

Annex A

<p>Cover Sheet for Proposals to Circular 05/06: Learners Experience of e-Learning Programme (All sections must be completed)</p>	<p>Bid for a: *B) Institutional Studies project;</p>
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Name of Institution/Organisation: University of Southampton

Name of Partners:

Name of Proposed Project: Disabled Learners' Experiences of e-learning (LExDis)

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Length of Project: 18 months

Project Start and End Dates: 1 March 2007 – 31 August 2008

Total Funding Requested from JISC: £80,000 (37.7%)

Funding Broken Down over Academic Years: Yr 1 £24,536 Yr 2 £51,343 Yr 3 £4,121

Total Institutional Contribution: £131,976 (62.3%)

Outline Project Description

The LExDis project will explore the e-learning experiences of disabled learners within one institution; The University of Southampton. The overarching aim is to increase our understanding of the many complex issues and interactions introduced by disabled learners' requirements for accessible e-learning, compatible assistive technologies and effective learning support. The need for such a project has been highlighted by previous JISC studies of learners' experiences, which identified the value of learning from the particular issues that applied to disabled students, noted the near impossibility of ascertaining a disabled learner's experience solely from observable behaviour and recommended further studies. Based on our extensive knowledge and experience of working with disabled students, it is our view that there are many very special issues that will not be fully understood or illuminated by a general study of a cohort that includes only one or two disabled students. Recognising that disabled students are not a homogenous group, students with a wide range of disabilities and experiences of using e-learning and assistive technologies at Southampton, will be included in the study.

The LExDis project will contribute to the field of knowledge by developing user-centred participatory methods that produce rich in-depth descriptions of the e-learning experiences of disabled students and help practitioners, support staff, managers, learners and developers address with some confidence the issues faced by disabled students in higher education. This project will have an important impact on wider participation and ease transition issues for those requiring equal access to on-line teaching and learning. The 62.3% institutional contribution reflects the fact that the results of the project's research will help The University of Southampton to achieve the objectives of its learning and teaching and e-learning enhancement strategies.

1. Introduction

The overarching aim of the LExDis project is to:

Explore the e-learning experiences of disabled learners within one institution (The University of Southampton) in order to increase understanding of the many complex issues and interactions introduced by disabled learners' requirements for accessible e-learning, compatible assistive technologies and effective learning support.

The need for such a project has been highlighted by previous JISC studies of learners' experiences^{1 2 3}, which identified the value of learning from the particular issues that applied to disabled students, noted the near impossibility of ascertaining a disabled learner's experience solely from observable behaviour and recommended further studies.

Based on our extensive knowledge and experience of working with disabled students, it is our view that there are many very special issues that will not be fully understood or illuminated by a general study of a cohort that includes only one or two disabled students. At the University of Southampton, the percentage of the total student population that is registered as disabled (or having an additional learning need) is roughly 8%. This compares to national average of around 5% (HESA 2003-4 statistics). Recognising that disabled students are not a homogenous group, students with a wide range of disabilities and experiences of using e-learning and assistive technologies at Southampton, will be included in the study in order to:

- Explore and describe how disabled learners experience and participate in learning in technology-rich environments
- Investigate the strategies, beliefs and intentions of disabled learners who are effective in learning in technology-rich environments and identify factors that enable or inhibit effective e-learning
- Develop user-centred methodologies for eliciting the e-learning experiences of disabled students and disseminate these widely in order to promote a participatory approach to designing and evaluating e-learning
- Make recommendations for those involved in designing learning systems and developing support services for disabled students based on our understanding of their diverse needs, experiences and preferences.

In addressing the above objectives, the LExDis Project will focus on the following questions⁴:

- What choices are disabled learners making in their study strategies e.g. about when and where to study, with whom, and using what technologies and services? How do these choices impact on their experience of e-learning? e.g.:
 - How do disabled students' experiences of accessibility of e-learning affect their choices?
- What are the critical moments in disabled learners' experiences of technology for learning e.g.:
 - What knowledge do prospective students who have declared a disability, and their technology assessors have of the assistive technology and training needs for a specific course?
 - What is university staff's knowledge and experience of how to support new and existing students using e-learning in conjunction with existing/new assistive technologies?
- How do institutional policies facilitate access to technologies, and positive choices about learning with technology and how well do institutional systems support different kinds of disabled learner? e.g.:

¹ Sharpe, R., Benfield, G., Lessner, E., & De Cicco, E. (2005) Learner Scoping Study: Final Report, available from http://www.jisc.ac.uk/elp_learneroutcomes.html

² Creanor, L., Trinder, K., Gowan, D., Howells, C. LEX: The learner experience of e-learning final project report (2006) http://www.jisc.ac.uk/uploaded_documents/LEX%20Final%20Report_August06.pdf

³ Conole, G., de Laat, M., Dillon, T. and Darby, J. (2006) JISC LXP Student experiences of technologies Draft final report http://www.jisc.ac.uk/media/documents/lxp_project_final_report_nov_06.pdf

⁴ Recognising that some or all of the questions may change as a result of advice and comments from disabled students who are participating in the project

- How do universities support both generic e-learning technologies and specialist assistive technologies?
- How are highly skilled disabled e-communicators being supported? What can be learned from their experience? e.g.
 - What is the relationship between highly skilled disabled e-learners and highly skilled disabled technology users in other aspects of their life?
- How are disabled learners personalising their learning tools and environments, and how are they involving 'personal' assistive technologies in their learning? What kinds of personalisation and adaptation would they value in their learning? e.g.
 - What are disabled students' experiences of interactions between assistive and e-learning technologies?
 - The use of e-assessment, e-portfolios, social software and mobile learning.

The LExDis project will contribute to the field of knowledge by developing user-centred participatory methods that produce rich in-depth descriptions of the e-learning experiences of disabled students and help practitioners, support staff, managers, learners and developers address with some confidence the issues faced by disabled students in higher education.

The LExDis project will start in March 2007 and end in August 2008. It will build on the outcomes of the completed Learner Experiences of e-Learning projects, liaise with relevant concurrent projects and share relevant information and project outcomes. This project will cooperate with the Support and Synthesis project and we welcome the expertise on methodology and tools for investigating learner experiences and will liaise with the JISC Programme Manager on a monthly basis to ensure there is a shared understanding of the work and its progress.

2. Project Description

Deliverables

The deliverables of the project will include:

- 30 case studies describing disabled learners' different experiences of learning and the role e-learning and other technologies plays in those experiences;
- A summary report detailing how the research questions have been addressed and drawing out lessons learned from the particular institutional context;
- A brief methodological report outlining the tools and techniques used, together with any tools developed and any transcripts produced;
- A critique of the chosen methodology;
- Recommendations and guidance for practitioners, support staff, institutional managers, learners, content providers, instructional designers, technical and program developers.

Methodology

The LExDis project will use a "participatory"^{5,6} research methodology, with a focus on the learner voice' where disabled students are involved as consultants and partners not just as research subjects and help to identify and (re)frame the research questions; work with the researchers to achieve a collective analysis of the research issues and bring the results to the attention of each of the constituencies that they represent (disabled students, HE staff). Following consultation with the project participants (disabled learners), it is anticipated that a variety of approaches to eliciting the learner experience will be used that build on techniques used in previous JISC projects:

- Defining what 'effective' means relative to learners' own goals and self-perceptions, and the difference technology has made to their experience of learning;
- Combining phenomenographic (IPA)⁷ and ethnographic approaches;

⁵ Chappell, A (2000) Emergence of participatory methodology in learning difficulty research: understanding the context. *British Journal of Learning Disabilities*, 28,38-43

⁶ Kitchin, R (2000) The researched opinions on research: disabled people and disability research. *Disability & Society*, 15,1, 25-47

⁷ Reid, K. Flowers, P. & Larkin, M. (2005), Exploring Lived Experience, *The Psychologist*, 18, 1, 20-23.

- Eliciting learner narratives through audio recorded semi-structured interviews and identifying uses of technology through written and audio logs;
- Using artefacts (e.g. blogs, e-portfolios, wikis) actually produced by learners as a means of helping the learner to reflect in depth on the technologies used, their learning strategies and social and learning impact;
- Using social software and concept mapping software to support analysis.

Research Background

Fuller et al.^{8 9} investigated disabled students' learning experience and noted that, although in 2000/2001 almost 5% of students self assessed as being disabled, the actual number may be closer to 10% as there is no obligation to disclose. Nearly one in five students they surveyed were claiming Disabled Student Allowance (DSA), while nearly two in five had consulted the Disability Coordinator. Nearly half the students reported barriers connected to their disability, which impacted on their learning in lectures and nearly one in five students reported barriers to using public IT facilities. Fuller notes that their research highlights the need for both variety and flexibility in all aspects of teaching and learning, as what works for one student may not be a good option for another.

Previous JISC learning experience studies have acknowledged the importance of addressing the experience of disabled e-learners and provide an important context for the LExDis Project. For example, Sharpe et al.¹⁰ reviewed the impact of individual differences and noted that a disability can dominate the experience for the individual, along with prior experience and 'attitude towards using computers within learning'. Some disabled students had highly specific and contextualised difficulties with work in a blended environment. Some benefited from catching up when they have to unavoidably miss sessions, having materials available in flexible formats, the reduced emphasis on note taking in class and the anonymity of online interactions. Disabled learners may therefore have different experiences in 'the same' learning situation and different requirements to be an effective learner. They note that The ALERT¹¹ project makes recommendations for supporting students with course notes, which would seem to be of benefit to many students, not just those with disabilities and that this view of an inclusive approach that takes into account the needs of all learners is growing in popularity. They refer to Draffan and Rainger's model¹² for an inclusive approach to the identification of challenges to blended learning as a means to identify educational accessibility issues to move towards a more all-encompassing learning approach that embraces the needs of learners, regardless of a defined disability. This provides a starting point for the identification of mismatches between the interactions used to facilitate learning and the individual characteristics and/or needs of the student. The LXP project draft final report concludes: "In a climate where it is important to provide equal opportunities for all ... Technology is constantly re-invented and repurposed to support learning activities and there is a complex co-evolution of tools and their use resulting in significant changes in the way students are learning, which we need to take account of in the way we support learning and the institutional environments we provide." It is therefore also important to consider how and to what extent "outdated" assistive technologies can support disabled students using 'new' e-learning technologies.

In addition to the JISC studies, a small number of studies have begun to explore some specific aspects of the disabled e-learner's experience. For example, Draffan *et al.*¹³ recently surveyed the use of and satisfaction with assistive technology by students with dyslexia in post-secondary education. They posed a number of key questions that can only be addressed by an in-depth study of individual students over the course of a programme of study including: a) do students receive the hardware and software that is most appropriate to their needs?; b) How do students actually use the systems that are provided for them?; c) Are they using these systems to their full potential or would

⁸ Fuller, M., Bradley, A., Healey, M. (2004) Incorporating disabled students within an inclusive higher education environment *Disability & Society*, Vol. 19, No. 5

⁹ Fuller, M., Healey, M., Bradley, A., Hall, T. (2004) Barriers to learning: a systematic study of the experience of disabled students in one university *Studies in Higher Education* Vol. 29, No. 3

¹⁰ Sharpe, R., Benfield, G., Roberts, G. & Francis, R (2006) The undergraduate experience of blended e-learning: a review of UK literature and practice undertaken for the Higher Education Academy, http://www.heacademy.ac.uk/research/Sharpe_Benfield_Roberts_Francis.pdf

¹¹ The ALERT (Accessibility in Learning Environments and Related Technologies) project: <<http://www.dur.ac.uk/alert/>>

¹² Draffan, E. A. & Rainger, P. (2006) A model for the identification of challenges to blended learning. *ALT-J, Research in Learning Technology*. 14 (1), 55-67.

¹³ Draffan, E. A., Evans, D. G., Blenkhorn, P. (2006) A Survey of the use of Assistive Technology by Students with Dyslexia in Post-Secondary Education. School of Informatics, University of Manchester (in press).

they benefit from training? Seale (2006)¹⁴ reviewed disabled students' experiences of e-learning in higher education using both primary and secondary sources of evidence. She found that there has been very little consideration of the interaction between assistive technologies and e-learning and that the value disabled students place on being able to access generic e-learning technology is influenced by the extent to which it enhances their independence, facilitates their learning needs and enables them to use their additional specialist technology. Negative experiences of e-learning can include the lack of accessibility and availability of generic technology and of specialist technology and the bureaucracy of systems for assessing and providing specialist technologies which means that students can take a long time to get assessed and the technologies can take a long time to arrive. Wald¹⁵ has worked with staff and students at 40 HE institutions to identify factors that may affect disabled students' e-learning experience. Based on our research and experience we therefore anticipate that some of the factors that disabled students' may find impact on their e-learning experience may include: complex interactions between assistive technologies and e-learning (including course specific issues and issues of anxiety and fatigue); previous assistive technology experience; assistive technology availability and funding; staff knowledge and expertise; accessibility of courses, assessments, facilities and resources; availability of online information for those unable to attend; the role of online communities in offering peer support to those learners who experience feelings of isolation because of their disability or lack confidence in face-to-face communication.

Timetable for Project

Task/Timeframe	March - Aug 2007	Sep 2007– Feb 2008	March –Aug 2008
Planning	Recruit disabled students and involve them in framing and re-framing the research questions as well as agreeing a methodology for creating the case studies. Complete structure for project methodologies and contact with other project holders. Produce detailed project plan.	Update plan and track progress - maintain contact with Support and Synthesis project and JISC project manager	Analyse position of project and review issues outstanding to ensure closure within project period.
Case study data collection	Set up strategies for creating the case studies in partnership with disabled participants, which may involve individual interviews, written and audio logs, analysis of artefacts.	Interviews (and/or other data collection strategies as agreed in partnership with research team and disabled participants) take place. Audio recording, written and where appropriate video recordings.	Analysis of data and report writing in partnership with disabled participants. Agree choices of artefacts for website and workshops etc.
Dissemination/ Recommendations	Set up website - Gather general data relevant to the project – set up Wiki/blog for team interaction and encourage links with other projects and web sites.	Capture learners' uses of technologies and provide searchable illustrations on website. Begin the provision of guidance to practitioners etc.	Complete data collection, recommendations and add 'learner voices' using podcasts and vodcasts, accessible format files for downloading text and MP3 files. Involve disabled participants in conference and workshop

¹⁴ Seale, J. (2006) E-learning and Disability in Higher Education: Accessibility research and practice. Routledge

¹⁵ <http://www.soton.ac.uk/~shec/ContentsICTadvisedocument.html>

			presentations.
Critique & evaluation	Analysis of early project issues & methodologies	1 st phase analysis. Review methodologies & case study techniques after meeting limited number of students – Feedback - make changes -continue	2 nd phase analysis of outcomes and issues relating to methodologies, dissemination techniques, team and student participation.

Risk Assessment

Risk	Impact	Probability	Action to Manage Risk
Staffing: recruitment and loss of personnel	low	low	All members of the team have the knowledge, experience and ability to support an inexperienced RA and to take over each other's roles at critical moments if required
Disabled Students; recruitment	high	low	Southampton has a much higher proportion of disabled students than the national average. The team have the support of the university's disability support team and do not anticipate a problem recruiting student volunteers for the project although the range of disabilities will be dependent on the students who volunteer for the studies. An honorarium of £50 will be made available for payment to disabled participants.
Keeping to planned timetable	high	low	The team are experienced at managing projects and will communicate and meet regularly throughout the project to ensure it runs to plan.

Value for money

This project will provide extremely good value for money, benefiting from a research team that is experienced in both researching in the field of disability, technology and e-learning and in raising awareness of disability issues through staff and educational development activities. This means that LExDis will not only provide a robust methodology for the research and innovative accessible methods of dissemination, but will also provide clear guidelines as to the enhancement of effective e-learning for teaching and support staff, developers and policy makers. This project will have an important impact on wider participation and ease transition issues for those requiring equal access to on-line teaching and learning. The 62.3% institutional contribution reflects the fact that the results of the project's research will help The University of Southampton to achieve the objectives of its learning and teaching and e-learning enhancement strategies which state that "over the next four years, the University of Southampton student learning experience will be enhanced by a focus on: ... inclusivity ..." and one of the six core values is "The appreciation of diversity and equality of opportunity" and one of the five e-learning objectives is that " E-learning will help remove barriers to learning, by allowing access to learning resources and activities, regardless of time of study, place of study, learning style preferences, cultural background or disability."

3. Key Personnel

The LExDis project team have extensive knowledge and successful experience of running e-learning and disability related projects, research and dissemination through international conferences, web sites, publications and staff development and of working with and supporting disabled students using assistive technologies. This will enable them to manage the project and support the research assistant in carrying out the work outlined in the project timetable.

- **Dr Wald** works within the Learning Technologies Group at the University of Southampton and has been responsible for nearly £1million disability related e-learning grant funding and advised

- HEFCE, JISC, BECTA , IBM/Liberated Learning Consortium, and Universities on enhancing learning for disabled students through assistive and learning technologies.
- **Dr Seale** is Senior Lecturer in Educational Innovation in Higher Education, School of Education, University of Southampton. She is Chair of Southampton University Inclusion Task Force, President of the Association for Learning Technology; Editor of the Association for Learning Technology Journal and co-investigator on a disability related ESRC research project. She has Co-ordinated an EPSRC funded MSc in Assistive Technology and been a Consultant in a Computer Applications to Special Education Research Unit.
 - **E.A. Draffan** has been a Senior Advisor to TechDis, established and managed a regional Assistive Technology Centre, manages an Assistive Technology Database, has been an Assistive Technology Adviser for European disability projects, is currently a Visiting Research Fellow in Manchester University's Assistive Technology Group and has been a member of HEFCE's Students with Learning Difficulties and Disabilities Committee.