seven stating that they would not. Some, particularly those on longer courses, would find it useful for encouragement, guidance, advice and support, particularly at the early stages. Eight would be prepared to be a mentor, but express concerns regarding time pressures and other commitments. It is noted that of the eight, three did not feel express a need to be mentored, as they were happy with their current level of support and guidance from tutors and work colleagues. However, three of the eight who would like a mentor were not prepared to be a mentor themselves due to time commitments or lack of confidence. The feasibility of mentoring is therefore questionable. If implemented, various factors would need to be considered, including: mentor training, guidelines, availability, knowledge, commitment, and matching mentors with mentees (similar experiences, courses and background etc).

3.3.3 Creating online communities

The idea of creating online communities of students to overcome the lack of direct contact with fellow students was suggested at the 'sandpit' workshop. Introducing and maintaining a format for online discussions, such as discussion boards and wikis was seen as a potential solution, to allow students to record and discuss experiences during and throughout their course. The idea of social networking was explored, suggesting the possibility of using Facebook style groups for communication and integration. It was felt that tutor facilitation and stimulation would be required to generate these discussions

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and ensure that they were used on a regular basis. The use of more humanised forms of discussion such as webcasts was proposed.

There was almost unanimous support for more student-student interaction from the interviewees to provide an 'online student resource where people can talk to each other'. Students were interested in 'seeing different points of view', discussing issues, exchanging information and creating 'colour added discussions', perhaps as a way of 'replicating the sort of discussion you have in, perhaps a tutorial seminar'. A number of respondents mentioned that it would be useful to have a list of other students' e-mail addresses so that they could enter into a dialogue. Students had concerns about synchronicity of message board discussions, the longevity of the activity, requiring an opt-out option, having a cut off date and the convenience of where the link was located online. The majority of interviewees were dismissive of the potential for using social networking sites citing: flexibility of study times; desire to study alone; needing to know people first; a dislike of new technology; and retaining distinction between social activity and academic work. Some students had used blogs and wikis previously, whereas others had not, although there was a general willingness from interviewees to engage with new approaches. Whilst one student thought that blogging would be useful they caveated this by noting the asynchronicity of the course. Concerns were expressed with the use of wikis: accuracy of content, manageability, use of unfamiliar technology, need for careful monitoring by tutors, and the time required for participation.

Four fifths of questionnaire respondents said they would like to be part of an online community, to discuss subjects or particular issues with fellow students online. It was noted that for this to be successful, there would need to be a number of people actively engaging and perhaps some outside facilitation. Two thirds of respondents said they would read wikis, and eleven would actively contribute to them, as they would be useful for gaining up-to-date information, to expand particular topics and to make students feel part of a learning community. Issues of relevance and accuracy were raised, suggesting that if wikis were used they would have to either come with a disclaimer or would need to be assessed/monitored/quality assured for content by the tutor. Guidance would be required regarding the operation of a wiki. Time constraints and confidence in individual knowledge may prevent students from participating.

3.3.4 Displaying student profiles online

In order to feel more connected and familiarity with fellow students, the 'sandpit' workshop developed the idea of posting individual student profiles online at the enrolment stage. These profiles could include short descriptions of themselves, interests, skills, work experience and photos.

Two thirds of questionnaire respondents said they would read the profiles of other students and nine would post their own profile; the same number of respondents thought that this would be useful or potentially useful, some as a way of identifying peers they could meet with in person or to share/find people with similar interests and backgrounds. Most said they would look at other profiles through curiosity. Only a third believed seeing student profiles as not relevant or useful, that they were engaged on the course for a short while, or that they did not want information about themselves being made available to others. One respondent expressed concern that they might be prejudged based on the profile. Using student profiles therefore is a potentially useful way to build online communities, provided involvement was voluntary. If this was introduced, profiles could include information about: the course/topics, work experience, areas of expertise, academic and professional background. Aspects to be addressed by UWE would need to include: confidentiality, access, data protection/security and identity theft.

3.3.5 Mapping student locations

In order for students to be aware of the locations of other students studying on distance learning programmes, an idea was proposed during the workshop of providing a map of student home locations. This would enable students to identify who was working on a module at one time, perhaps by applying a sign in when logging on to a module. This could take on an established format such as that of Google Maps.

Two thirds of questionnaire respondents would like to know where fellow students are located geographically and the same number would like other students to know where they are located geographically. This would be used purely out of interest/curiosity, to assess the potential for face-to-face meetings/networking with peers, to feel part of a community with others who are studying online and possibly to help those in remote settings when studying particular topics. One third of respondents did not see this information as relevant to their learning.

3.3.6 Material format, content and knowledge development

Participants in the 'sandpit' workshop felt that the concept of accreting material within the course over time to deepen the student learning experience had great potential.

Student-generated content such as tips and experiences and useful material and web sites could be created. These 'hidden gems' (material developed by students and/or staff amongst the course material to be discovered, indicated though 'buried' markers in the learning path); and 'footprints' (student comments, advice and guidance added throughout the course materials, using the concept of accretive material to indicate that previous students had passed that way), could build-up and share the knowledge that would normally be exchanged during face-to-face meetings, lectures and tutorials.

Recording student experiences and developing a stories archive were other potential ideas for generating content. Additions and changes to course material were suggested, including a glossary for common terms and more variety in the use of multimedia to supplement existing course material, such as audio and video files. Wikis could be a place where 'tutors could drop relevant bits and info for discussion, journals etcetera'. A common thread of the 'sandpit' session was the need to 'humanise' the course, as there is an absence of the first person in distance learning, with few explicit indicators of personality, personalisation or individuality.

Interviewees felt that accreted message boards linked to particular aspects of modules/topics could be useful. Particular concerns were expressed, including: a lack of spontaneity; the feeling that tutors could be checking up on students' engagement with the module and the need to ensure equal participation and engagement by others. Students felt video conferencing would not be a viable addition to the course, with issues of cost, synchronicity, availability, personal preferences, technological difficulties/availability, and the constraint of needing to be available at a predetermined time and location all cited. These factors mean that this is unlikely to be a particularly useful tool for distance learning in the particular context asynchronous, non-cohort learning.

Almost all questionnaire respondents said they would welcome tips/'hidden gems' placed by fellow students and the same number would contribute to posting these. It was felt that, if relevant, this would help future students negotiate the topics, share information and experiences, and to generate up-to-date content. This may be less useful for those studying on single modules/topics rather than longer courses. One felt

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that this would not reduce the sense of isolation from the university and tutors. A positive response was received by over two thirds of questionnaire respondents for potential additions to the course such as additional material from previous students inserted into module material, a glossary of common terms, UWE created video clips for specific topics and links to additional third party multimedia. Only one student said they would not be happy to post additional material for future students, all others thought that they would if they had relevant material. The overall opinion was that any additional help received would be beneficial, particularly 'real world' examples perhaps in alternative formats to the typical course content, but with a need to 'keep it simple'.

3.3.7 Overall student preferences

In terms of preference for improvements to distance learning programmes, four potential solutions were ranked considerably higher than other potential areas of improvement in the questionnaire survey (Figure 6). These were:

- Improved tutor contact.
- Discussing experiences and tips with peers.
- Tips and comments posted by previous students.
- Material and content posted by previous students.

Knowing about who and where fellow students are, being mentored by a peer and receiving alternative delivery methods were lower priorities.

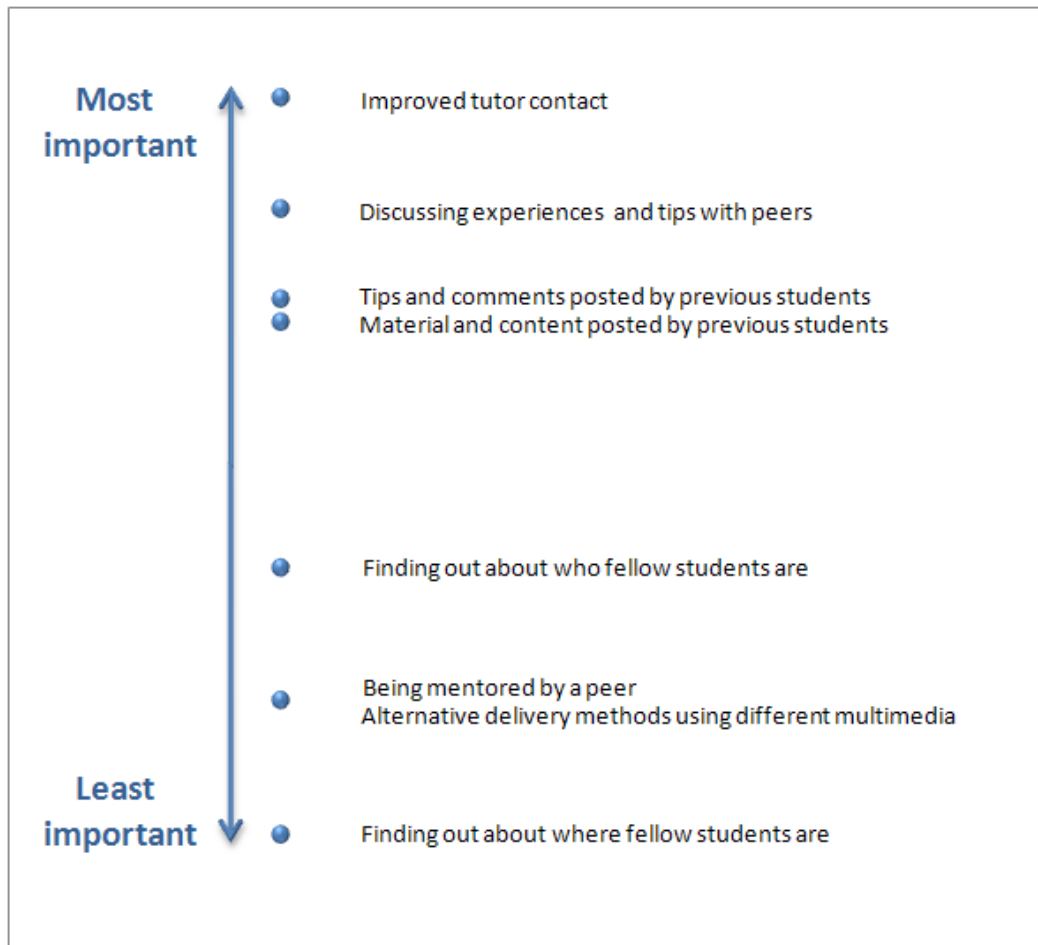


Figure 6 The perceived importance of potential solutions for overcoming feelings of isolation in distance learning: mapped according to rankings given by students on non-cohort courses at UWE in the survey questionnaire

3.4 Summary

The research found that the nature of course being studied may affect student desire to be involved. Those engaged on shorter courses/individual modules may have less desire for involvement. Time commitments will affect the willingness and ability of students to participate. On the whole it was felt that increased interaction with peers and tutors would reduce feelings of isolation and improve the student learning experience.

Potential approaches to increase interaction and create an online community suggested by the research include: wikis, online discussion boards, the use of additional media such as video clips, embedding student-posted material into the existing online material, changes to/clarifications of tutor contact and accreting student experiences and tips

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throughout the material. Some respondents had no experience of using such solutions and therefore may have expressed uncertainty as to the use of these. An important consideration was the need to ensure that current processes work sufficiently, such as agreed levels of contact and feedback between tutor and student, prior to introducing new ideas.

Based on the findings from the three stages of data collection, summary conclusions have been made and recommendations for improving distance learning programmes have been proposed. This is discussed in the following section with reference back to the literature on distance learning and implications for the delivery and management of distance learning courses in general.

4. Conclusions and recommendations

This research set out to answer the research question: 'How can the student learning experience on a non-campus based programme, where there is no course cohort, be enriched through reducing the potential for isolation?'. In order to answer this question, three stages of empirical research were conducted, guided by three research sub-questions. Conclusions are provided in this section, along with some detailed recommendations. A reflective account is provided regarding the limitations of the research, followed by a discussion about possible areas for future investigation.

4.1 Conclusions

4.1.1 Distance learning experiences at UWE

The first research question asked: 'What are the experiences of students on non-cohort distance learning courses at UWE?'. This research found that experiences were hugely varied. The reasons students gave for choosing distance learning programmes included end goals, flexibility (time and convenience), location, cost, and course content. The need for the course to remain flexible and feasible in conjunction with work/home life commitments is therefore a key factor to consider when seeking to enrich the learning experiences of students. Other important themes that emerged from the interviews were:

- On commencing the course students' feelings differed from anxiety to excitement.
- Most students wanted greater contact with fellow students to discuss their work; however a minority of students sought to study alone.
- More tutor contact would be preferred but generally there was recognition that tutor support was available if required.
- There is a lack of consistency of tutor feedback between modules in terms of quality, quantity and speed.
- There were contrasting experiences with regards using online reference sources.
- Use of technology for learning was embraced by some, but others were reticent to engage, preferring instead paper based media.

4.1.2 Challenges for distance learning

The second research question asked: 'what are the barriers and challenges to improving the learning experience for these students?'. These barriers and challenges were found to include:

- Retaining the flexibility of an asynchronous programme whilst pursuing greater contact between students and tutors.
- Increasing the impression of physical connectivity with the University without requiring student attendance.
- Encouraging group work between students that chose to study at a distance to avoid student-student contact.
- Ensuring prompt, consistent and appropriate feedback from tutors on an asynchronous programme of study.
- Retaining and enhancing student motivation.
- Maintaining the currency of the online course material.
- Managing students' expectations.

The findings of this research were examined under the nine different dimensions of isolation, of which five key ones were explored in more detail during the research Stage Two sandpit event. It is noted that although some students found themselves feeling 'isolated', many did not express this view. It is clear that the core characteristics of distance learning, asynchronicity and anonymisation, create barriers to and challenges for the delivery of these courses. These barriers need to be overcome to reduce isolation and improve the student learning experience, particularly if a virtual community is to be successfully created.

- Chronological (time) isolation

The asynchronicity of the programmes is a major barrier to creating a real-time student community. Consequently there may not be other students on the module/topic at the same time and thus synchronous group work is rendered impossible. Students may feel like they are the only person on the course, which at any given point in time may be correct. However, students clearly value the flexibility that commencement and progression at their chosen pace offers and this is a key benefit of the course that should be retained.

- Social isolation

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Many students were unaware that others were studying on the same course. Even where this was known, there was a lack of awareness of how to contact other students. This is potentially a simple issue to address (data protection issues aside), for example by distributing e-mail addresses or telephone numbers to fellow students. The need to create a social presence is an important element in 'the success of the educational experience' (Garrison *et al*, 2000: 89). This needs to be factored in to mechanisms for building a successful online community.

- Spatial (physical) isolation

The geographic dispersal of students means that they are physically separated from the institution and their peers, but this was not found to be an issue for students. The use of an interactive map to act as a 'bridge' to the distance showing student locations was not a feature that many felt would add to their learning experience. It may however have other uses, for example for marketing and course advertisement purposes.

- Sectoral isolation

There was no identifiable discrepancy between courses or professions in the comments made, although the availability of willing interviewees meant that this research only engaged with a limited range of professions.

- Technological isolation

Some students were clearly less comfortable with computer software packages than others, whilst others identified that they did not have compatible software either at their home or workplace, and they may be reticent to engage with electronic forms of communication.

- Sensory isolation

Some students desired face-to-face connections whereas wished to study alone. This highlights the different approaches to communication favoured by individual students. The inability to experience either people (students or tutors) or places (for example a case study building or location) first hand is a particularly difficult issue for distance learning courses to address. Whilst student communication via electronic media can be encouraged, the interviewees did not feel that this was a complete substitute for hearing a human voice or seeing another person. Humanising the course was thus considered

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to be an important element introduce (this can also contribute to increasing the social aspects of interaction).

- Intellectual/experience isolation

The diversity of students' backgrounds means that although two students undertaking a topic may be from the same profession, their levels of knowledge and experience are likely to be very different. Despite this diversity, there was little evidence that this was a priority issue to be addressed when improving the learning experience.

- Topical (subject) isolation

Students on the four programmes are free to begin the course, and choose any of the individual topics, at any time and in any order (this dimension is closely linked to chronological isolation). The asynchronicity of the programmes has implications for module authors and programme leaders in terms of course design, delivery and management.

- Cultural isolation

Although the literature refers to the existence of cultural isolation, no evidence of this was found in this research, although the sample was limited in size.

4.1.3 Potential solutions

The third research question asked: 'What solutions could be used to overcome these barriers and challenges?'. The potential solutions proposed and developed during a participatory workshop with staff and respondents included:

- Mentoring via peer learning is partially supported by these findings, in particular to help understand the process and materials of the course.
- 'Humanising' the course, for example, by using videos of tutors.
- Accreting student information in the material by encouraging the leaving of material and messages, for example via use of blogs/wikis.
- Improving tutor contact and their role: providing a formal welcome to the course; initiating 'staging points' for tutors to encourage students and check on progress; proactive encouragement; address inconsistency.
- Creating online communities to encourage student-student contact, for example, by posting student profiles and contact details online or by mentoring.

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- Providing a clear statement of tutor and student expectations.
- Improving course material and delivery, for example, providing case study examples to illustrate points and providing pieces of previous student work to indicate university expectations of standard (content, quality, format).

The potential solutions would seek to enrich the programmes by adding an extra dimension that provides a valued-added experience beyond the money-for-qualifications exchange. Within the limited context of the research sample, and noting that this study did not explore cultural issues, these findings reflect Venter's (2003) surrogate teacher (for proactive tutor support and encouragement) and student identity (where students feel that they are part of an online community of learning) responses to isolation.

4.1.4 Student responses to potential solutions

The potential solutions developed in the 'sandpit' session were proposed to students on distance learning courses at UWE as part of the questionnaire survey component of the research (Stage Three). This was also informed by findings from the interviews. The aim was to explore the potential of applying these solutions, to further inform the answer for the third research question: 'What solutions could be used to overcome these barriers and challenges?'

Responses from the students suggested that the main priority for improving the student learning experience is improving student/tutor contact. This would need to be instigated by the tutors, and therefore they would need to be involved in discussions to assess the feasibility and practicality of increasing the frequency and depth of contact and feedback with students.

The notion of developing online communities was largely welcomed by the students, suggesting that increasing peer to peer contact would be beneficial to the student learning experience, to enable the discussion of experiences and tips with peers. The format for this increased contact could be via wikis and online discussion forums. The concept of knowledge accretion received positive feedback, particularly as there would be no need for real time interaction; participants could still feel part of a community. This could include sharing and viewing tips, comments, material and content posted by previous students. Concern was expressed at the potential for successfully maintaining online communities, such as the need to have a significant number of active participants

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to be successfully engaging. Some respondents reflected on past experience where such initiatives had largely failed due to low numbers of participants.

In terms of course delivery and materials, respondents felt that providing real world examples, using additional media and providing additional web-links to third part material, would be welcomed in order to vary the format currently received and enrich the experience. Although not directly addressing the isolation element of the research question, the potential for course enrichment should not be overlooked.

Peer mentoring would require large amounts of student and tutor (initially) time and commitment. A number of other practical issues were raised such as: personal aptitude, experience, and willingness to participate, which meant that it was not a very popular solution.

An important message from the research is the need to 'get the basics right', by tightening up the current course and its processes, making sure that the simple things are done properly, such as timely e-mails from tutors and encouragement/feedback to an agreed standard.

4.1.6 Summary

The student learning experience on a non-campus based programme, where there is no course cohort, can be enriched through reducing the potential for isolation. This research has identified that isolation was a problem experienced by students, alongside other issues. Further barriers and challenges were identified relating to the difficulty of delivering and maintaining distance learning courses. The need to create a form of online community, where peer contact is increased, was identified as an overarching theme in the research. A second theme was the importance of improving tutor-student interaction. Various measures exist which could be used to overcome these barriers and challenges, and to create an online community. These measures may address issues of isolation either directly or indirectly. The feasibility and potential to use specific methods was assessed, and this informs the recommendations that the research proposes, outlined in the following section.

4.2 Recommendations

Specific actions have been identified for use on distance learning courses, particularly those with no course cohort, which will help to enrich the experience and reduce feelings of isolation. The recommendations are pedagogically led rather than subject orientated and therefore will apply to other higher education programmes delivered by distance learning, including those delivered synchronously and with a cohort. Whilst the individual contexts, courses and procedures will vary and some of these mechanisms may already be employed, the conceptual ideas generated for overcoming student isolation have pertinence to others preparing and delivering distance learning material. Specific recommendations include:

- Providing service level agreements so that students know when they can expect a response.
- Ensure quicker tutor response to queries.
- Make available online tutor calendars of availability and ensure tutors notify students of any periods of absence due to holidays, sick leave etc.
- Introduce student welcome emails from module/topic tutors, offering a friendly welcome with guidelines for expectations of contact, response times, feedback, student/tutor relationship etc.
- Encourage more detailed feedback by tutors and send acknowledgement of submissions.
- Designate 'staging points' for tutors to email their students, to encourage their studies and to check on progress.
- Offer students the opportunity (invitation from the tutor?) to visit the university and meet the tutor in person.
- Develop ideas around student generated content to provide tips, reviews and commentary as 'footprints', 'buried treasure'.
- Provide more case studies to illustrate course materials and relate them to real world practice.
- Provide examples of previous student work to demonstrate the UWE expectations with regards the required standard for assessments.
- Humanise the course by including staff profiles with photos alongside relevant modules and topics.

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- Generate a social presence through encouraging students to contact each other to discuss material and develop critical thinking (noting that the communication should allow for social as well as work-orientated dialogue).
- Introduce a mechanism (for example a wiki) that would provide students with their peer's thoughts/views on the course material, with guidelines for use, succinct information, expectations, a disclaimer (e.g. 'this wiki contains opinions and information from fellow students and does not represent the views of the University'), and a dedicated moderator; perhaps make a wiki contribution part of an early assessment to encourage participation at the commencement of study.

In order to implement the recommendations it will be necessary to feed back the research findings to tutors in order to make them aware of issues around the broad concept of humanising the courses. The suggested mechanisms will be proposed to course tutors for their comments on feasibility and willingness to participate.

Comparing the findings of this research with the literature, it would appear that many of the issues raised are common across subjects, professions and countries. For example: accounting (Gammie *et al* 2002); nursing (Hartley *et al* 2001); and construction (Wall *et al* 2006).

4.3 Considerations and limitations of the findings

It is noted that the solutions proposed to the students were conceptual, in that they are not currently used and therefore the students may not have experienced them or how they work. Their views are therefore only indicative of how a particular solution would be received, used and valued. If a particular method or facility was successfully applied and used by some students, for example a wiki or mentoring, others may gain confidence and therefore wish to use it also. The combination of additional mechanisms may be of greater value than the sum of their constituent parts, especially when set against the broad objective of making the content, communication and conduct of the course humanised.

This research was based on the opinions of a small sample of students, studying on four non-cohort, asynchronous distance learning courses at UWE. This is not therefore representative of all students on distance learning courses. In addition, the small sample meant that comparing sub-group responses, such as by gender or age, was not

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statistically robust. Participant non-response may have been due to a range of factors, including lack of interest, lack of time and perception of their relevance to the survey (for example, students who had completed their studies or who had only completed one module/topic for CPD); however, reasons for choosing not to participate are unknown. As a result, the survey results are not designed to be representative, but they do provide a range of experiences from students from different backgrounds studying on a variety of distance-learning courses. Data protection considerations impacted on the ease of contacting students, the possibility for sending follow-up invitations, the sampling strategy and response rates.

4.4 Future research

Following on from this research, engagement with tutors and staff involved in preparing and delivering distance learning material will be essential, in order to understand their views on the findings. Gaining their support will be crucial to implement any of the proposed recommendations. Although this implementation stage was beyond the scope of this research, the practicality of the recommendations was a significant consideration.

Once any changes are implemented to distance learning programmes, subsequent monitoring of the impact of these measures will be essential in order to assess their success and contribute to the pedagogical debate. Annual student surveys and further research should be used to gain feedback on the student experience.

Good practice examples from higher education distance learning courses across institutions should be shared. At a national level, carrying out a similar study on a much larger number of students studying on distance learning courses for CPD purposes (it is noted it would be difficult if not impossible to find other non-cohort courses), would permit subgroup comparison and analysis.

With trends such as the continuing pressure for more innovative forms of delivery, particularly with regards to the Government's agenda for lifelong learning and the ever more effective functionality and penetration of the Internet, distance learning will continue to be an important pedagogic topic. As a result, non-cohort methods may become an important vehicle for delivering this education. Continued research in this area is necessary for the ongoing improvement of programmes delivered via distance learning.

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6. Appendices

Appendix A

Interviewer guidance sheet

Opening protocol

Purpose of research, format and length of interview, questions raised

A The course/programme/topic

A1 Course enrolled on

A2 Purpose of study

B Distance learning experience

B1 Previous experience of studying at University

B2 Reasons for choosing distance learning

B3 Initial feelings about starting on the programme/course/module/topic

B4 Factors contributing to any initial concerns

B5 Aspect/s of the programme/course/module/topic particularly liked

B6 Aspect/s of the programme/course/module/topic particularly disliked

B7 Difficulties with any modules/topics

B8 Motivation during your studies

B9 Connectedness with the University and other students

B10 Expectations of the time and resources required

B11 Support from university/students/work colleagues

B12 Student interaction and contact with fellow students

B13 Involved in structured on-line discussion

B14 Positive and negative experiences

B15 The most important thing that could be done to improve your experience

C Improving the student experience

C1 Forms of communication familiar with that may be useful to distance learners

C2 Methods to improve the student experience

D Employment details

D1 Employer name/location during study

D2 Employer's business

D3 Number of related professionals in the organisation

D4 Student's role/position within the organisation

D5 Length of related professional employment at time of enrolling

Appendix B

Research questionnaire

Page 1. Welcome

Introduction to the project and with contact details of the research team

Page 2. Tutor contact

1. Are you happy with the amount of contact you have with your tutor?
2. For you, what makes good quality tutor contact? Please briefly describe below:
3. If you are unhappy with current amount or quality of tutor contact, which of the following would help? Please choose all that apply...
4. Which methods do you use to communicate with your tutor?
5. Are you happy with the current methods available to contact your tutor?
6. Are there any other ways we could improve the student/tutor relationship?

Page 3. Peer mentoring

7. Would you like to have a mentor?
8. Would you be prepared to be a mentor to a new student?
9. What factors should we consider if we use mentoring?

Page 4. Online communities

10. Would you like to feel part of an online community and be able to communicate with other students?
11. Would you read wikis created by your fellow students?
12. Would you contribute information to wikis for fellow students to use?
13. Do you have any further thoughts regarding creating 'online communities' for students studying via distance learning?

Page 5. Student profiles

14. How useful would it be to be able to see profiles of other students?
15. Would you read the profiles of other students?
16. Would you be prepared to put your profile online?
17. What would we need to consider to provide student profiles?

Page 6. Student location information

18. Would you like to know where other students are located geographically?
19. Would you like other students to know your broad geographic location?

Overcoming isolation in distance learning: *Building a learning community through time and space*

20. Would you like the facility to be put in contact with the students who are closest to you geographically?

Page 7. Course material and delivery

21. Would you welcome these tips or 'nuggets' posted by students?
22. Would you post your own tips and advice to help future students?
23. We could use other methods and material on distance learning courses. Please indicate if you would welcome the use of the following...
24. Would you be prepared to post additional material (for example, articles, web sites, glossary of terms, audio files or other resources), for future students?
25. Do you have any further thoughts regarding the implementation of alternative methods and material?

Page 8. Your preferences

26. From the following list, what would improve your experiences on UWE distance learning courses the most? Please choose your top 4 from the list below, entering rank '1' for the most important through to '4'
27. Is there anything, not covered in the above list that we could do to improve distance learning at UWE?
28. Please indicate which programme title you are currently studying modules/topics on

Page 9. Thank you