



JISC LEARNER EXPERIENCES OF E-LEARNING PROGRAMME

THEMA: EXPLORING THE EXPERIENCES OF MASTER'S STUDENTS IN A DIGITAL AGE

EXECUTIVE SUMMARY

Compiled by:

Liz Masterman

Project team:

Dr Liz Masterman: Learning Technologies Group, University of Oxford

Jane Alexen Shuyska: Department of Education, University of Oxford

Fawei Geng: Learning Technologies Group, University of Oxford

With support from:

Kate Lindsay, Peter Robinson: Learning Technologies Group, University of Oxford

Dr Gabriel Hanganu: Oxford University Computing Services

Yuen-Yi Lo, Mitsuko Matsumoto, Helen Willey: Department of Education, University of Oxford

Version 1.0

18th January, 2010

CONTENTS

1. Aims and objectives	1
2. Overall approach	1
3. Findings and recommendations in relation to students' use of digital technologies	2
3.1 Findings	2
3.2 Recommendations	3
4. Findings and recommendations in relation to the experience of taught postgraduates at the University of Oxford	6
4.1 Findings	6
4.2 Recommendations	8
5. Findings and recommendations in relation to the methodological approach adopted	9
5.1 Findings	9
5.2 Recommendations	9
Appendices	11
A. Courses participating in the Thema project	11
B. Principal project outputs	11

The findings and recommendations outlined in sections 3-5 of this document are derived from three separate reports (listed in Appendix B). As a result, they are presented in slightly different formats.

THEMA: EXECUTIVE SUMMARY

1. Aims and objectives

The Thema project set out to investigate the experiences of taught Master's students at Oxford University in 2007-8, with specific reference to the role of digital technologies in supporting their academic and social lives. Our objective was to undertake a longitudinal exploration of their holistic experience in order to uncover their learning strategies, the relationship between personally-owned and institutionally-provided technologies, changes in their use of technology and their significant learning experiences.

Thema formed part of phase 2 of the JISC-funded Learner Experiences of E-learning programme¹ and was carried out between 1st March 2007 and 31st March 2009. Our key areas of interest were

- Whether – and how – students' use of digital technologies changes during their course, through contact with the tools provided by the University (e.g. the institutional VLE or bibliographic software) and tools which they find out about in other ways (e.g. from fellow students or through their own discoveries).
- The "significant moments" in students' experience – e.g. induction into the course and Oxford social life, group projects, revision, or researching and writing their dissertations – and the part that technology plays in these.
- The extent to which teaching staff use technology in a way that students find motivating and beneficial to their learning.
- The extent to which students are using Web 2.0 applications such as blogs, wikis and Facebook, and whether they feel these tools might have a role in their formal studies as well as in their personal lives.

2. Overall approach

We considered Master's students to be of particular interest because of their heterogeneity in terms of educational history, age, country of origin, life situation and disposition toward, and extent of, IT experience in comparison with undergraduate students. This heterogeneity was largely confirmed by a baseline survey which we conducted in May 2007 in order to establish the landscape of technology use by students across the whole University. An exception was in the sphere of IT, where differences between the undergraduate and taught postgraduate populations were negligible.

The primary outputs from the Thema project were 23 qualitative case records of students' experience of learning over the first nine months of their course, from which we compiled 11 narrative case studies. To set these data within their institutional and pedagogical context, we adopted a mixed-methods research design and framed them within two online surveys gathering data from a larger sample of students on the same programmes. The qualitative data for the case studies were collected using a "pen-pal" technique, a variant of the email interview which we devised to meet the challenge of eliciting data from busy students over an extended period with minimal intrusion, and using a simple and robust technology. Our premise was that sustained participation would be maximised through adopting a personal approach and asking questions that took each student's specific course and own individual experience as a starting point (although some "common" questions were put to all students).

¹ JISC: Joint Information Systems Committee: supports UK colleges and universities in the innovative use of digital technologies. For further information, please visit <http://www.jisc.ac.uk>.

Within our correspondence with the students, we primarily adopted a holistic perspective: viz. foregrounding their general experience to see how technology fitted into it (or did not fit into it), rather than making technology the starting point of all our enquiries. We felt that this approach was more appropriate, both for the quasi-longitudinal nature of the study and in order to gain a fully rounded picture of students' experience and the interplay among the different technologies – non-digital as well as digital – that mediate it. As our data collection and analysis proceeded, we discovered that postgraduate students in general have remained a relatively under-researched population, and the sub-population of taught postgraduate students even more so. We therefore found ourselves making more of a contribution to general research into the student experience than expected – to the extent, indeed, of needing to write an additional project report.

3. Findings and recommendations in relation to students' use of digital technologies

3.1 Findings

Throughout our interactions with the students it was clear that technology played a very important role in the lives and study habits of most of them. In many cases it was an all-pervasive influence, without which the students could barely imagine their studies and social lives.

At the same time, when seen through a broader lens of the students' overall experience, technology is easily overshadowed by much more important concerns of social and academic life. It can be seen as playing a supporting role, enabling activity, which would not otherwise be possible, but mostly blending in with the background. Often the technology becomes clearly visible only when it breaks down or causes other types of problems. Otherwise, it remains part of the fabric of students' everyday lives. Indeed, when students recounted significant learning experiences from their previous study at the beginning of the project, the focus on technology was minimal. Experiences that meant the most to the students were to do with exciting, skilful tutors, who were capable of making complex material make sense, with feelings of personal achievement and development and with acquisition of hands-on experience in their field of study. In all these experiences, technology could have, and in some cases probably did, play a supporting part, but the importance of those moments is seen in terms of something more universal.

Nonetheless, technology influences students' experiences in important ways. Most of the Thema participants reported being grateful for the instantaneous access to a wealth of resources which would be impossible without the technology, and named a myriad ways in which technology makes their life and work easier. Key findings in relation to taught postgraduate students' experiences of digital technologies are:

- Students know when to “e-” and when not to “e-”, blending the affordances of tools and interactions in the online and real worlds. They also recognise the special atmosphere engendered when students and lecturers are co-present in the classroom and feel that the learning experience may be diminished if lectures are offered as podcasts.
- Students' perception of their proficiency in their use of digital technologies may be at variance with the behaviours that they actually display in terms of the range of tools used and their curiosity in finding out what is available.
- Although over 90% of students have laptops, they tend not to take them to classes for a range of reasons that include the weight and/or poor condition of the equipment, fear of theft and preference for taking notes by hand. This raises implications for designing class-based learning activities that assume students have their own technologies to hand.

- Postgraduate students are – or become – adept at accessing and evaluating information in digital environments, in using specialist (domain-specific) tools needed to support their learning, and in finding online tools either themselves or by asking friends. They are also able to implement their own strategies to resist distractions from social tools while they are working, although this may come about only after protracted painful experiences.
- Facebook is the dominant medium of informal peer communication, both for academic support and for social purposes. However, postgraduate students consider social networks inappropriate environments for formal learning.
- Technologies such as Skype and Facebook play an important role in enabling overseas students in adapting to an unfamiliar academic and social environment through keeping in touch with friends and family at home.

3.2 Recommendations

In relation to our findings on students' use of, and attitudes towards the role of, digital technologies, our recommendations to stakeholders, both within the University of Oxford and beyond are:

Academic staff and those responsible for supporting them

These recommendations are also addressed to staff development officers and learning technologists who are responsible for training early-career lecturers and for facilitating the deployment of technology-enhanced learning:

In relation to the institutional VLE, lecturers within the same course should:

- Provide students with the same “base level” of service (i.e. in making PowerPoint presentations, lecture notes and so forth available), even if they do not all use the other tools and features provided.

In relation to the use of digital technologies in lectures and other classes, lecturers are encouraged to:

- Make judicious use of PowerPoint presentations to supplement lectures, paying particular attention to:
 - Using bullet points sparingly to convey structure and key information;
 - Making concepts and processes more salient through the use of memorable images, graphics and animations.
- Make greater use of the interactive capabilities of electronic whiteboards, where these are available to them.
- Consider the recording of lectures as podcasts to aid students' revision, without fear that students will cease to attend lectures as a consequence.
- Consult students before incorporating a Web 2.0 technology such as Facebook into their teaching, in order to ascertain students' perspective on its acceptability as an online environment for formal learning.

To realise these aims, staff training should address the effective pedagogic use of these technologies, not just their functional use.

In compiling students' reading lists, lecturers should:

- Be aware of many students' preference for obtaining materials online, but not eschew printed materials simply because of this preference.

- Make photocopied study packs of print-based materials available where possible, subject to copyright restrictions and cost implications.

To prepare for mobile learning in the classroom, lecturers are encouraged to:

- Maintain awareness both of the numbers of students using mobile devices (laptops and smart phones) and of the patterns in their usage, in order to ascertain when the critical mass is reached.
- Investigate the potential for the innovative use of mobile technologies within one's discipline. The support of staff developers and learning technologists may play a key role in this.

Providers of training in IT for students: central services, departments, libraries

When planning the delivery of training through the academic year, providers are encouraged to:

- Be mindful of students' preference for "just-in-time" training.
- Keep the amount of information and training to a minimum during the induction period (first two weeks of the year), focusing perhaps on raising students' awareness of how to obtain training when they need it.
- Consider the creation of online "refresher" guides to supplement face-to-face training.

When designing training in specialised digital tools needed for students' studies:

- Ensure that training is directed towards supporting students' thinking and problem-solving in the domain: e.g. by being built around genuine tasks that students need to accomplish rather than "generic" tasks.

It may be more appropriate for such training to be provided by individual academic departments, although co-design and co-delivery with members of the central IT training service is recommended.

- Consider recruiting doctoral students to provide one-to-one support to Master's students who need to use complex tools in the collection and analysis of data for their dissertations.

Training and other forms of support for the development of digital literacy skills are strongly recommended. These might include:

- Training students in the efficient evaluation of online publications in order to assess their relevance (and to avoid unnecessary, and wasteful, printing).
- Guiding students in the judicious use, for academic purposes, of popular search and reference tools such as Google and Wikipedia.
- Bringing productivity tools such as online calendars and bookmarking applications to students' attention at an early stage (without, of course, weighing them down with still more information during the first few weeks of their studies).

Also recommended in this respect is the maintaining of lists of useful tools that can be passed from one year's cohort to the next.

- Encouraging students to become "study buddies" for mutual support, encouragement and feedback, especially during the dissertation phase.
- Advising students on simple strategies to manage distractions from Facebook and other social and communication tools while they are engaged in study.

- Conducting awareness-raising in online privacy and security, including practical advice on measures that students can take.

Librarians and those responsible for information services

The following recommendations are made:

- Maintain the provision of computers in libraries.
- Ensure the provision of quiet (“laptop-free”) zones for students who are distracted by the noise of keyboards.
- Consider the extension of opening hours until late evening.
- For college libraries: consider permitting lending rights (or, at the minimum, reference-only access) to students from other colleges

Facilities managers and others responsible for learning spaces in academic departments

The following recommendation is made:

- Maintain or extend the provision of computers in departmental libraries and study rooms.

Providers of technological services and infrastructure

The following recommendations are made:

- Encourage academic departments to install wireless LANs in all teaching rooms.
- Ensure that students have good quality internet access in university accommodation that allows sufficient bandwidth for video communications.
- Respond to the increase in usage of Apple Mac computers in terms of
 - Technical support
 - Training in the use of the Mac versions of applications
 - The digital tools recommended to students, making it clear which ones are not available on Macs and offering alternatives

Researchers in students’ use of digital technologies

Within each institution, individual departments are encouraged to:

- Conduct regular surveys of their students’ use of, and attitudes towards, digital technologies, with a view to identifying the point at which a critical mass is reached and innovation becomes practicable: e.g. the design of learning with laptops or smart phones.

This recommendation may also be implemented with undergraduates.

The following avenue has also been identified for more general research:

- Investigate students’ awareness of “green” (environmental) issues in their learning, and ways in which they might be encouraged in environmentally responsible practices regarding digital technologies.

4. Findings and recommendations in relation to the experience of taught postgraduates

4.1 Findings

The Thema project highlighted the challenges presented to a diverse and international body of students by a taught postgraduate course and sketched out some of the ways students go about meeting these challenges.

A sense of awe

Students approach the University of Oxford with a mixture of excitement and trepidation in anticipation of entering an institution with a very special reputation of excellence. Thema uncovered expectations about other students at Oxford being especially clever, an expectation that seemed to be quickly disproved in most cases. Indeed, for many students, the first term was an exciting experience, where their skills were affirmed and their confidence boosted. We suspect that these experiences may not be unique to the University of Oxford, but are shared by taught postgraduate students elsewhere. With an international and diverse cohort of students, it is easy to imagine similar compositions of student experience at other higher education institutions, although future investigations will need to confirm this.

Adaptation to autonomous study

The students in our cohort were facing issues of transition from undergraduate to postgraduate study: specifically, a move towards more autonomous learning. Familiar structures, such as reading lists were much looser, or even absent entirely. Seminars rather than lectures constituted the prevailing method of teaching, often requiring higher levels of engagement than those to which students had previously been accustomed. In some cases, lectures played a supporting role on the course, rather than being its backbone, thus requiring a different kind of engagement with the accompanying reading materials.

Students with a flexible approach succeeded in adapting to their new reality, and negotiated a fit between their previous experience, expectations and skills, and the new challenges they were facing. Indeed, a few found this new autonomy to be a liberating experience and enjoyed what they saw as an opportunity to shape their own learning. Others, who exhibited more fixed expectations towards their course and who found a greater gap between their expectations and what the course had to offer, faced a bigger challenge in reconciling the two. In some cases they were unable to find a satisfactory (and satisfying) balance between their understanding of postgraduate study and their perception of the course.

Challenges specific to international students

Overseas students in particular experienced a marked difference between the pedagogical approach of their course at Oxford and that of their previous institutions; thus the above shift towards autonomy in learning was perhaps most pronounced for them. In particular, Asian students and those from North American universities reported facing dramatic changes in the approach to teaching and learning.

For some non-native English speakers, language was a challenge. Problems were reported with reading comprehension and speed, with academic writing in a foreign language, and especially with participating in class discussions on equal footing with native English speakers. However, all the students in our cohort who had expressed concerns about their level of English were able to function well enough to complete the course (and, of course, to contribute rich data to the Thema project).

Formative feedback

Receiving formative feedback considered very important by the students, because without it they felt unconfident about taking examinations. However, a large proportion of students reported that the feedback they received was insufficient to provide them with an adequate picture of their status and progress. In part, this was due to the qualitative nature of the feedback, which contrasted with the graded assignments to which many were accustomed.

Problems were also reported with the timing of feedback, as some students received little or no official feedback on assignments before their final examination.

However, a number of students who expressed dissatisfaction with the quality of support and feedback on the taught part of the course were highly complimentary about the support they received from their supervisor for their dissertation research.

Strategies for managing learning

A substantial number of students found the workload on their course higher than expected, and had to adapt their learning strategies, or even adopt completely new strategies to cope with the pressure. We found that students adapted flexibly to their circumstances and drew on their own resources, as well as on existing and new support networks, to enable them to navigate their courses successfully.

Time management

The main approach to dealing with increased workload and complexity was to divide one's work into manageable chunks, write to-do lists, regulate the time spent working and set oneself achievable deadlines. While for most students this was a case of adjusting existing strategies, for a small number, to whom the routines of self-organisation were new, it was a more formidable challenge.

Reading and information search skills

Many students had to adjust their reading strategies to fit with the structures of their course. The lack of a standard set of required reading was a new experience, and while some struggled with deciding what to read, others treated this as an opportunity to take control of their own reading and to concentrate on the topics that interested them the most. When it came to dissertation writing, students exhibited maturity in their approaches to searching and selecting literature and information online and in libraries.

Academic support from peers

A number of participants described how they capitalised on the expertise of their peers to support their own understanding. Students reported pairing up for supporting each other's dissertation writing, creating reading groups around exam time and using the course Facebook group for communication about assignments and exam questions.

Emotional support

Some students talked in affective terms about the challenges of adapting to their course and to life in Oxford generally. They relied on their peers and their family for support. Here technology played an important role as it allowed for quicker, more seamless communication both with peers and with family and friends in their native country.

Dealing with distractions from the internet

Technology tended to distract students from their work – Facebook and email were particularly cited in this connection – but generally all students eventually managed these distractions successfully. For some this meant learning to disconnect themselves completely from the web for a set period.

4.2 Recommendations

The following recommendations to providers of taught postgraduate courses should be viewed in light of the relatively small-scale nature of this study. In particular, they should be treated as indications of what students may benefit from (or think that they may benefit from) rather than fixed prescriptions. They must also be seen in conjunction with proposed directions for future research, which capitalise on questions arising from the present investigation.

Course directors and teaching staff

The following two recommendations are made:

- Ensure that applicants for taught postgraduate courses receive clear information about the pedagogic approach of courses in order to help them to negotiate a fit between their aspirations for the course and the resources and structures available:

The following types of information might be useful additions to descriptions in prospectuses and on course Websites:

- Expectations of the department towards students in terms of their readiness to take on the role of autonomous learner:
 - Detailed descriptions of what it means to be a learner in the department
 - Explication of reading approaches that the student will need to develop
 - Specifications of the expected levels of academic writing and research
 - Expected levels of participation during classroom activities
 - Expected disposition towards learning, such as critique and analysis
- What students can expect from their course:
 - Descriptions of pedagogical approach, including an explication of what terms like “seminar”, “tutorial”, “discussion session” etc., mean in the context of the particular course
 - Details of formative feedback mechanisms both during taught and research-based parts of the course
 - Reasonable assessment of the workload and suggestions for ways to manage it
- Review strategies for giving formative feedback.

This does not necessitate switching to new assessment methods; rather, engaging with each student in a closer conversation about their progress. Students appreciate reassurance and concrete opportunities for improvement, especially with respect to metacognitive skills such as academic writing, reading, critique and analysis.

Researchers investigating the learner experience

Recommended areas for further research into the experience of taught postgraduate students are:

- Triangulate students’ experiences and perceptions with the experiences and perceptions of the teaching staff.
- Investigate in more depth how formative feedback is best provided to taught postgraduate students – from the point of view of both students and staff – and connect the findings from such research with students’ achievement in summative assessments.
- Correlate students’ experience with their academic success. A view of how facing the challenges discussed here may impact upon students’ attainment might present a different picture of the students’ experiences during their taught course.
- Investigate in full the experience of working on a Master’s dissertation, in order to obtain a comprehensive picture of the taught postgraduate experience (recommendation

made in view of the fact that the present study ended while the students were still writing their dissertations).

- Investigate more widely students' expectations and concerns in relation to the institutional culture and to their prospective peers prior to their arrival, and the extent to which they negotiate this affective dimension of transition.

5. Findings and recommendations in relation to the methodological approach adopted

5.1 Findings

From a methodological perspective, the project was broadly a success in that the main study exceeded its targets in terms of the number of "pen-pals" recruited and retained, and in the number of responses to the two surveys, and met its target in terms of the number of case studies obtained from the pen-pals. The specific implementation of the email interview technique as a personalised "pen-pal" correspondence with a limited number of rounds was well received by the participants. Complemented by a face-to-face interview and contextualised within quantitative surveys, it proved a satisfactory method for collecting longitudinal data on students' evolving relationship with digital technologies, as well as their adaptation to a new form of study, often in a different institution.

5.2 Recommendations

In terms of methodological approaches to studying the learner experience using online techniques over an extended period, we make the following recommendations:

Research design

- An extended asynchronous email interview complemented with a synchronous interview (face-to-face where possible) is appropriate for quasi-longitudinal investigations: i.e. ones that involve episodes of data collection extending over a period of months.
- Where case studies are a required output, a mixed-methods approach involving the collection of additional quantitative, and limited qualitative, data from a broader sample is strongly recommended. This makes it possible to place the case studies in context, and to determine how far individually reported experiences are common to other participants.
- Within-subject and between-subject triangulation is essential and can be achieved through a) complementary methods of data collection from each participant, and b) putting the same question to other participants.

Sampling, recruitment and retention

- If possible, sample purposively from a known sub-population. This a) helps to contextualise the study and b) reduces problems of authenticity: i.e. one can be confident that participants are *bona fide* members of the sub-population being studied.
- Over-recruit in order a) to guard against attrition, b) to accommodate variability in the quality and quantity of data collected from participants, and c) to maximise the diversity of experiences captured (if this is an aim of the project). However, recruiting more participants than needed can result in a greater workload for the researchers.
- Maximise the likelihood of retention by establishing and maintaining rapport with the participants. In particular, note the following:

- Maintain a personalised relationship with each participant, allocating a single researcher who remains responsible for corresponding with that participant throughout.
- Establish rapport at the start through a familiarisation exercise, ideally a face-to-face encounter.
- Engage in judicious self-disclosure if this helps to put the participant more at ease, but not if it may influence or otherwise compromise the data being collected.
- When selecting participants for further, in-depth, study, be cautious of selecting on the basis of data collected in one medium alone (i.e. written or oral), as students may be more communicative in one medium than another.

Technologies for data collection

- Use a technology that is the most widely used, simple to use, robust (i.e. unlikely to fail, resulting in data loss) and secure from potential hacking (i.e. confidentiality can be assured). Email is strongly recommended.

Timing and frequency of correspondence

- Set a clear upper limit to the number of rounds envisaged in the correspondence.
- Schedule the email rounds carefully, aiming a) to capture participants' impressions of significant learning activities while they are fresh and b) to avoid times of heavy workload. Knowledge of the course schedule is essential in this respect.
- Allow flexibility in the period in which students can reply.

Question design

- Write clear, unambiguous questions, supplying a judicious amount of supplementary information to illustrate or clarify the question if necessary. If in doubt, pilot the questions before circulating them to participants.
- To ensure that questions are relevant to students' experience, obtain the course handbook or a similar document that lays out the structure, content, teaching approach and/or schedule of learning activities and assessments.
- Send 4-5 questions in each message.
- When sending the email message:
 - Make the subject line explicit.
 - Include the questions in the body of the message.

Approval process

- Ask participants to approve not only verbatim statements that will be used in project outputs, but also 3rd person narratives compiled from their direct quotations where these are too long to quote in full.
- Make the context in which a particular quotation will be used as clear as possible: e.g. by relating it to the research question or theme which it is intended to illustrate.

Appendices

A. Courses participating in the Thema project

Numbers in parentheses denote, respectively, the number of students contributing case records and the number of case records that were distilled into case studies.

- **Full-time courses (1 year)**
 - *Medical Sciences Division:*
 - MSc Integrated Immunology (3 → 1)
 - MSc Neuroscience (4 → 2)
 - *Department of Education:*
 - MSc Applied Linguistics & Second-Language Acquisition (4 → 2)
 - MSc Education, subdivided as follows:
 - Comparative & International Education (1 → 1)
 - Educational Research Methods (2 → 1)
 - E-learning (2 → 1)
 - Higher Education (1)
- **Part-time courses (2 years)**
 - *Department for Continuing Education:*
 - MSc Applied Landscape Archaeology (2 → 1)
 - MSt International Human Rights Law (4 → 2)

The courses began in October 2007 and were face-to-face, with the exception of International Human Rights Law, which began in January 2008 and blended online learning with two 5-week residential sessions in Oxford.

B. Principal project outputs

These outputs are publicly available on the project website at <http://thema.oucs.ox.ac.uk>, with the exception of the report on students' experience of studying and the project completion report.

Reports

- *Report on Students' Use of Digital Technologies*
- *Report on Students' Experience of Studying at Master's Level.* This adopts a holistic perspective, and thus covers data that do not relate directly to students' use of digital technologies
- *Methodology Report:* describes the research design and methodology in detail
- Project completion report: a formal report submitted to JISC in April 2009

Narrative case studies

- Students in the Department of Education
 - Chun-Tao
 - Ellen
 - Indra
 - Liling
 - Teresa
- Students in the Division of Medical Sciences
 - Elisabeth
 - Madeleine
 - Natalie

- Students in the Department for Continuing Education
 - Alison
 - Hashini
 - Neil

Online surveys

- Questions
 - Baseline survey conducted across the whole University, May 2007
 - Initial survey (2 variants)
 - Reflective survey (3 variants)
- Summary of quantitative data
 - Baseline survey
 - Initial survey (collated; includes selected qualitative data)
 - Reflective survey (collated; includes selected qualitative data)