JISC Developing Digital Literacies programme: Digitally Ready project

Baseline Report

University of Reading
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Executive summary

The European Commission defines 'digital literacy' as 'the confident and critical use of ICT for work, leisure, learning and communication'[1] and the JISC defines it as 'those capabilities which fit an individual for living, learning and working in a digital society: for example, the skills to use digital tools to undertake academic research, writing and critical thinking; as part of personal development planning; and as a way of showcasing achievements.'

The Digitally Ready project at the University of Reading is funded by the JISC Developing Digital Literacies Programme[2], and seeks to 'develop a holistic and inclusive approach towards achieving our vision to create a digital literacies community within the University', developing strategy and change management processes to ensure all members of the University have the digital literacies for their current role, have access to resources to ensure they are digitally ready for their future, and to better support the University's aims and objectives now and in the future.

The rate of technological change is increasing, with new software and hardware frequently available. Within the context of the University, based on the baselining exercise, we believe that equipping students and staff to be able to live and work in this digital age of change could be achieved two ways.

- The first is driven centrally by the institution, by providing support sessions and educational materials developed to match both the changes in technologies and the changes in future roles that will face both staff and students.

- The second is by developing abilities of all members of the University, enabling them to assess, analyse, acquire and reflect on their digital competencies, and on their strategies for acquiring the necessary skills.

The report follows the basic structure of the JISC template report, covering six key areas, and identifies general areas for improvement as well as a baseline of practice. Digital literacies for student employability are discussed in a separate section, as it is a specific focus of the project.

[1] http://www.jiscinfonet.ac.uk/infokits/collaborative-tools/digital-literacy
[2] http://www.jisc.ac.uk/developingdigitalliteracies

Policy and strategy

The review of institutional strategy documents reveals that, although they are aspirational, there is no explicit mention of 'digital literacy'. There are, however, several mentions which effectively place requirements on the levels of digital literacy in the institution.

The diversity of documents covering policy, strategy and guidance on digital matters for staff and students means there are few members of the University aware of it all and some are aware of very little.

The project operates within the strategic aims demonstrated by the Thematic Review of Work-Related and Placement Learning[3], the University Teaching and Learning Enhancement Priorities 2011–2013[4] and the University Information Framework[5] as the most significant in terms of the digital literacy agenda.

Infrastructure

The University has a generally good, and improving, ICT infrastructure, supporting research, teaching and learning, provided and supported centrally by the University's Information Technology Services.[6] In addition to the provision of computers, excellent networking facilities and a centrally supported Virtual Learning Environment (VLE), the University provides WiFi, email (either directly or through partnership with Microsoft), technology desks providing audio-visual facilities in every teaching space, and a range of software and services to support the administrative, research and teaching aspects of its day to day business.

An important example of the continuing improvement of the infrastructure is the programme of work at the University library to increase the availability of power outlets for personal devices, study space and WiFi connectivity.

With many aspects of IT, people generally only notice it when there are problems. As a consequence of this, it is easy to identify areas where individuals would appreciate changes and improvements to the infrastructure (e.g. wider WiFi coverage). It is worth noting that where current provision is viewed as inadequate, this can also be seen as an opportunity to develop digital literacies, by encouraging people to find new ways of working (e.g. uploading video to YouTube as well as the institutional video streaming provision to make videos available to students).

Support

The University has a well-founded federal structure and collegiate culture, within which entities at all levels have been free to develop their own solutions, including developing their own digital literacies

[3] http://www.reading.ac.uk/web/FILES/cdotl/Thematic_Review_final_report_for_UBTL.pdf
[4] http://www.reading.ac.uk/web/FILES/cdotl/TL_enhancement_priorities_2011_13.pdf
[5] http://www.reading.ac.uk/web/FILES/imps/2010-2014UoRInformation_Framework.pdf
[6] http://www.reading.ac.uk/internal/its/services/its-SerCat/its-SerCat-home.aspx

at all levels of the institution (e.g. Faculty, Directorate, School, department and individual). This freedom and flexibility is seen by some as meaning that there is too much variability between, say, academic departments in the way services are provided. It is also valid to observe that this diversity provides the institution with a degree of strength and the opportunity to more rapidly adapt to new environmental pressures.

Training and support are offered to members of the University by a range of support departments, including Information Technology Services (ITS), the Library, Centre for Staff Training and Development (CSTD), Centre for the Development of Teaching and Learning (CDoTL), Digital Development Team (DDT), the Graduate School, services with the Student Learning and Teaching Services Directorate and others.

There are a range of Communities of Practice, both formal and informal, throughout the University (see Appendix II), which help communicate good practice across the institution. Generally, it seems that the most highly digitally literate individuals develop their skills through self-study.

Staff and students are not always aware of what support is available, and there is a perception of a lack of 'joined-up thinking' amongst the support departments. There is progress in this area, with CSTD providing a much improved portal for staff to find training opportunities and other information, but it is apparent that more could still be done.

Practice

The collection of information on the digital practices of members of the University will continue throughout the project, in order to allow for evaluation of project initiatives, complementing existing initiatives such as annual surveys of student technology ownership and use, and their views on IT facilities and study spaces (see Appendices II and III).

There is a wide range of practice across all levels and sectors in the University. For instance, VLE use varies between non-existent, through use as a repository for lecture notes, to purpose built online learning materials and active use of the social tools for discussion and communal learning. Both staff and student use of email varies between a read-only resource, a mechanism for formal notifications, through to a collaboration platform and mechanism for social interaction. There is some variation in student practices using technologies for learning, employability and social purposes.

Practice ranges from staff and students who do not want, or perceive a need, to use technology active engagement with social media and using new technologies, e.g. to promote the University, to raise the profile of research, to find employment, or for networking.

Generally speaking, individuals feel that they have the skills they need for their current roles, although in many cases the job functions could probably be improved in terms of efficiency, reliability or accuracy. Observation suggests that most people regard themselves as generally having adequate digital literacies, as they naturally bring their expectations in line with their level of ability.

The individuals at both ends of the spectrum of digital literacies feel they need to further develop their digital skills. However, there are also those who feel constrained by the digital infrastructure, and by the perceived safe or risk averse culture of the University.

Expertise and attitudes

Information on expertise and attitudes will continue to be collected throughout the project.
From our research so far, it seems most individuals regard themselves as having adequate digital literacies for their current role. However there are outliers at one end who need more skills and at the other end who are constrained by current systems.

Several respondents describe a culture of being risk averse. Although there are many examples of good practice, with individuals being willing to take risks with unfamiliar or novel technology to evaluate how useful it may be for them and/or their students, there are certainly also cases where individuals report being unable or unwilling to take on the level of risk required.

In terms of attitudes and expertise, there are those who are content to have 'just enough' knowledge to perform the task at hand, those who will delegate the task rather than learn how to achieve a successful outcome, and those who want to optimise their practices, and even extend what can be done by exploring new ways of working, or by re-using technologies in novel ways.

The University has a flat structure with academic departments enjoying a good deal of autonomy. Tensions can arise when directives come from ‘the centre’ without staff engagement.

We recommend that all members of the University be able to benchmark their digital skills and be able to identify resources to develop both the skills they need now and the ones they will need in the future.

Stakeholder needs, views and expectations

Information on the stakeholder needs, views and expectations will continue to be collected throughout the project.

The stakeholders (see Appendix VI) are of two main types – those with a stake in the process of project (the JISC, the wider HE sector, professional bodies) and those with a stake in the outcomes of the project, that is, the improving level of digital literacy amongst the members of the University (students, staff, support units and employers). This baseline report is concerned with the latter of these types.

The support units, such as Centre for Development of Teaching and Learning, Student Services, Centre for Staff Training and Development, Information Services and the Digital Development Team all have a high level of awareness of the importance for increasing digital literacy for all members of the University. They have all expressed positive views about implementing changes to support the development of students and staff at all levels, and are already actively engaging with the digital

literacy agenda and the project. As a result of meetings for the project, there are initiatives between these support units to emphasise the agenda and implement change across the institution.

Baseline summary

In this baseline report we have sketched the landscape of digital technologies and practice at the University of Reading.

Highlighted points:

- We have strategies and policies which have implications for the development of digital literacies for students and staff.
- The current infrastructure is robust, and extensive support is available to both staff and students to develop skills relating to the digital age.
- The broadly based nature of support services provides a wealth of diverse development opportunities and guidance for both staff and students, capitalising on the experience of a wide range of skills within the support teams.
- Practice shows a wide diversity, providing the opportunity for niche expertise to develop.
- There is a strong, diverse range of digital literacy expertise and attitudes across University sectors and roles.

Initial recommendations in brief:

- The agenda should be given further impetus by explicitly stating the term 'digital literacies' (or similar) in University policy documents as appropriate.
- Infrastructure planning would benefit from greater agility and readiness to respond to fast changes to technology and the expectations of students and staff.
- The diversity in support could be strengthened by encouraging 'joined-up thinking' and better collaboration and communication of good practice between the service providers.
- Individuals could benefit from self-diagnosis tools to promote personal life-long learning around digital literacies.
- Provide channels for people to share good practice and provide motivation within the community, raising awareness and shaping attitudes.
- Motivation could be improved by recognition of the digital skills and literacies needed by many roles across the University, e.g. administrative roles, and recognition that these roles are changing and the implications of this for job descriptions.
- Develop Learning & Teaching to enhance the student learning experience and address student expectations as well as possible efficiency gains from capitalising on the affordances that technology provides to handle increasing numbers of students.

- Develop the delivery of L&T within the Internationalisation Agenda, continuing professional development (CPD) programmes and to support potential future innovations.

- Support the redesign of the curriculum to capitalise on digital technologies, enable the development of pedagogy, and promote the development of digital literacies for staff and students, especially in the employability context.

Digital literacies at the University of Reading: the current state of play

Purpose

This report provides a snapshot of the current digital technology environment at the University of Reading, including infrastructure, policies, support levels, general practices, expertise, needs, views and expectations at the institution.

The report draws from an initial 'light touch' analysis of information from focus groups, semi-structured interviews and naturalistic observation. This approach allows for key themes emerging from the observations to be explored and used to inform the direction of the project and further investigation. It forms a baseline against which to measure progress in improving digital literacies at the University, the goal of the Digitally Ready project, but should also be considered to be part of a continuing process of reviewing the digital readiness of the institution. The project builds on the work of previous projects at the University, which have either provided background information or contributed to raising the levels of digital literacy, as well as the ongoing work in the digital literacy domain by various departments and teams across the institution.

It is impractical to attempt a full audit of skills, practices and aspirations across the entire institution. Instead the report examines the existing institutional offerings, and provides the results of interviews with individuals and groups across the membership of the University. These results are used in order to facilitate the project to develop the right questions to be asking as part of a longer term policy of collecting and collating digital literacy competencies and needs, with the intention of producing a viable, sustainable long term strategy of continuous improvement.

Background

'The University of Reading has a culture of 'digital adoption' at its core, with an eagerness from senior managers and decision making groups to be in the vanguard of innovative working practices and technologies to help drive the University, its students and staff forward. This is represented in our corporate plan and information framework and the impetus to ensure ownership of the project University wide.' [7]

e-Skills UK research reported in their 'Technology Insights 2011'[8] demonstrates the demand for digital literacies for employability:

- Across the UK economy, 22 million people, 77% of the workforce, use IT in their jobs, and this will continue to rise. 92% of job advertisements require applicants to have basic IT skills and 1 in 10 UK businesses report gaps in IT user skills.

[7] Digitally Ready project bid, http://blogs.reading.ac.uk/digitallyready/files/2011/10/Digitally_Ready_bid.pdf
[8] http://www.e-skills.com/research/research-publications/insights-reports-and-videos/technology-insights-2011/technology-insights-2011-key-findings

- 1.5 million people in the UK are currently employed in the IT sector and 500,000 new staff will be required in this sector over the next 5 years.

The Digitally Ready project builds on a number of previous projects, initiatives and practices all of which help develop the digital literacy levels of the members of the University.

In 2006, an e-benchmarking exercise highlighted the non-directive and evolutionary approach the University had adopted. In response to this the Pathfinder[9] process was embedded in the University's quality assurance of Teaching and Learning. The key aim of the Pathfinder approach is to support Schools through Periodic Review, moving from a focus on quality assurance to one of quality enhancement.

Building on this, other projects have been undertaken to develop and shape infrastructure, support, practices, expertise and attitudes, such as the This Is Me[10] project to enhance understanding of Digital Identity, ASSET[11] and DEVELOP[12], both funded by JISC, to enhance academic practice and pedagogy, and to provide greater functionality for the VLE. The OULDI[13] project focused enhancing curriculum design and delivery, including using more digital technology in the process.

Details of other services, support and projects can be found below, in the Support section.

[9] http://blogs.reading.ac.uk/pathfinder/2007/06/01/project-description/
[10] http://thisisme.reading.ac.uk/pg/pages/view/12/ 2008, funded by Eduserv
[11] http://www.reading.ac.uk/videofeedback/Whatisasset/asset-WhatistheASSETProject.aspx 2008
[12] http://blogs.reading.ac.uk/develop/about-the-project/ 2010
[13] http://www.open.ac.uk/blogs/OULDI/?page_id=277 2010, funded by JISC

Policy and strategy

The University has a wide range of policies and strategies some of which have implications for digital literacies. However, digital literacies are explicitly mentioned in very few policy and strategy documents and never by that term. Those that have the most relevance are:

- The **Corporate Plan 2008–2013**[14] says the University has to 'be in the top 20 Universities for graduate employability by 2013'.

- The **University Information Framework 2010–2014**[15] outlines three priority themes
    - Supporting excellence in research, teaching & learning, and enterprise
    - Accessibility and efficiency in information and communication
    - Effective decision making and good governance

- The **University Learning and Teaching Strategy 2008–2013**[16] has as one its targets that students will 'develop the wide-ranging skills, self-reliance, and adaptability required for their destinations beyond the University and a self-awareness of their own individual attributes so that they can continue to build upon a strong base.'

- The University Board of Teaching and Learning (UBTL) conducted a **Thematic Review of Work-Related and Placement Learning**[17] which recommends that every undergraduate programme should have a work placement scheme embedded within the curriculum from the 2011/2012 entry.

- **Information Security policy** is currently under review, and has potential impacts on the digital literacies agenda.

Committees, groups and communities

There are also a large number of University committees (see Appendix I), Communities of Practice and working groups (see Appendix II) which have impact on the digital literacies agenda. There are, however, few references in the University's strategy and policy documents relating directly to digital literacy.

The baselining exercise reveals that there tends to be a lack of awareness amongst students and staff of University policies, and the committees responsible for them. Both staff and students tend to be more aware of policies and strategies which are developed (or seen to be owned) locally, at a School or departmental level.

- The **Human Resources Strategy**[18] commits to '… provide broad, appropriately benchmarked opportunities for the continuous professional development of all staff within a framework that

[14] http://www.reading.ac.uk/web/FILES/Corporate_Plan_2008-13.pdf
[15] http://www.reading.ac.uk/web/FILES/imps/2010-2014UoRInformation_Framework.pdf
[16] http://www.reading.ac.uk/web/FILES/cdotl/Learning_and_Teaching_Strategy_2008-2013.pdf
[17] http://www.reading.ac.uk/web/FILES/cdotl/Thematic_Review_final_report_for_UBTL.pdf
[18] http://www.reading.ac.uk/web/files/humanresources/humres-HR_strategy.pdf

emphasizes organisational development, notably through the implementation of a career and performance management system, leadership development programmes and succession planning methodologies.'

- The **Information Framework** has three themes which have a bearing:
    - Supporting Excellence in Research, Teaching & Learning, and Enterprise
    - Accessibility and Efficiency in Information and Communication
    - Effective Decision Making and Good Governance

Each of these implies a need for the development of digital literacies. The information Framework states that these themes will be supported by a commitment to ensuring:

- Digital and material resources for research and teaching enable us to be competitive in areas of strength
    - Supporting and enhancing research and knowledge transfer
    - Supporting and enhancing teaching and learning
    - Accessibility and Efficiency in information and communication
    - Effective decision making and good governance

- Staff with information roles and responsibilities have the required authority, skills and training.

- A secure, reliable, efficient and scalable physical IT infrastructure.

- Effective consultation and communication with users at all levels

- The adoption of demonstrably best practice in service management and support

It has been observed that these commitments would be enhanced by an operating plan for supporting the themes. The Information Framework provides a sound basis, which will be enhanced by implementation plans.

The Thematic Review implies a need to help students develop the digital literacies in order to be ready to take placements with employers.

The University has high-level goals which would be well served by improving digital literacy across the institution. The traditional approach to making policies and strategies, which happens mainly without the awareness of staff and students, tends to be somewhat slow to implement change. This rate of change provides continuity, but it is potentially at the expense of sufficient agility to keep pace with changing demands.

Related documents

There are some documents published by the University, which are not formally Strategies or Policies, but which have a bearing on the issues around digital literacy:

- **Teaching and Learning enhancement priorities 2011–2013**
    - Managing transitions into, during and out of University (e.g. including employability)
    - To provide opportunities to benefit from broad development activities and experiences, including both in and out of curriculum,
    - Staff development, reward and recognition for contributions to teaching and learning

- **University Brochure**[19]

  'The University is committed to developing the best interactive learning experience for its students. This includes 'Blackboard', the University's virtual learning environment. 'Blackboard' supports a number of activities including: downloading lectures, using discussion boards, and preparing for seminars.

  The Practice of Entrepreneurship is a 20-credit module offered to second year, third year and postgraduate-level students from any degree discipline at Reading. The aim of the module is to help students develop their entrepreneurial skills as well as provide them with an understanding of the 'nuts and bolts' of business start up.

  We also encourage our students to develop key employability skills through the Reading Experience and Development (RED) Award. The scheme rewards students for engaging in extra-curricular activities such as volunteering and work experience, whilst helping them to identify the personal attributes and transferable skills they are developing.'

  The University practice of using a VLE, in addition to a policy of using email for communications, places a minimal level of requirement on students' digital competencies. The commitment in the brochure also relates to the employability agenda, and the development of students' ability to self-assess and recognize their own personal skills and attributes. The Digitally Ready project aims to improve their skills and competencies further to help them have the best access to the careers they seek.

- **Guidance to students on Web 2.0**

  The University's Student Services Directorate has excellent guidance for students about use of Web 2.0 technologies [20]. This not only advocates students developing their digital literacy in terms of software use, social responsibility and building their digital identity, but also makes a commitment support the development of technical skills and promote the use of Web 2.0 amongst staff to better facilitate learning and communication.

- **Teaching & Learning Priorities**

  The Learning & Teaching Strategy explicitly mentions some of the drivers for improving digital literacy, especially in relation to providing flexible and cost effective delivery of teaching. It highlights the finding from the e-benchmarking exercise in 2006 that innovation occurs around

[19] http://www.reading.ac.uk/Universitypublications/UniversityBrochure/up-Universitybrochure.aspx
[20] http://www.reading.ac.uk/internal/student/rules-and-regulations/std-serv-web2.aspx

individual champions, and the Pathfinder project which has helped to disseminate some of this practice from the pockets of excellence to drive up standards across the institution.

Observations

- It was observed while collating the information on institutional strategies that many staff were unaware of strategies which may have a direct bearing on their work. Equally as concerning, there is a low level of awareness of the process and timing of new strategies being devised and existing ones being revised, and the opportunity for engagement with the process is far from universal.

- In relation to strategies which define the intended behavior of the institution with regard to the rapidly changing world of information technology, it may be argued that the traditional mechanisms for developing and agreeing strategies lack sufficient agility.

- Online conferencing is not regarded as a core technical provision, and thus it is provided on a charged basis. The costs involved are a significant barrier to its use. It is worth noting, in relation to this, that students returning from placements with some major employers identify training on how to use online conferencing as a gap in the support they receive.

- University policy and the staff induction welcome page clearly state that it 'offers an exceptional opportunity to apply your skills and experience' and '[w]e will continue to provide broad, appropriately benchmarked opportunities for the continuous professional development of all staff within a framework that emphasises organisational development, notably through the implementation of a career and performance management system, leadership development programmes and succession planning methodologies. There is no mention of providing specific digital literacy training, or of developing staff as individuals for growth within, or outside, the institution.

- Changes in key members of staff can lead to cultural change, and the new VC has signaled a desire to have a culture of more open communication in his first 'Welcome' video to staff[21].

- The rate of change due to key personnel changing can be greater than the rate supported by procedures governing the change of Strategy documents. Particularly during periods of transition, Communities of Practice, and less formal communities, have a role to play in implementing change and in providing feedback informing the development of strategies.

- The project has triggered discussions through which it has been observed that there appears to be a common view that the process of making and maintaining policies and strategies would benefit from being more agile, and possibly make more use of digital tools in their development and dissemination.

[21] http://www.reading.ac.uk/internal/staffportal/news/articles/spsn-vc-introvid.aspx

Infrastructure

The University has a wide range of services and support available for staff and students, provided centrally by the **Information Technology Services**.[22]

ITS embed support directly in some Schools. For example the School of Systems Engineering has a local help desk, and offers remote access to servers and options for staff and students to host their own systems on virtual servers.

All of these services are regularly reviewed and improved when possible, e.g.

- Library redesign[23] to facilitate the greater use of digital practice, and provide increased study space.
- Shift to outsourced email for students (ReadingLive)

Observations

- With the ubiquitous nature of the technology, it tends to 'fade into the background' and people generally only remember it for when it is seen as inadequate (see Appendix IV for examples).

- Differing standards of service for updating of software has been commented on negatively as users need time to familiarise themselves with the differences.

[22] http://www.reading.ac.uk/internal/its/services/its-SerCat/its-SerCat-home.aspx
[23] http://www.reading.ac.uk/web/FILES/library/review20062007.pdf

Support

- The **Library**[24] has an ongoing programme of training and improvements to facilities, such as delivering WiFi connectivity, better access to power sockets for students wishing to use their own laptops, and increasing study space, in response to feedback from student surveys (see *Appendices I and IIII*).

- The **Centre for Development of Teaching and Learning**[25] (CDoTL) provides a range of training courses for staff, covering topics from basic literacy with the institutional VLE through user-generated content tools (e.g. wikis, blogs) and multi-media (e.g. podcasting) to curriculum design for blended learning and third party tools such as Prezi. Additionally, it provides initiates, pioneers, support and delivers many projects relating to improving digital literacy and enhancing teaching and learning.

- The **Centre for Staff Training and Development**[26] (CSTD) provides a wide range of courses for staff, covering both digital and non-digital topics, and provides a ready access point for staff to view these and courses offered by other support units. In 2012, CSTD has 302 training sessions listed between January and July covering 193 unique topics, with approximately two thirds of them being directly relevant to digital literacies.

- The **Student Learning and Teaching Services Directorate**[27] provides a range of courses via the Student Training and Experience Programme[28] (STEP), alongside the Skills Development programme[29] run by the Reading University Students' Union (RUSU) with accreditation through the Reading Experience and Development (RED) Award[30].

- **Student Access to Independent Learning** (S@IL)[31] 'is a learning and teaching environment that uses the latest technology. This development greatly increases the availability and quality of the IT-based facilities on the Whiteknights campus and includes the following facilities:
    - Open access area – over 90 networked PCs, simply drop in and use the PCs, printers and scanners.
    - A number of PCs are available for quick email and Web access.
    - Laptop plugin stations
    - Small rooms, equipped with a networked PC, data projector and video are available for students who wish to work together or practice a presentation.
    - Study Advice and Maths Support Centre
    - ITS Helpdesk

[24] http://www.reading.ac.uk/library/lib-home.aspx
[25] http://www.reading.ac.uk/internal/cdotl/cdotl-home.aspx
[26] http://www.reading.ac.uk/internal/CSTD/cstd-home.aspx
[27] http://www.reading.ac.uk/internal/personaltutor/Directory/pt-studentservicesdirectorate.aspx
[28] http://www.reading.ac.uk/internal/student/trainingprogramme/stdserv-training.aspx
[29] http://www.rusu.co.uk/activities/skillsdevelopment
[30] http://www.reading.ac.uk/redaward
[31] http://www.reading.ac.uk/internal/its/facilities/its-sail.aspx

- The **Digital Development Team**[32] (DDT) provide **Drop In And Learn** (DI@L) sessions for staff: 'Are you planning a new web site … or re-developing an existing site? Have you ever wondered 'Is anyone looking at the content I'm publishing?' How can I make sure it's worth the time I'm spending on it? Where can I pick up tips on how to create engaging copy, good layout, great images, and quality audio and video? What do I need to know about other channels, such as mobile, HTML newsletters, YouTube, Facebook, or Twitter? How do I find out about how I should use all the available systems and technologies, such as CMS, Wikis, etc? Who do I talk to if I've got a fantastic new idea, a proposal, or some important feedback?'

  DDT also maintain a blog[33], sharing their experiences of providing services to the institution, and sharing the occasional tip with readers. The Digital Development Team initiated the **Digital Development Forum** bringing together staff engaged with all aspects of the University's digital presence through a series of presentations, workshops and digital Communities of Practice including CMS Development; Multimedia; Social Networking and other Web 2.0 Technologies; Mobile and Smart Phone Applications.

- The **Graduate School**[34] supplies training through the Researcher Development Programme[35] which has an assessment tool based on the one developed by Vitae. This works by a self-assessment (Learning Needs Analysis[36]) and reflection:

  Learning Needs Analysis

  'At the start of your PhD programme, you will need to carry out a Learning Needs Analysis (LNA). This probably sounds more complicated than it is. The LNA simply provides you with an opportunity to reflect on what skills you will need to succeed, what skills you already have, and what skills you need to develop. The skills and attributes set out in the Vitae Researcher Development Framework are listed in a template document, along with relevant sections within the Reading Researcher Development Programme (RRDP). You simply identify the skills you need to develop and select appropriate sessions in discussion with your supervisor/s.'

- The **Student Experience, Employability and Careers Centre**[37] has recently been launched, building on the work of the previous Careers Advisory Service. SEECC offers a full range of career services, including:
  - Careers resource centre and IT based resources
  - Events, seminars and workshops
  - Individual consultations - Careers Discussions and Quick Queries
  - Vacancy advertising

- The **Information Technology Networking Group**[38] (ITNG), part of the School of Systems Engineering, provides a range of support and infrastructure for students and staff. Amongst

[32] http://www.reading.ac.uk/internal/directorate-of-external-affairs/digitaldevelopment/dea-digitaldev.aspx
[33] http://blogs.reading.ac.uk/digitaldevelopment/
[34] http://www.reading.ac.uk/graduateschool/gs-home.aspx
[35] http://www.reading.ac.uk/graduateschool/skillstrainingprogramme/gs-skillhome.aspx
[36] http://www.reading.ac.uk/graduateschool/skillstrainingprogramme/gs-assess-training-needs.aspx
[37] http://www.reading.ac.uk/internal/personaltutor/Directory/pt-SEECC.aspx
[38] http://www.itng.reading.ac.uk/

these are a wiki[39] for sharing advice and reviews of systems, a Virtual Private Networking solution, which allows members to access systems through the institutional fire walls, and an implementation of CPANEL to allow staff and students to easily experiment with, and thus learn about, a range of different systems and technologies.

- The **Whiteknights Biodiversity blog**[40] is an example of a development of teaching and learning practice making use of a popular blogging platform, WordPress, hosted at the institution, to help students and staff both improve their digital literacies and contribute to the wider public's awareness and knowledge about a subject.

- The **This Is Me project** (2008), funded by Eduserv, produced learning materials to help people improve their awareness of their Digital Identity and learn how to take greater control of it. This is used by some Placement Officers, and elements of it used within courses.

Communities of Practice and other initiatives

The University has a number of groups, and both formal and informal communities which have an interest in, and an impact on, the digital literacies agenda (Appendix II).

- Each School has a **School E-Learning Coordinator**[41] (SeLC)who plays a key role in:
    - Contributing to the development and enhancement of the curriculum within the School in respect of e-Learning
    - Supporting the School to exploit the pedagogic value of e-Learning developments
    - Disseminating within the School and to the University Community, reports and examples of good practice in using learning technologies
    - Facilitating the effective adoption of learning technology and on-line resources amongst colleagues and students for study and research.

- Each School has a named **School Directors of Teaching and Learning** (SDTL)[42]. SDTLs have a number of responsibilities, including the development and co-ordination of the School's Learning and Teaching Strategy.

- **Social Networking and Other Web2.0 technologies** (SNOW) is a group established to consider the risks and benefits to the University and its community of social networking applications and other Web2.0 technologies; to assess the implications for the University policy framework and recommend changes as necessary, and to develop practice guidelines for the Information Strategy Committee to consider.

- A number of other projects have had impacts on digital literacy levels or the need for digital literacy. The **ASSET** project[43] developed the use of video for feedback and feed forward, and as a result, some staff had the opportunity to gain skills with digital video.

[39] http://wiki.sse.reading.ac.uk/wiki/SSEC:Community
[40] http://blogs.reading.ac.uk/whiteknightsbiodiversity/
[41] http://www.reading.ac.uk/internal/cdotl/CommunitiesandNetworks/cdotl-Schoole-LearningCo-ordinators(SeLCs).aspx
[42] http://www.reading.ac.uk/internal/cdotl/CommunitiesandNetworks/cdotl-SchoolDirectorsOfTeachingAndLearning(SDTLs).aspx
[43] http://www.reading.ac.uk/videofeedback/Whatisasset/asset-WhatistheASSETProject.aspx

- The **Developing and Enhancing Virtual Learning Environment and E-Learning Options**[44] (DEVELOP) project produced a number of additions to the University's VLE as well as simplifying the web interface for uploading the video.

Observations

Many students and staff report using the web as their major source of support for developing their digital literacies. This means that they have to develop sufficient basic skills (e.g. keyboard, mouse, surfing, searching, evaluating, interacting in communities) in order to be able to gain access to the learning they need. It is, however, a set of skills, attitudes and abilities which they can take with them to later life, and embodies a life-long learning, student-centred, student led approach which empowers the learner to develop themselves and adapt to their future needs.

[44] http://blogs.reading.ac.uk/develop

Practice

It is impractical to attempt a full audit of skills, practices and aspirations across the entire institution. Instead the report examines the existing institutional offerings, and provides the results of interviews with individuals and groups across the membership of the University. These results are used in order to facilitate the project to develop the right questions to be asking as part of a longer term policy of collecting and collating digital literacy competencies and needs, with the intention of producing a viable, sustainable long term strategy of continuous improvement.

- Historical surveys and interviews undertaken at the University of Reading indicate a very wide range of technologies and systems being used, generally with a greater variety amongst students. Technologies include PC, MAC, iPad, Broadband, Smart Phone, Digital camera, AV; iPod/ Mp3 player; Microsoft Office; Emails; Blogs; Instant Messaging; Video calls with web cam e.g Skype; Facebook, Twitter; LinkedIn; Prezi; Web CMS; VLE, CMS, Specialist hardware, software, search engines, on-line services e.g. YouTube clips, data analysis tools, editing software, communications and presentation tools, professional and academic (subject-specific) tools, Interactive Smartboard, Powerpoint; Google; Google scholar; Wikipedia; Online journals and journal databases; Library Catalogue.

- Staff and students use a mix of institutionally provided machines and their own personal devices and laptops and desktop computers. Around 50% of first year students who responded to a 'Freshers' survey in 2010 confirmed that had access to a smartphone. Some staff are provided with smartphones. Many staff are using their own devices such as smartphone and iPads for University business.

- The University supports Windows based PCs and laptops , however there has been a steady increase in the use of iPads and Macs. The use of video and audio equipment is steadily increasing. In some Biological Science modules, there have been requirements for students to use a range of technologies, including social bookmarking, wikis and shared spaces, and more recently contributing to a course-related blog.

- In Systems Engineering there are a number of instances of a wide range of uses of technology, including wikis, shared spaces, adapting course requirements to suit student preference of technologies (e.g. Google Docs over VLE), as might be expected given the academic domain.

The institutional policies and support frameworks allow a great deal of independence and staff and students engage with technology accordingly. Although there are many examples of innovative use of technology, many staff and students restrict themselves to basic use of the tools available.

- **Create text documents, spreadsheets and presentations**
  Staff and students use supported Microsoft Office products such as Word for reports and other documents, Powerpoint for presentations, and Excel for spreadsheet applications, plus open source and other proprietary alternatives. Other applications include Prezi.

- **Create web sites**
  The University operates a Web Content Management System – all web administrators are required to be trained before they publish content. Web content can be to inform, engage, perform tasks e.g. on-line booking, create sales.

- **Create communications tools**

  The Design and Print Unit provide templates in Word that enable staff to produce a range of University stationery; flyers; posters; brochures; postcards, etc but also advise that staff will need to know how to use styles in Word. If staff are not confident in using styles, they recommend taking the 'Microsoft Word - An Intermediate Guide' course provided by ITS. The Design and Print Unit also create templates for use on Digital Signage.

- **Communicate**

  Email is recognized as the official communications channel in the University however as more communications channels are being adopted gaps can occur if there is no integrated strategy. Email use varies widely, with some staff and students only accessing it occasionally through to others using it as a collaborative tool and a primary means of communication. There are issues with some students not checking their University email account, as well as some reporting issues with slow response times from lecturers. In a 24 hour world of communications managing expectations regarding response can be challenging.

  Many specialist email lists are used around the University and use is made of the email function in the VLE.

  Staff and students use 3rd party communications tools (e.g. Facebook[45], Twitter[46]), including recent use of Twitter by ITS to keep University members informed and even accept new incident reports.

  Other uses of technology for communication includes:
  - Skype for **video conferencing and messaging**
  - LinkedIn for **networking**
  - The University recommends Wordpress for **blogging**. It has recently launched a Research Forum blog to invite **engagement**, and there is evidence of individual academics using blogs to raise their professional profile.
  - There is a variety of software used for **video editing** First Cut Pro (Mac users) Premier Pro
  - The University recommends Audacity for **audio editing** and there are a small number of users. The Institute of Education currently employs a specialist audio technician. The Department of Psychology employ a fully fitted sound studio with technician. The Department of Linguistics employs an audio technician.
  - Some services use QR codes e.g. to **advertise** Study Advice session

  There are a number of 'institutional accounts' for the University on Twitter, as well as some staff making excellent use of the tool to promote professional profile in conjunction with the University, but by using their personal account (e.g. the Copyright an Compliance Officer, Emily Goodhand, who runs the Twitter account @CopyRightGirl[47]). The Library have developed a series

[45] http://www.facebook.com
[46] http://twitter.com
[47] http://twitter.com/copyrightgirl

of podcasts to raise awareness of various services. The Digital Development Forum have been running a series of workshops on the use of Facebook for Student Recruitment; Twitter for raising profile.

- **Diary Management**
  Outlook Calendar is the official method of diary management however there are many instances of other systems in use such as iCal for the Mac users, Doodle for complex diary managements and Google calendar.

- **Data Storage**
  The VLE is still typically used for data storage and can be accessed from places remote from the campus. Staff and students also have access to personal data storage space on network drives but access to that is more complicated via VPN. There has been an increase of staff and students using www.dropbox.com for data storage.

- **Digital Asset Management**

  The University invested in a Digital Asset Management System to manage the storage of digital images for marketing communications. Staff involved in producing such material access these images over the network. The Communications Office have created libraries of photographs which are available in the public domain targeted at the media via Flickr.

- **Create digital photographs**

  Many departments make use of digital cameras from SLRs to compact and Flip cameras. Digital imagery is used extensively in teaching, research and for marketing communications.

- **Edit images**

  There are various levels of image editing skills – some departments have licences for Photoshop or Elements of Photoshop and some departments use freesource software.

- **Edit videos**

  There is a variety of software in use, including First Cut Pro (Mac users) Premier Pro; iMovie; Windows Movie Maker

- **Video conversion**
  AVS is occasionally used for video conversion.

- **Database Management**
  There is a variety of database use, e.g. Microsoft Excel and Access, MSSQL (supported by ITS), and some limited used of MySQL.

- **Lecture capture**
  ITS have 10 licences for Camtasia for lecture capture. However, this requires specialist skills so

that lecture capture is usually run by ITS Multimedia. The Institute of Education make use of Media Site but again, this requires specialist skills to set up and process the output.

- **Learning and Teaching**
  The Graduate School provides some interactive learning objects, and the Department of English Language and Literature has developed an interactive guide to help students develop their academic writing (Academic Writing in Context[48]).

  The PGCE courses run by the Insititute of Education require students to use the VLE . extensive use is made of the discussion groups and wikis providing much needed peer support. Students gain useful experience to prepare them for 'learning platforms' that are used extensively in Primary and Secondary Schools.

  There is an increasing use of video (through DEVELOP enhancements and YouTube) in co-curriculum materials and in staff development (e.g. the Academic Writing in Context organisation in BB and Seminar Leader training).

  For several years SSE ran RedGloo, a social network for students, based on ELGG v0.9. Although largely supplanted by Facebook now, it served to give students experience of social online engagement, and sustained some special interest groups. The Meteorology Department has provided a small number of ELGG[49] servers.

  Video is used as resource material for enquiry based learning and also for practical training e.g. Using a microscope and Typography workshops. Video can be published via the VLE and via YouTube. Video is also used to enable students to evaluate themselves in presentations.

It is recognized within the institution that the use of technology in learning and teaching practice varies between schools:
'Rationale: The development of TEL in the University of Reading has taken place within an evolutionary approach to staff engagement, as a tool at the disposal of the academic who chooses to use it for teaching with CDoTL as the central point of provision and support. The e-benchmarking exercise in 2006 showed that innovation was centred around individual champions and the Pathfinder process has gone some way to engage and expose more staff to the uses of learning technologies and raise interest. This has resulted in variable ('patchy') use of Blackboard by Schools and therefore in a variable student learning experience across the University.
b. The CDOTL eL team have been supporting an increasing number of staff and an increasing number of courses using Blackboard over the last 5 years. As technology provision for T&L becomes increasingly important, expectations for flexible delivery of learning increase, the large class sizes, it is important to adopt a more strategic approach to the adoption of TEL.
c. We recommend that CDoTL works closely with schools to conduct reviews of TEL use and support schemes within schools for better uptake of Blackboard.'

[48] https://www.reading.ac.uk/english-language-and-literature/Research/EnglishLanguage/Awic/ell-language-awic-awic.aspx
[49] http://elgg.org/

It has also been reported that the e-benchmarking exercise, and subsequently the Pathfinder process, have enabled a more to a more strategic approach to the use of Technology Enhanced Learning (TEL):

'The e-benchmarking exercise the University undertook in 2006 highlighted the 'flexible, non-directive and evolutionary approach' we had thus far adopted. This had been very successful in creating a strong community of practice and fostering an environment where academic staff had a strong sense of ownership and control over their innovations, but at the same time was not considered to be enough to bring about any real institutional change. It was concluded that the University needed to move towards a more strategic approach to the adoption of e-Learning at School level. In response to this, the Pathfinder process was developed and adopted and more School-level training and support offered. Many Schools now choose to make use of the opportunity Pathfinder provides to reflect on their Blackboard use on their programmes, and to consider and address this as a School. Furthermore, all Schools are encouraged to request tailored Blackboard sessions at any time.'

Additionally, it has been noted that the number of courses with modules in the VLE has increased from approximately 50% in 2006 to 70% in 2011, which is at least partially attributable to the e-benchmarking exercise and Pathfinder project.

This variance in use can also be seen as a strength, providing creative tensions enabling and encouraging innovative approaches to be taken, and for which we can supply support.

Students are not generally involved in the process of curriculum design with technology. There may be some resistance to encouraging this from academics.

Alongside the Graduate School's self assessment framework, they also provide online learning modules in the VLE (http://www.reading.ac.uk/internal/gsdp/courses/gsdp-online.aspx).

- **Research**
  Search engines and online services such as Google/Google Scholar and Wikipedia are extensively used for research. Specialist technologies for research include subject databases, statistical packages, Matlab, various programming languages and grid computing.

- **Referencing**
  Endnote is the supported tool. Other technologies in use include Zotero, Cite U Like, Biblio, and Mendeley.

- **Collaborative Working**
  Many students report their use of Facebook to discuss texts, organise study groups, and coordinate group work. They report having a greater feeling of control over who can see the discussions than when using institutionally provided tools such as the VLE. There is some awareness of Google Docs, which is used widely by students but less so by staff.

We are not currently aware of any direct consideration of digital capability being recognised as a learning outcome, except in those disciplines and modules where there is an obvious requirement (e.g. those where a level of programming, or data analysis is necessary). While there are no modules which explicitly focus on digital skills, the development of digital literacies is frequently implicit or embedded in module assignments. For example, practical projects in the Department of Typography & Graphic Communication are designed to challenge students' competence with Adobe Creative Suite, the common design package for graphic designers.

SEECC, the University's careers service, have embedded some activities in the curriculum which require a minimum level of digital competency, for example the requirement to be able to produce a CV. Additionally, most student are expected to produce coursework using a word processor, and some require other digital tools. Search skills and other technological competency are implicit in most curriculum areas, with requirements for researching answers, formatting documents, maintaining data etc.

- The **OULDI** project (2010)[50] was led by CDoTL aimed to help academics design their curriculum with the use of technology.

[50] http://www.open.ac.uk/blogs/OULDI/?page_id=277

Conlusions about practice based on data from workshops

The examples of practice gathered through the baselining activity were analysed with regard to the 'Development Pyramid' model, as detailed by the JISC Learner Experiences of e-Learning programme at Oxford Brookes[51].

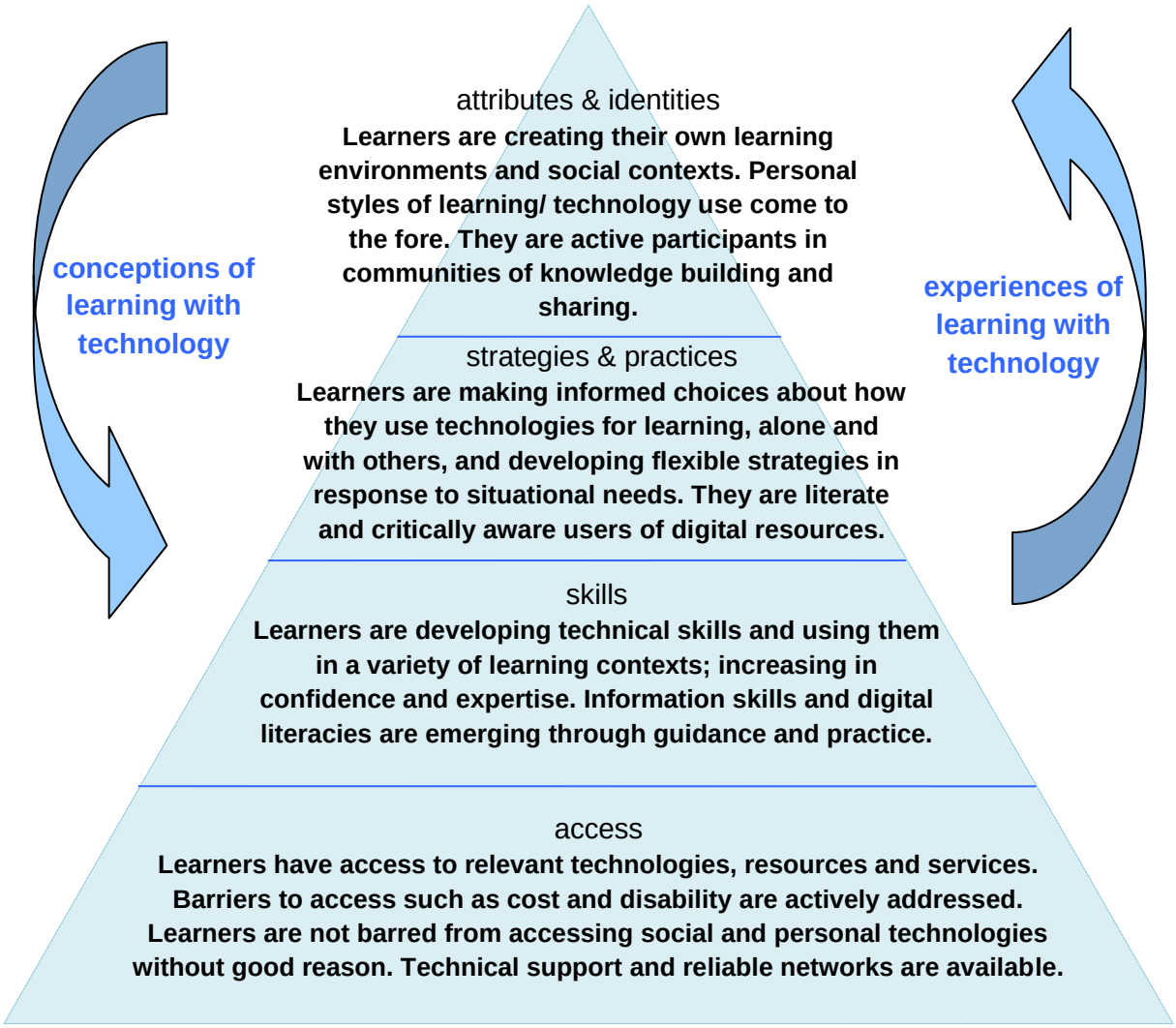


Figure 1 Developing Effective e-Learning (1) The Development Pyramid, (Beetham and Sharpe 2008)

For the purposes of this analysis, all participants are regarded as 'learners'. This is justified by the argument that the range of digital tools is expanding sufficiently quickly that no individual has complete mastery of all of them. The use of the model which was developed to describe a framework of competencies for e-Learning, for the broader digital literacy work is justified because the original was sufficiently broadly framed to make it directly applicable.

The foundation for developing digital literacies is *access*. Some of this is provided by the institution, and some is based on personal and social technologies, which the University allows to be used, and for which in some cases it can provide support.

[51] http://radar.brookes.ac.uk/radar/items/34ca8303-b29f-ee91-24da-e88098af500c/1/

Except in a very few cases, the University of Reading does not block access to third-party tools and services. In those cases where a system is legal but may cause problems, particularly if mis-used, such as peer-to-peer file sharing software, the University's networks may be configured to disallow use, but exceptions can be made where a student or member of staff can demonstrate a need.

The evidence from interviews, previous focus groups and from naturalistic observation suggests that in many cases students are developing technical skills and using them in a variety of learning contexts; they are increasing in confidence and expertise, and their information skills and digital literacies are emerging through guidance and practice. This is often achieved with a 'just in time' approach, with an immediate perceived need driving the development of the skills.

Some students and staff are showing evidence of making informed choices about how they use technologies for learning, alone and with others, and developing flexible strategies in response to situational needs. Many, however, are only discovering tools and the requisite skills to use them on an *ad hoc* basis through peer networks, and it may be beneficial to encourage earlier, and broader, engagement with a range of technologies. It is likely that while the 'just in time' approach allows immediate needs to be met, it undermines opportunities to develop a more critical approach to developing skills which can help with future endeavours.

There are a few students and staff who are creating their own learning environments and social contexts, and allowing their personal styles of learning/ technology use to come to the fore. There is evidence of some achieving this without necessarily fulfilling the 'strategies and practices' level of the pyramid model, e.g. Case study 6 (Appendix V). A few are active participants in communities of knowledge building and sharing e.g. Case studies 4, 5 & 9 (Appendix V).

However, there are also many who are showing little or no evidence of developing technical skills or of using them to any great extent in learning or other practice. For example, lack of adequate search skills, inability to assess the correctness of information found, inappropriate use of tools and excessive manual copying of information can be observed as fairly routine behaviours.

Expertise

Self-perceptions of digital competencies vary from individual to individual, and for most individuals, they also vary between their roles and the systems in use.
Those who approach the technology as a set of tools tend to feel satisfied with their competency levels, whereas those who try to gain mastery of each system often feel they have much more to learn.

It appears that many staff and students are confident in their own ability to find out how to develop skills for themselves, with support (e.g. in terms of time available, recognition for gaining skills). However, there is still plenty of demand for the courses run by support groups, and it is relatively common to hear observations from members of the University that colleagues and peers need additional help.
It is also noticeable that individuals tend to fall back on 'tried and tested' practices, such as sharing documents being collaboratively developed via email, rather than using more appropriate systems to facilitate this work. This appears to be particularly prevalent when there are tight time constraints.

Individuals have widely varying opinions on the correct use of technology. For instance, there have been interesting and useful exchanges of views on the Digitally Ready blog regarding the use of email. These views range from regarding it as a platform that should only be used for very brief communications, through to those regarding it as a suitable medium for extended debate.

The SNOW group has been established to examine risks to the University relating to these issues. Typically, both staff and students consider themselves sufficiently aware of the legal issues of, for instance, web2.0 use. They also tend to report being relatively relaxed about the possibility of being noticed if they do over-step the line. However, their actual knowledge is generally not accurate, and it is regarded as being a problem for 'the team' that deal with these issues to worry about.

It appears that in many cases, individuals' own assessments of their competencies are over-estimated. They are, however, generally able to apply their knowledge to work within their role as long as it remains undisrupted by, for instance, technology failures or legislative change. Essentially, competencies appear to be approximately fit for current purposes, but lack sufficient agility to allow for improved ways of working and lack sufficient robustness to allow for efficient adaptation in the event of imposed change.

Stakeholder needs, views and expectations

Increasing student numbers and pressure for greater cost efficiency place an implicit requirement on the sector to examine possible ways of increasing the provision of technology enhanced learning.
Rate of change – the technologies advance more quickly than individuals can reasonably learn/adapt, whilst legislation and social norms change more slowly. Although the social norms can swing wildly from one extreme to another, they tend to lag both the technology and individual practice of many people).

The general trend towards greater numbers of students engaging with HE places increasing pressure on the sector to provide quality education in a cost effective and efficient manner. At the same time, there are pressures to become more 'employability' focused, and provide 'transferrable' skills, even though the high level of variability in the needs for different skills means that a focused approach requires many specialised elements to be developed, maintained and delivered as part of the curriculum, often at the expense of the core academic content and practices traditionally required at the HE level.

The institution, as exemplified by support units within it, would benefit from the members of the University having an increased level of digital literacy. Greater adaptability and personal ability to resolve minor IT problems, for instance, reduce the cost of providing support for the existing use patterns. However, the corollary is that increased digital literacy also gives individuals the confidence to experiment and work in new ways, and they may push the limits of the infrastructure.
Staff express the desire to be able to work in more efficient ways. This takes two general forms – wanting to be able to overcome technical issues more easily (e.g. installing printer drivers on laptops) and improving the processes in their work by increased use of computers.
The first of these is an expression of a need and expectation to be able to improve their own digital literacy. There is a range of views about whether it is the individual, or the institution, that should be responsible for providing the specific guidance necessary to implement this improvement.
The second is an expression of a desire for greater efficiency through improved technological integration with workflows and processes in the institution. For example, replacing manual re-enrollment in Schools with an online system would reduce chances of error, and improve the student experience. Collation of marks, expenses claims, and many other facets of University administration could be improved by ‘computerising’ them, which would add an extra requirement to staff digital competencies.

Similarly, student views encompass both a desire for change to the systems in place, and for the ability to be able to overcome minor technical issues. For example, students want to be able to submit work electronically (technically feasible using the VLE but not always procedurally acceptable), and to be able to easily share and access files with their peers. They also want to be able to use online tools to facilitate discussion, but tend to prefer third-party systems such as Facebook, citing a greater level of access control as a primary reason for this.

The Terms of Reference of several University sub-committees (Appendix I) have an implied need for digital literacy skills. For example, Sub-Committee on Delivery and Enhancement of Teaching and Learning has ‘To consider the impact of information services in teaching and learning and ensure

that these are appropriately aligned with the University Teaching and Learning Strategy'. The Sub-Committee on Management Information and Monitoring has 'To ensure that a joined-up approach is taken to the production and management of student data' and the Sub-Committee on Student Recruitment and Marketing has 'To monitor the effectiveness of ongoing marketing activities (eg. the website, the prospectus and visit/open days) and to identify and embed effective practice'

The University places an implicit requirement on students and staff to be able to use email, and typical 'office' applications. Academic staff, students and some administrative staff are expected to be able to use the VLE. Students, and some staff, generally expect to be able to use their 'personal technology' in conjunction with University systems.

CSTD have an aspiration to have an online self-assessment tool to help staff assess their own skill levels, and identify gaps where training would be beneficial.

Baseline

Agile strategy development and management would enable the institution to be able to adapt more readily to changes in the socio-technical landscape in which it, and its members, operate. Proceduralised change management (QA) in support functions, so that they do not negatively impinge on learning/research.

Student led, student focused, student owned self-assessment, gap analysis, skills acquisition and reflection on the process. The model being used by the Graduate School, based on the Vitae competency framework is similar to the system desired by the Centre for Staff Training and Development, and fits in to the life-long learning and personalized learning aspirations common in the HE sector.

Digital literacies for student employability

Policy and strategy

A review of the University's institutional strategy and other key documents, and a number of recent internal initiatives with a work-related and placement learning (WRPL)/employability focus reveal student employability as a key theme in current University strategy. Whilst no explicit reference is made to digital literacies in these policies, the high importance afforded to employability and the institution's commitment to improving student employability through 'real world' experience clearly imply a need for the development of digital literacies. With the majority of graduate jobs requiring at least some use of digital skills and resources, and the current and projected growth in digital and creative sectors, digital literacy is a crucial factor in employability (see Developing Digital Literacies: Briefing Paper in Support of JISC Funding 4/11[52]).

- One of the targets set in the **University's Corporate Plan 2008–2013** is to see Reading positioned as one of the 'top 20 Universities for graduate employability by 2013'.

- One of the enhancement priorities from the University's **Learning and Teaching Strategy 2008–2013** is to '[o]ffer students opportunities for work-based 'real world' learning experiences within the curricula and outside their formal learning.' The specific actions identified under this priority are as follows:

  '11 (39). Further develop opportunities and support (incl quality monitoring) for placements within programmes where appropriate

  12 (40). Encourage and support students to seek relevant work experience including internships and increase the internship opportunities available

  13 (41). Further develop and support work-based/ work-related projects in the curriculum where appropriate

  14 (36). Develop mechanisms for employer involvement in L&T at University and discipline levels'

- Following on from this, the **University's Teaching and Learning Enhancement Priorities 2011–13** include managing transitions into, during and out of University; the provision of opportunities for students to benefit from broad development activities and experiences; and to engage in research; both in and out of the curriculum.

- The **Steering Group for the Institutional Review**, appointed by UBTL in October 2011 to prepare for the institutional review of higher education institutions in England and Northern Ireland taking place in 2012, identified employability as a 'major challenge' for the University to be addressed in the Self Evaluation Document that will be submitted to the Quality Assurance Agency for Higher Education (QAA). The review team are planning meetings with students and recent graduates as well as discussions with employers regarding their experience of receiving Reading graduates.

[52] http://www.jisc.ac.uk/media/documents/funding/2011/04/Briefingpaper.pdf

- The University was awarded funding from 2005–2010 for the **Centre for Excellence in Teaching and Learning for Applied Undergraduate Research Skills** (CETL-AURS)[53] and the **Centre for Career Management Skills** (CCMS). Both Centres provided funding for projects with a WRPL/employability focus, promoting the development of effective practice in this area and highlighting relevant issues. Most notably, CETL-AURS funded and developed the **Undergraduate Research Opportunities Programme**[54] (UROP), a placement scheme which allows undergraduate students in their penultimate year of study to work with academic staff on University research projects.

- **Improving the Employability of Reading Graduates** (2009), a report by the University's Pro-Vice Chancellor for Teaching and Learning, highlighted Reading's consistently poor performance in the statistics for graduate level employability, the resulting impact on its league table position and likely negative impact on student recruitment. The report referred to '[g]aining experience of work and using it for self development and promotion' as a 'key to student success in the job market.'

- In 2009, the Senior Management Board (SMB) established an **Employment Project Group**, with a remit to consider how the University could improve its graduate employment statistics, including as one area of investigation '1.1 Provision of in-course placements, long and short, under Theme 1 – Work experience and placements. '

- The **Working Group on the Quality Assurance of Work Placements**, which reported to the University Board of Teaching and Learning (UBTL) in June 2009 made a number of recommendations relating to work placements, leading to the **Thematic Review of Work-Related and Placement Training** (2009–2010). Provision of WRPL opportunities on all undergraduate programmes has come into effect from the 2011/2012 entry, as per the recommendations made in the review team's final report.

- The Thematic Review contributed significantly to the work of the Employment Group. Findings of the Employment Group were published in the **Framework for Annual Quality Assurance Reports 2009–2010**, detailing how Schools had indicated they intended to implement the requirements.

- Recommendations from the Employment Group and the Thematic Review were pursued by an **Implementation Group** set up by SMB in September 2010. The Implementation Group was also asked to ensure the implementation of recommendations made by the **Working Group to Review the Provision of Career Management Skills**, submitted to UBTL in October 2010, as well as proposals in relation to placement opportunities in postgraduate programmes.

- The **Evolution of MASIV Working Group** was set up to explore how the Modular Accreditation of Students in Volunteering (MASIV) scheme, a joint initiative by the University and Reading University Students' Union (RUSU), could be evolved in order enhance to the employability of

[53] http://www.reading.ac.uk/cetl-aurs/
[54] http://www.reading.ac.uk/urop

Reading students. This led to the establishment of the **Reading Experience and Development** (RED) **Award**[55] in January 2010. The scheme is intended to recognise and reward students' engagement with extra-curricular activities that provide them with 'real world' work experience, and to enable them to reflect on and articulate the skills and knowledge they develop through the experience.

[55] http://www.reading.ac.uk/redaward

Infrastructure

Students have access to a range of services, tools and technologies provided by the University's Student Employment, Experience and Careers Centre[56] (SEECC) to engage them with opportunities that will enable them to develop their employability skills, and to reflect on and articulate those skills.

- The **SEECC web portal** is a central place for comprehensive information on news, events, job vacancies, placement and volunteering opportunities (both in- and extra-curricular), and careers and career development information, including printed help resources, video tutorials, useful listings of external sites leading to a vast range of information on employers, vacancies and careers.

- Launched in October 2011, **TARGETConnect** is an integrated system which allows students to build their own personal profile to receive details of relevant placement and job opportunities, new jobs, placements, and events, and to make enquiries, book skills sessions or make an appointment with a member of staff, all managed through a single interface. The system is open to Reading graduates as well current students.

- A **Facebook page**[57], **Twitter channel** (@UniRdg_Careers) and **careers blog**[58], all newly launched in October 2011, provide students with further channels to find out about opportunities to enhance their employability.

- **Headstart**, SEECC's programme of careers-related events for students, includes a session on 'Using social media to get graduate jobs' for the first time in Spring 2012.

- SEECC will be piloting **Job Savvi Grad**, a web portal of tools which allows students to build profiles showcasing their skills and experiences, trawl job sites, and to manage their applications online.

[56] http://www.reading.ac.uk/seecc
[57] http://www.facebook.com/pages/University-of-Reading-Careers-Centre/251539188233268
[58] http://blogs.reading.ac.uk/seecc

Support

In keeping with the University's federal and collegiate structure, WRPL opportunities are managed at the School/departmental level rather than being centrally administered. Placement officers in each School or department promote placement activities, assist students in their search for suitable opportunities, and are responsible for ensuring that placements run smoothly, fit with students' academic studies and will benefit their career prospects.

As per the recommendations made by the Thematic Review, Schools and departments have revised their programme specifications and module descriptions for 2011/12 to reflect the WRPL opportunities embedded within them, reviewed by the University's Quality Support Office to ensure that placement opportunities are embedded in all undergraduate programmes.

Central support is provided by the University's careers service. Central Placement and Development Officers assigned to each Faculty further support students where placement support at the School/ departmental level is limited, or where students wish to undertake placements outside of their degree programme. SEECC also provide pre-placement training to prepare students for placements as well as post-placement 'wrap-up' sessions, with a focus on skills articulation.

Practice

In-curriculum opportunities for students to develop digital literacies for employability include work placements and the University-wide entrepreneurship programme. Students also develop digital literacies through self-study and peer learning implicit in their academic studies and social experience. This seems to be particularly true for discipline-specific digital skills, although further research is needed to gain a better understanding of the nature and extent of these digital literacies.

Outside the curriculum, accredited placement schemes and skills sessions offered by student-facing services such as Study Advice, Library, IT Services and RUSU (many of which are accredited through these schemes) provide further opportunities to gain skills and knowledge crucial to student employability.

The project will investigate what role these opportunities have to play in the development of students' digital literacies.

- Provision of **WRPL opportunities** on all undergraduate programmes has come into effect from the 2011/12 entry, with all courses offering at least one of three forms of placement under the 'Skirts Model': Micro – embedded within a module; Mini – constituting an entire module; Maxi – comprising a year. Proposals in relation to placement opportunities in postgraduate programmes are currently under review.

- **Practice of Entrepreneurship** is a cross-Faculty credit-bearing module open to undergraduate students from their second year, and all postgraduate students. The module runs three times a year, with around 100 students per cohort. It combines business frameworks with the opportunity for students to develop a business idea and prepare a plan for it. The teaching for this course is a multi-method approach with traditional lectures, expert guest speakers as well shared experiences from entrepreneurs. Students work in groups to develop a business idea that they present in an exhibition that is run along the format of a trade show. During this event students pitch their ideas to different groups of judges to gain feedback on the commercial viability of their concept. For many students this module presents the first business-based experience during their studies. The learning associated with presenting ideas, interacting with a wide range of businesses people and dealing with feedback are very important in supporting their employability skills.

- Open to all students, the **Reading Experience and Development** (RED) **Award**[59] recognises and rewards their engagement with extra-curricular activities that provide them with 'real world' work experience, and to enable them to reflect on and articulate the skills and knowledge they develop through their experience. Students complete 35 hours of 'core activity' (paid work, volunteering, work experience or internship), 10 hours of volunteering, and 5 hours of training and development, with many of the skills sessions offered by student-facing services eligible for the Award. Students then attend a sign-off session which focuses on skills articulation.

[59] http://www.reading.ac.uk/redaward

- The **Undergraduate Research Opportunities Programme**[60] (UROP), a paid placement scheme which allows undergraduate students in their penultimate year of study to work with academic staff on University research projects. Placements last six weeks over the summer vacation or part-time equivalent during the Autumn term. Further research is needed to evaluate the extent to which the scheme helps students to build their digital literacies, particularly in relation to subject-knowledge and discipline-specific skills.

- **Summer Employment Experience and Discovery** (SEED) is a paid internship placement scheme for returning students and local/regional business and enterprise. Placements last eight weeks over the summer vacation and are based in a diverse range of businesses, with students undertaking specific project-based assignments. Students receive pre-placement training and ongoing support and present their projects in the 'Finale'. Examples of recent projects include website design and setting up of IT systems, and generally indicate much scope for the development of digital literacies for employability.

[60] http://www.reading.ac.uk/urop

Expertise

Staff and students' confidence and ability in using relevant digital technologies is one of the main areas of investigation for the project. Initial discussions with students during Welcome Week seem to indicate that students are confident in their ability to 'pick things up' and are comfortable using digital technologies in their social lives, but perhaps less confident or experienced in how to apply this in their academic studies and for employability, and know little about employer's expectations in terms of digital skills.[61]

Further research is also needed into academic staff's views on students' abilities, their own attitudes to digital technologies, and their levels of digital literacy and market intelligence to help prepare students become digitally literate for employability.

It seems clear that there is a need for support staff, particularly in the student-facing services and the careers service in particular, to upskill in order to understand more about the use of digital technologies and social media for employability. Use of social media will be the focus of a staff training development session for SEECC staff in February 2012, which the project team hopes to use as an opportunity to identify relevant issues and research questions.

[61] 'Digital Leisure and Digital Literacy', http://blogs.reading.ac.uk/digitallyready/2011/08/10/digital-leisure-and-digital-literacy; 'Getting a feel …', http://blogs.reading.ac.uk/digitallyready/2011/10/17/getting-a-feel

Stakeholder needs, views and expectations

The University's Careers Advisory Service was replaced by SEEC in August 2011, with the explicit aim of providing support to Schools and departments in developing a wide range of placement schemes, activities and resources to complement degree programmes; all intended to maximise graduate level recruitment and enhance students' work-related experience students. Restructuring and the appointment of a new director of service seems to have refocused the Centre's investment in digital technologies and use of social media to achieve these aims. Very recent adoption of many of the digital technologies used by staff and students (SEECC's web portal, the TARGETConnect system, the service's Facebook page, Twitter channel and blog were all launched in October 2011) and relatively low usage mean those technologies have not been properly evaluated.

The project team is in discussion with SEECC to set up research into their effectiveness for the development of digital literacies for employability, and how this information can be used to improve the delivery of services to students. The project will fund students through the existing placement schemes to work with the project team, academic and support staff, and employers as well as other students. Opening conversations with employers are planned for February 2012.

Appendices

Appendix I: Relevant University committees

University Committees[62]

Advisory Board for Information Services (ABIS)
To consider policy and strategy issues relating to the provision of information services to staff and students by IT Services and the Library in support of the research intensive University and to ensure that policy and strategy developments reflect the principles and themes of the Information Framework 2010-14.

Committee on Museums, Archives and Collections (CMAC)
Develops and oversees the implementation of a coordinated strategy for the University's museums, archives and collections in the context of the University's Corporate Plan.

- **Copyright and Compliance Advisory (CAG)**
  Seek to ensure the proper implementation of a University copyright and compliance strategy; as the primary consultative body for current and anticipated policy matters relating to copyright compliance; Alert the University, via the Information Framework Steering Group to risks which might affect its good standing; advise how to deal with compliance problems, further training and support requirements and the dissemination of information about copyright.

- **Information Framework Steering Group (IFSG)**
  To have oversight of and make recommendations on matters of strategy and policy across the broad area of information in the University and to have responsibility for the University's Information Framework and oversight of action in support of its principles and themes.

Committee on Museum of English Rural Life (MERL)
Be responsible for considering and making recommendations on the operating policies and strategies and the forward plan of the Museum and for ratifying such policies and plans for the purposes of Accreditation and for the requirements of other external bodies; Recommend operating plans and policies to the Council; Report operating plans and policies to the Committee for Museums, Archives and Collections; Advise on management and financial matters concerning the Museum.

University Board for Research and Innovation

Terms of reference:

1. To monitor the implementation of the University's Research and Enterprise Strategies and achievement of key strategic objectives set in the University's Corporate Plan
2. To support and monitor the development of Research Centres of Excellence, foster interdisciplinary activity and collaboration with external organisations, including

[62] http://www.reading.ac.uk/web/FILES/Calendar/Committee_List_2011-12.pdf

international; encourage innovative initiatives in emerging areas of strength.
3. Focusing on areas of research excellence, enable strong sustained relationships with business and other stakeholders to increase the economic and social impact of our research.
4. Evaluate the impact of our research, including through income generation, technology transfer, and knowledge exchange and policy development.
5. To ensure that RETF and HEIF funds are allocated in a manner that is effective and supports areas of research strength and potential.
6. To support and monitor implementation of PGR recruitment strategies and development of an excellent research and training environment.
7. To support the development of early career researchers and ensure appropriate implementation of the research Concordat within the University.

Sub-Committee on Research Excellence and Impact

Terms of Reference:
1. To ensure that structures and procedures are in place to maximise the quality of research activity most effectively, be it research by individuals, research groups, cross-faculty teams or with external organisations or institutions.
2. To monitor and advise on the strategic use of centrally-provided funds to enhance research excellence.
3. To monitor and advise on the strategic use of research platforms to enhance research excellence.
4. To monitor the development and maintenance of the University's research Centres of Excellence and research platforms.
5. To oversee the University's preparations for the Research Excellence Framework.
6. To evaluate the academic impact (both qualitative and quantitative) of our research, as reflected in performance indicators.
7. To report termly to the University Board for Research and Innovation

Sub-Committee on Innovation and Knowledge Exchange

Terms of reference:
1. Focusing on areas of research excellence, enable strong sustained relationships with business and other stakeholders to increase the economic and social impact of our research.
2. Evaluate the impact of our research, including through income generation, technology transfer, knowledge exchange and policy development.

University Board for Teaching and Learning

Sub Committee on Teaching and Learning Facilities

Sub-Committee on Delivery and Enhancement of Teaching and Learning

Terms of Reference:
(a) To take an institutional overview of matters relating to teaching and learning enhancement and advise the University Board for Teaching and Learning accordingly;
(b) To consider matters relating to examinations and assessment;

(c) To consider the impact of information services in teaching and learning and ensure that these are appropriately aligned with the University Teaching and Learning Strategy;
(d) To advise and report to the University Board for Teaching and Learning as appropriate.

Sub-Committee on Management Information and Monitoring

Terms of reference:
(a) To ensure that management information on students that the University wishes to have, is produced in relation to planning, financial projections or for any other purpose;
(b) To ensure that a joined-up approach is taken to the production and management of student data;
(c) To monitor performance relative to competitor institutions with regard to KPIs identified by the University Board for Teaching and Learning, and specifically with regard to the University's Learning and Teaching Strategy;
(d) To monitor the University's position in league tables and report on performance to the University Board for Teaching and Learning and to the Senior Management Board as appropriate;
(e) To advise and report to the University Board for Teaching and Learning on matters relating to student management information and the management of taught programmes.

Sub-Committee on Student Development

Terms of reference:
(a) To take an institutional overview of matters relating to the full range of development activities provided by the University but which fall outside the core academic curriculum;
(b) To ensure that student development activities are appropriately aligned with the University's Learning and Teaching Strategy and priorities;
(c) To foster collaboration and sharing of good practice, and in particular to consider how to maximise the effectiveness of such activities in terms of students personal, academic and career development;
(d) To advise and report to the University Board for Teaching and Learning as appropriate.

Sub-Committee on Student Recruitment and Marketing

Terms of reference:
(a) To develop student recruitment and marketing strategies to meet admissions targets set by STRAP;
(b) To monitor the effectiveness of ongoing marketing activities (eg. the website, the prospectus and visit / open days) and to identify and embed effective practice;
(c) To make recommendations on University policy on bursaries and scholarships, and to approve all prizes;
(d) To consider the effectiveness of bursary and scholarship schemes on recruitment and the marketing profile of the University;
(e) To monitor and support the University's Widening Participation Strategic Assessment and Access Agreement;
(f) To report to the University Board for Teaching and Learning and to the Committee on Strategy for Student Recruitment and Academic Provision.

Sub-Committee on Student Support

Terms of reference:

(a) To take an institutional overview of the University's support for students (other than direct academic support) and identify opportunities to enhance this support;

(b) To monitor activities and data relating to support for students and report on matters which could impede delivery of the University's objectives;

(c) To foster collaboration and the sharing of good practice in the provision of support for students;

(d) To advise and report to the University Board for Teaching and Learning as appropriate

Appendix II: Communities of Practice and other initiatives

Recognised by UBTL

Communities of Practice (Teaching & Learning or Student Focus)
School Directors of Teaching & Learning
School e-Learning Co-ordinators (see job descriptions)
Senior Tutors
Disability Reps
Admissions Tutors (FAH/FoSS)
Placement Tutors
CMS (Career Management Skills) Tutors
Study Abroad and Erasmus
Admissions
UTFS Fellows
Student Welfare

Communities of Practice (Research focus)
School Directors of Research
School Directors of P/G Research
Research Staff Committee

Communities of Practice (Enterprise Focus)
School Directors of Enterprise
School Managers
Heads of School
Technical Managers

Communities of Practice (Role Specific)
Personal Assistants
Technicians

Communities of Practice (Governance/Compliance)
IMPS Contacts
Harassment Advisors

Communities of Practice (IT Systems)
IT Supporters
RISIS users (SCRUM - Senior Core RISIS Users)
Trent user group

Communities of Practice (Initiatives)
Environmental Champions

Communities of Practice (Service related)
Continuing Professional Development
Library
Events Forum
Digital Development Forum including *Multimedia; Social Networking & Other Web 2.0 Technologies (SNOW);*

Mobile technology; Wed Design and templates; CMS (Content Management System) Development

Communities of Practice (Informal)
Blooming Community (Agents of Change)

Communities of Practice (In development)
DDF - Digital signage; Online payments; HTML newsletters; Web search; Portal interfaces; Internationalisation and digital development; News and events;
Online business communities
Assessment & Feedback
Student Academic Representatives
External Examiners

Appendix III: Survey of student technology ownership and use (2008); Student survey and learning facilities (2010 –2011)

Summary Report

Introduction

All undergraduates were invited to take part in an online survey to investigate the level of student PC ownership. The survey took place in January 2008. There were a total of 1533 respondents. In this report we generally show percentages of respondents with actual respondent numbers in brackets.

44% of respondents (654) were living in halls while the remaining 56% (809) were either in private rented accommodation (40%), the parental home (6%) or their own homes (8%).

Respondents represent the following faculties:

Faculty	Percentage of respondents
Arts & Humanities	23.9% (350)
Economics & Social Sciences	23.4% (343)
Life Sciences	25.8% (379)
Science	26.9% (395)

University Facilities

82.9% (1262) have used S@IL and 44.5% (677) have used computers in Palmer Building. 64.8% (986) have used room connections in hall which may see strange as only 44% of the respondents live in halls, although this is probably explained as 2nd and 3rd year students who lived in halls in previous years.

75.3% (1140) of respondents rated University Computing facilities as good or very good. 34% (513) said facilities were better or much better than expected with a further 55.5% (837) saying they were 'as expected'.

Only 18% (269) of respondents have attended any of the drop-in sessions or courses provided by ITS.

PC Ownership

93.9% (1425) of respondents have their own computer with them at University. 93.3% (1273) of these have PCs running Windows. A relatively small number (29=2.9%) run Linux or have dual boot machines with Linux and Windows. 6.3% (86) own an Apple Macintosh with a third of those also owning a PC running Windows.

75.8% (1078) of computer owners have a laptop computer with a further 8.9% (126) owning both a laptop and a desktop.

39% (459) of laptop owners bring their laptops onto campus with them and 94% (1107) of laptops have wireless networking capabilities. Of those with wireless capabilities 42.1% (463) say they have

connected their laptops to the wireless network on campus. There were many comments about locations for wireless routers:

- About 40 students mentioned Halls of Residence and many wanted access throughout including the kitchen and individual rooms.
- 15 students mentioned the library and how they would like to be able to connect from all floors.
- About 22 students said they should be able to connect in all buildings or from anywhere on campus with 7 specifically mentioning a desire to connect from the grass areas between buildings.
- The Students Union was also a popular choice mentioned by about 15 students some of whom wanted covered to extend to the bars (mojos) and cafes.
- About 20 respondents commented that although coverage was okay, the signal was too weak, difficult to connect to or unstable at times. A handful of students said that they either weren't aware of a wireless network on campus or they couldn't understand how to use it.

Network Connections

For computer owners living in halls 22.3% (139) used the 'Reading Connect' help service when connecting their computers in their study bedrooms. For those not living in halls only 7.4% (51) had help from ITS to connect to the University network. 96.9% (712) of those not living in hall have broadband connection to the Internet.
90.8% (1373) of respondents feel they need 24-hr Internet access to support their studies. 91.7% (1387) most frequently access the Internet from their term-time residence. When on campus 70.7% (1059) of respondents used a University owned networked PC to access the Internet while 21.9% (329) used their own laptop either connected to a plug-in point or wireless connection.

IT Components needed for your studies

Students were asked which IT components they felt they needed to own for their studies. The list below shows the components they were asked about together with the percentage who felt they needed that particular item:

Desktop or laptop	96.5% (1452)
Printer	70.6% (1057)
Scanner	24.8% (363)
CD-Writer drive	39.9% (584)
DVD-R drive	30.7% (447)
DVD-Writer drive	19.5% (278)
Standard Office Software (Word, Excel, etc.)	95.9% (1436)
Specialist Software	38.2% (556)

Time spent on a computer

Another group of questions related to the amount of time students spent on computers for different reasons. The list below shows the percentage of respondents who used computers for more than 6 hours per week for the specified reasons:

In support of their studies	47.7% (727)
For social communication with friends and family	40.0% (608)
For other things (e.g. online shopping, games, DVDs, etc.)	27.1% (409)

We also ran a cross-tabulation for this question to see what the overlap was between the first two groups above. The results are shown in the table below:

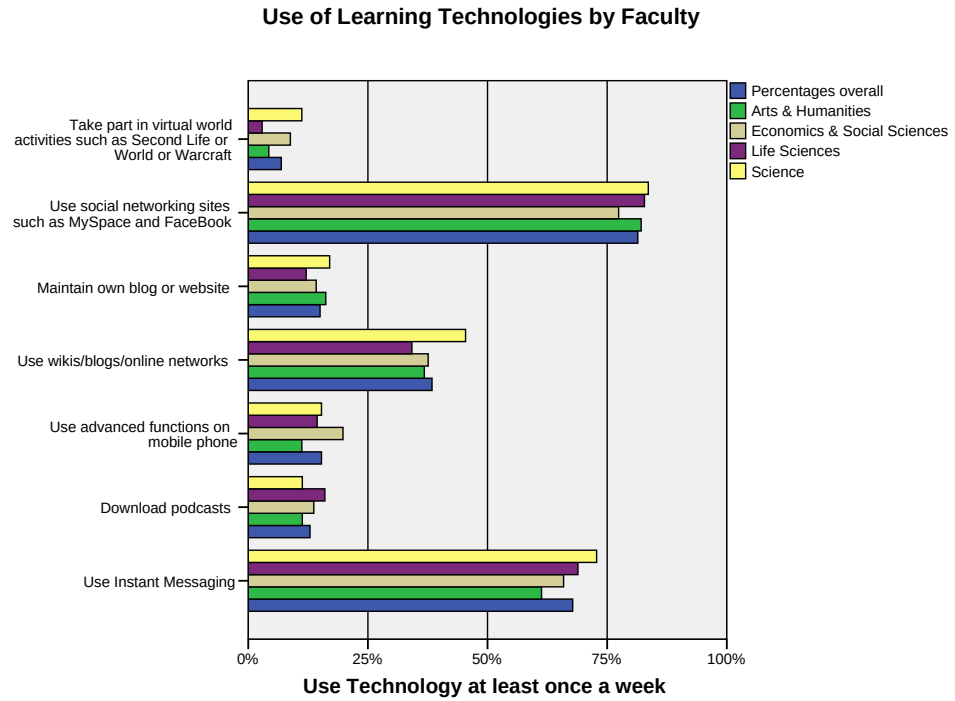
Time spent on a computer		In support of studies	
		< 6 hours per week	> 6hrs per week
For social communication with friends and family	< 6hrs per week	34.3% (518)	25.8% (392)
	> 6hrs per week	18.2% (276)	21.9% (332)

Learning Technologies

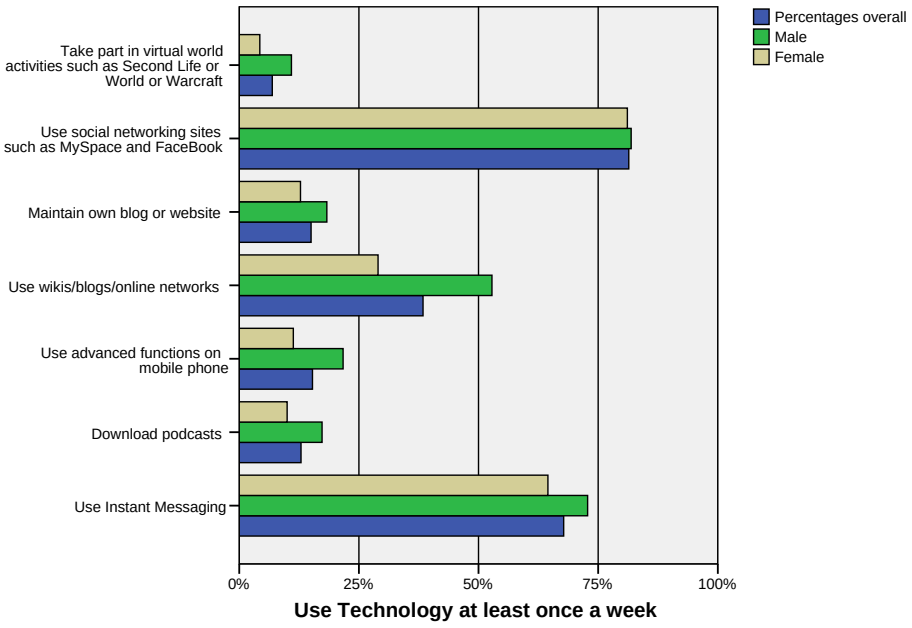
Students were asked how often the use particular technologies. The list below shows the percentage of respondents who used each of the specified technologies weekly or more often:

Use instant messaging	67.8% (1033)
Download podcasts	12.9% (195)
Use advanced functions on mobile phone	15.3% (232)
Use wikis/blogs/online networks	38.4% (580)
Maintain own blog or website	15% (222)
Use social networking sites such as MySpace and FaceBook	81.4% (1228)
Take part in virtual world activities such as Second Life or World of Warcraft	6.9% (104)

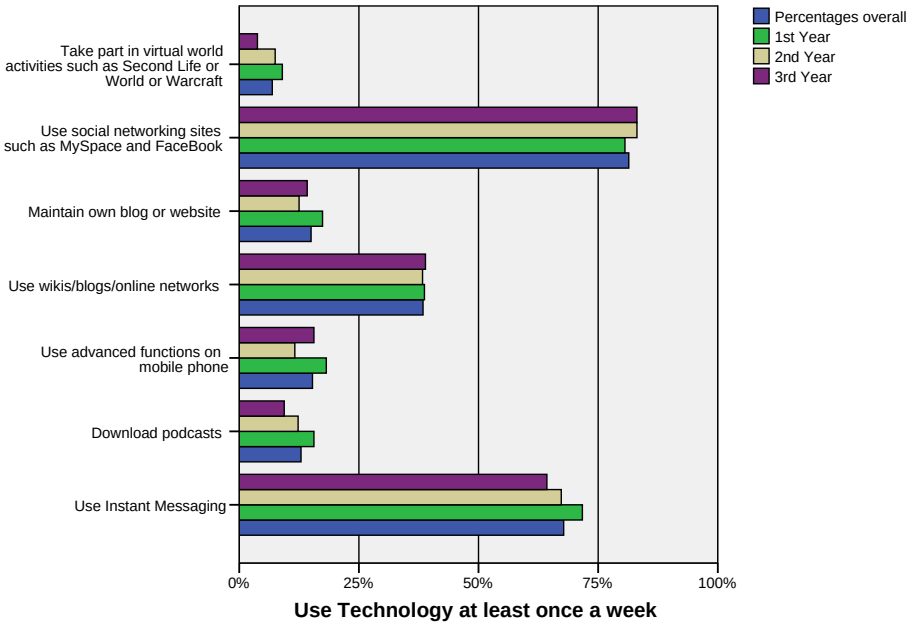
These results were grouped into faculty, gender of respondent, year group and place of residence (living in halls vs. not living in halls). The following charts show these results graphically.

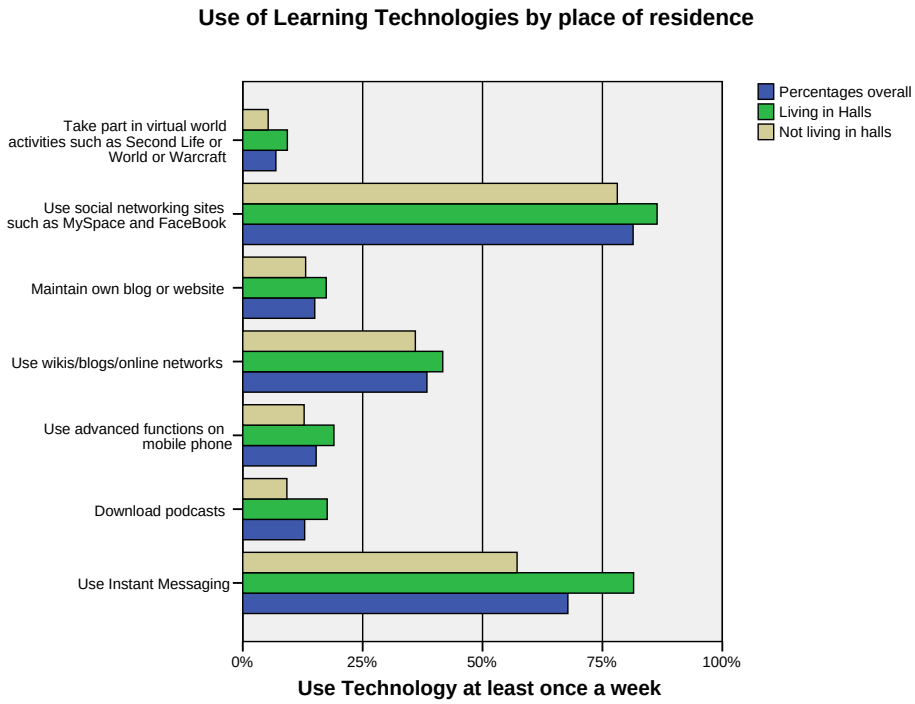


Use of Learning Technologies by gender



Use of Learning Technologies by year group



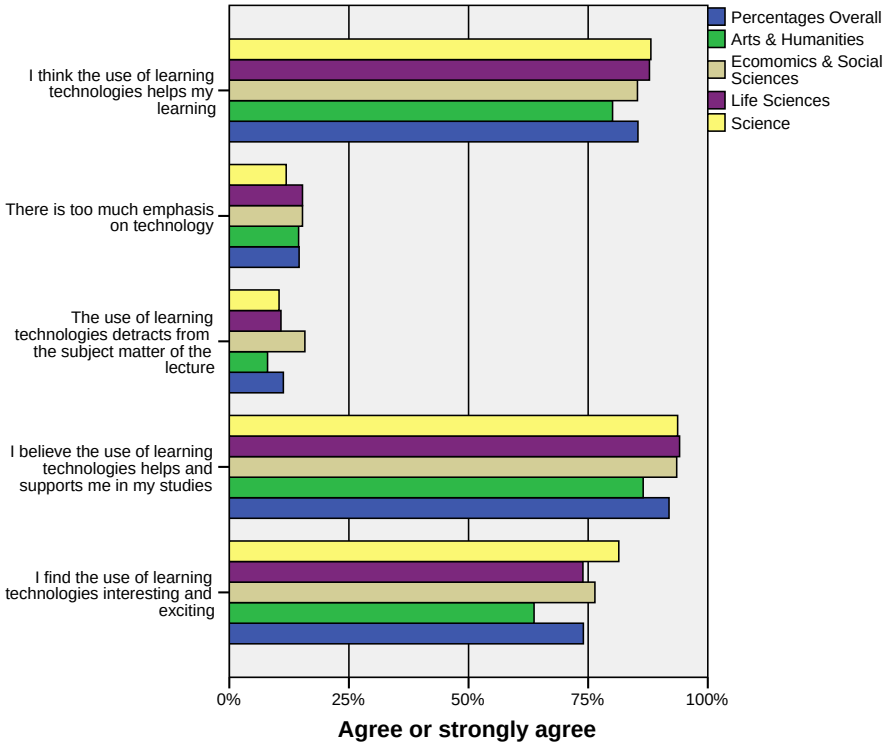


Students were then asked whether they agreed or disagreed with a set of statements about learning technologies. The list below shows the statements together with the percentage of respondents who either agreed or strongly agreed:

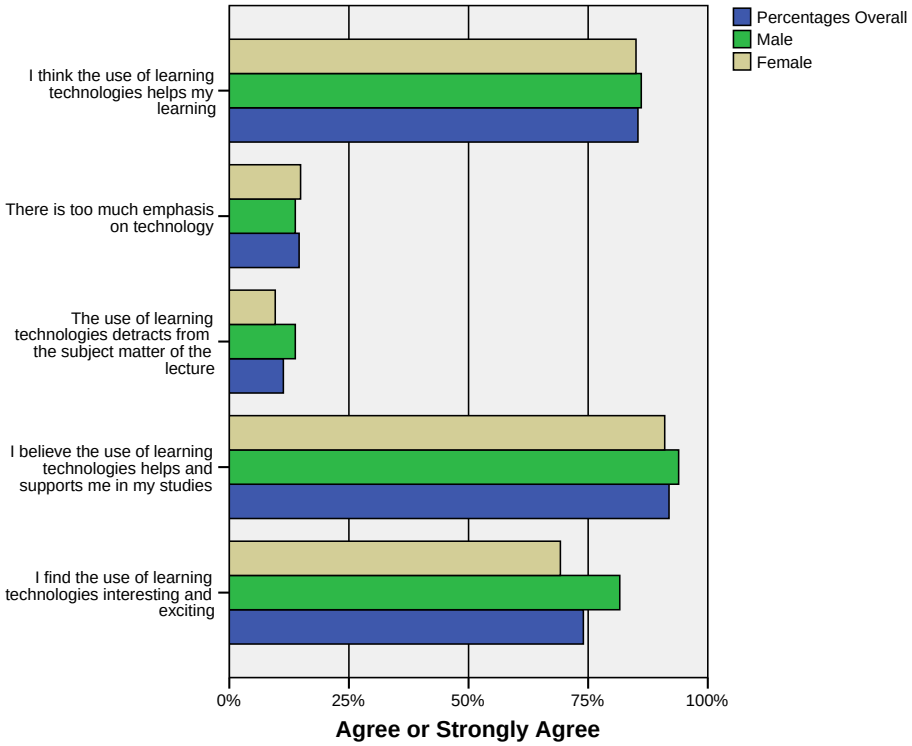
I find the use of learning technologies interesting and exciting	74% (1121)
I believe the use of learning technologies helps and supports me in my studies	91.9% (1234)
The use of learning technologies detracts from the subject matter of the lecture	11.3% (171)
There is too much emphasis on technology	14.6% (221)
I think the use of learning technologies helps my learning	85.4% (1297)

Again these results were divided into faculty, gender, year group and place of residence. These results are illustrated in the following charts.

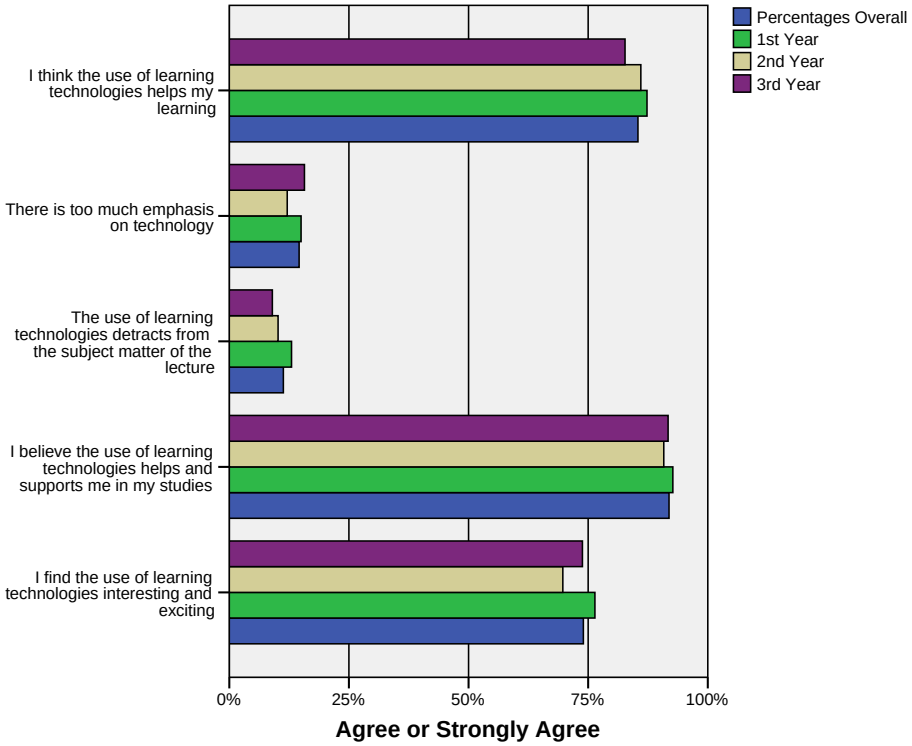
Opinions on the use of Learning Technologies by faculty



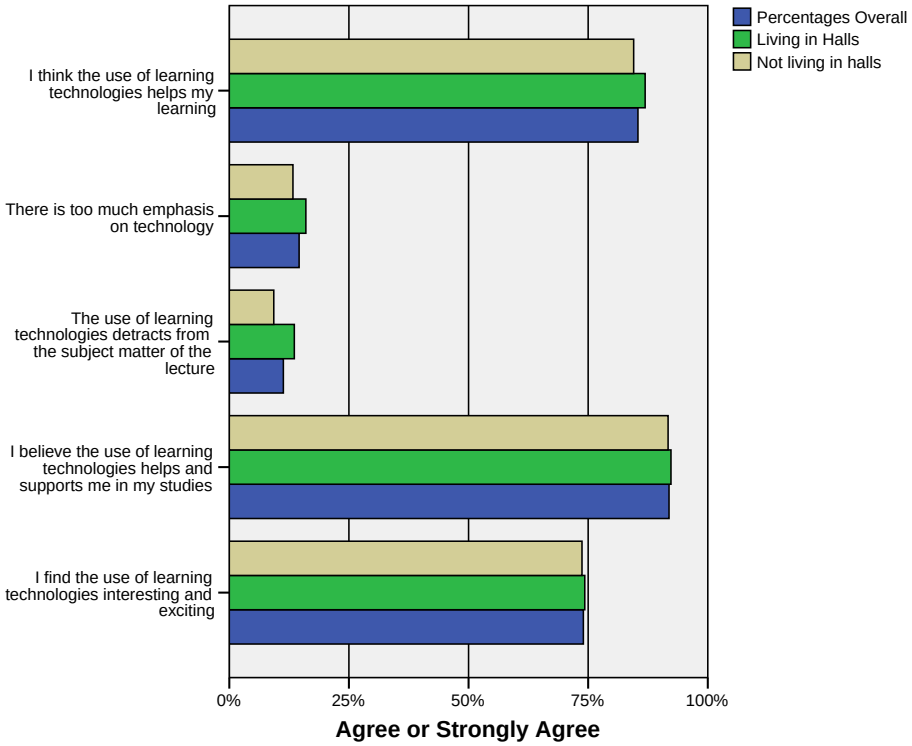
Opinions on the use of Learning Technologies by gender



Opinions on the use of Learning Technologies by year group



Opinions on use of Learning Technologies by place of residence

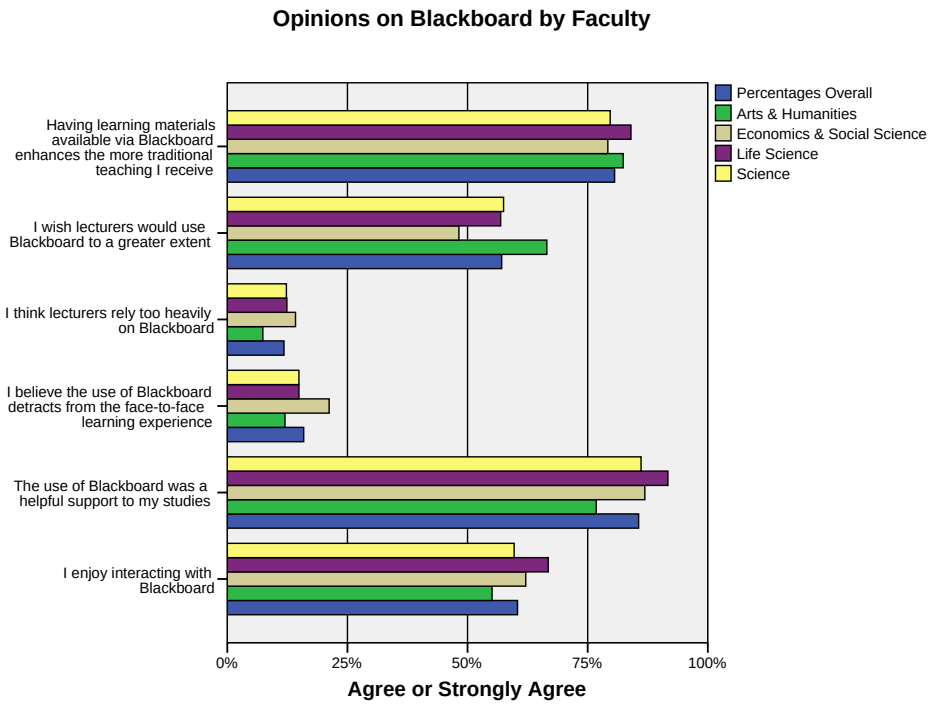


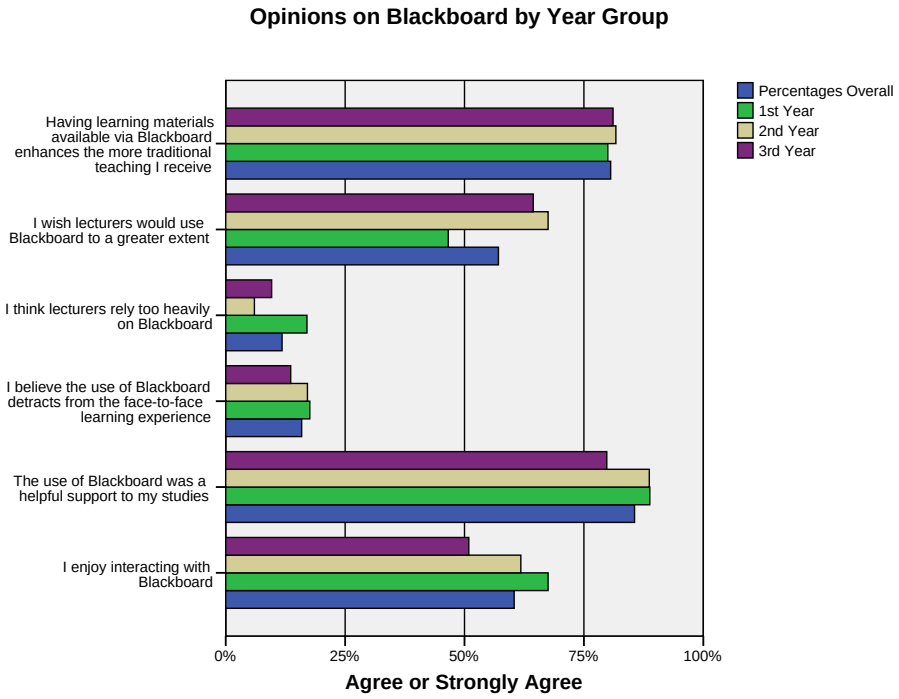
Blackboard

Students were then asked some specific questions about Blackboard. 95.1% (1435) say they have used Blackboard. Of these 85% (1190) have more than half of their modules using Blackboard. 82% (1222) of respondents believe that all courses should have a Blackboard component.
Respondents were given the following statements regarding Blackboard and asked whether they agreed or disagreed. The list below shoes the percentage of Blackboard users who either agreed or disagreed with each statement:

I enjoy interacting with Blackboard	60.4% (860)
The use of Blackboard was a helpful support to my studies	85.6% (1216)
I believe the use of Blackboard detracts from the face-to-face learning experience	15.9% (227)
I think lecturers rely too heavily on Blackboard	11.8% (168)
I wish lecturers would use Blackboard to a greater extent	57.1% (809)
Having learning materials available via Blackboard enhances the more traditional teaching I receive	80.6% (1148)

These results were grouped by faculty and by year group and these grouped results are illustrated in the following charts.



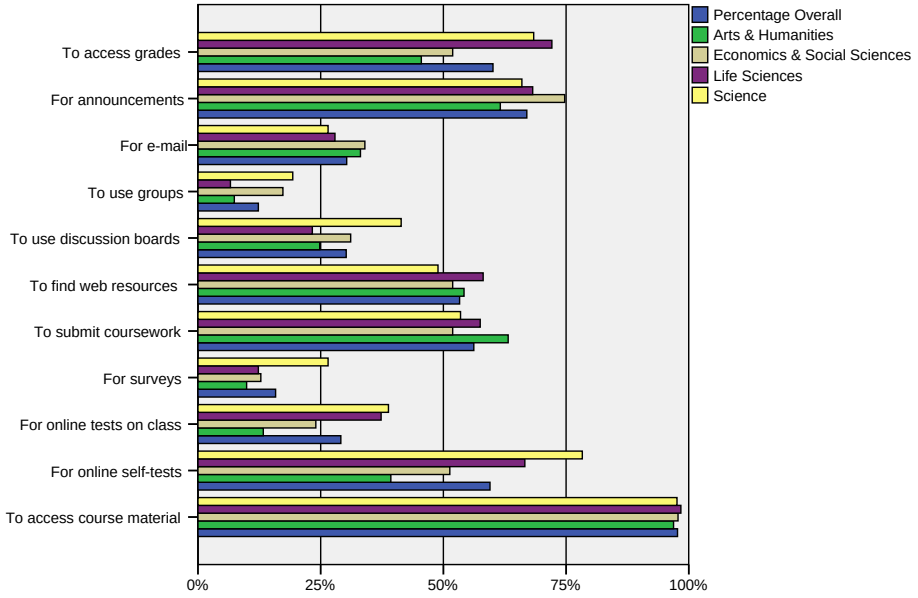


Students were asked what they used Blackboard for. The following table lists the uses that were included in the survey and the percentage of respondents using Blackboard in that way:

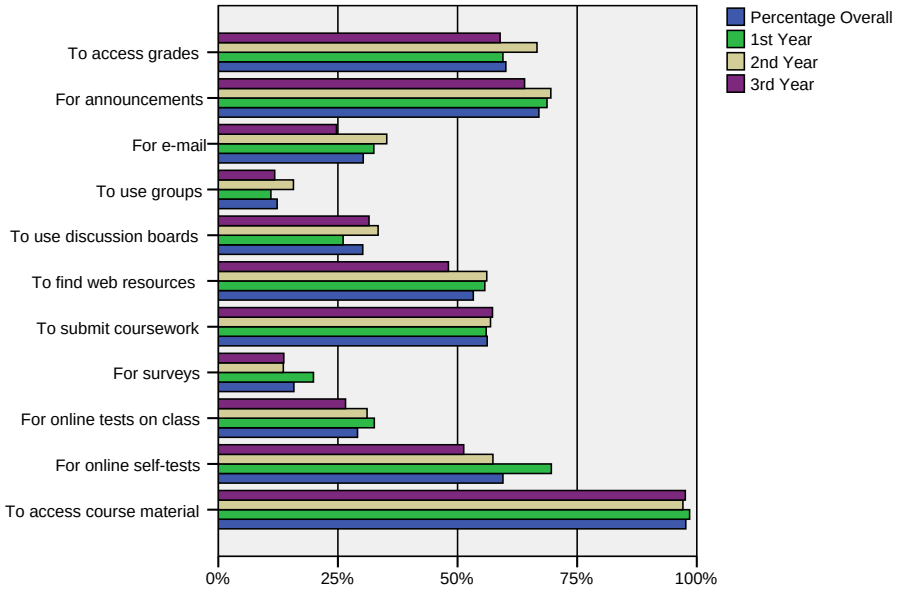
To access course materials	97.7% (1388)
For online self-tests	59.5% (846)
For online tests in class	29.1% (414)
For surveys	15.8% (225)
To submit coursework	56.2% (798)
To find web resources	53.3% (757)
To use discussion boards	30.2% (429)
To use groups	12.3% (175)
For e-mail	30.3% (431)
For announcements	67% (952)
To access grades	60.1% (854)
Other uses	2.2% (31)

Again these results were grouped by faculty and by year group and these grouped results are illustrated in the following charts.

Uses of Blackboard by Faculty



Uses of Blackboard by Year Group



Other uses included:

- To contact seminar colleagues
- To get information about lecturers
- To listen to podcasts
- To check deadlines
- To get general course information
- To use Portfolio application to display my work
- For timetables
- To get book lists
- Extra information such as suggested websites and articles to look at
- Halls of residence section – checking menus
- To ask questions
- Online counselling sessions through the University

Summary Report

Introduction

All University students were invited by email and via the student web pages to take part in an online survey to investigate what they think of the University's IT facilities and informal learning and study spaces. The survey was open from 27 June to 15 July 2011, during the busy exam period.
There were a total of 540 respondents, although some responses were incomplete, and open-ended questions inviting comments in particular saw a relatively low response rate. In this report we show percentages of respondents with actual respondent numbers for each question in brackets.
66.6% (357) of respondents were female, 33.4% (179) were male.

Respondents represent the following years of study:

Year of study	**Percentage of respondents**
Year 1	23.5% (125)
Year 2	24.1% (128)
Year 3	17.3% (92)
Year 4	4.3% (23)
Post Graduate	30.8% (164)

78.3% (414) of respondents were home students, 8.9% (47) came from the EU, and 12.9% (68) of respondents were international students.

Respondents represent the following faculties:

Faculty	**Percentage of respondents**
Life Sciences	27.2% (147)
Arts & Humanities	26.9% (145)
Science	25.4% (137)
Social Sciences	11.9% (64)
Henley Business School	8.7% (47)

Working on your own

The Library (338), students' own rooms on and off campus (430), and departmental spaces (162) were the most popular places where students prefer to work on their own. Other spaces on campus listed by respondents included the Students' Union, managed computer labs, and outside areas, although only 15.5% (84) of respondents answered this question. Off campus, other libraries, students' homes and coffee shops were listed as places to work on your own, but this question had a very low response rate of 3.9% (21).
Books, journals, access to computers and online resources, wifi, and a comfortable, quiet environment to work in were all seen as important by students to have available to support them working on their own.

Working with others

Places most commonly used by students to work with others were, again, the Library (303), students' own rooms (229), and departmental spaces (284).
Again, books, journals, access to computers and online resources, wifi, and a comfortable, quiet environment to work in were perceived as important by students when working with others. Some respondents also stated they would like to have a group work space with presentation facilities available to them.

Exam study space

Use of extra study spaces available during the exam period in Geography, Henley Business School, Agriculture, HumSS and Physics was low. 70.1% (298) of respondents said they were unaware of extra study space available during the exam period.

All learning spaces

52.7% (255) of respondents commented further on the learning spaces available to them for both individual and group work with regard to how these facilities met their requirements, with a comfortable working environment ranking high on the list.

Use of University IT facilities

41.6% (220) of respondents stated that they used University IT facilities several times a week, with a further 35.7% (189) using them at least 1-2 a week.
The IT facilities used most frequently were S@il PCs in the Library, used by 315 respondents, wifi areas (246) and department PC rooms (228).
49.1% (257) of respondents rated the IT facilities they use as 'good', with a further 18.9% (99) rating them as 'very good' and 26.2% (137) as 'adequate'.
53.7% (283) felt IT facilities were 'as expected', a further 28.3% (149) rating them as 'better' or 'much better' than expected.
72.4% (391) did not leave further comments. Of those that did, opinion was divided on the number and specification of computers available, with as many students finding provision adequate as inadequate, partly depending on location. Unreliable wifi and poor coverage in key locations received negative comments, with some respondents relying on 3G instead of the University network. Facilities in the Library were commented on very negatively as noisy and uncomfortable. Lack of monitoring of internet use and printing problems were also mentioned by a number of students. Students requiring access to specialist software and/or resources found provision uneven.

Technology ownership

95.7% (517) of respondents stated that they own a PC or Mac laptop. 234 respondents own a smartphone, 265 a mobile phone. 135 respondents own a desktop PC or Mac computer, and 29 own a tablet (iPad or similar).

Types of smartphones most commonly owned by the participants were iPhone (50), Android phones (51) and Blackberry (39).
376 of respondents acquired their computer or laptop before coming to university, whereas 236 bought or replaced a laptop during their time at university.
The majority of respondents (347) stated they decided for themselves what they needed before buying a computer or laptop. 232 respondents said they had sought advice from friends or family, whereas 88 took advice from sales staff. 28 students sought advice from their School or department, and 26 consulted other university/ITS staff.
81.9% (430) of respondents said they knew how to connect a computer to the University network.

Use of personal technology

72.3% (235) of respondents bring a laptop on to campus at one time or another, with departmental spaces, the Library, cafes, and wifi zones listed as the most popular places to use a laptop.
Laptops are used for all aspects of academic work including note taking, coursework and assignments, accessing email and online resources. Some respondents also mentioned the use of laptops for group work, with one student making the point that there are few areas suitable for group discussions that also have a computer.
Laptops are used during lectures and seminars or to fill time between them, as well as for more sustained periods of time. Many participants commented they saw their laptop as essential to their studies.
27.7% (142) of respondents stated they never bring their own laptop on to campus. Risk of loss was a major concern, with many respondents wishing for better security and/or secure lockers on campus. Participants also stated better wifi and more power sockets to charge batteries would encourage them to bring laptops on to campus more frequently.
70.3% (372) of respondents have used the wireless network facilities across campus, 20.4% (108) have not, with 9.3% (49) stating that they did not know where wifi areas were located.
197 respondents said they use their smartphones to access emails relating to their studies, 88 use it to access online learning/study resources, 85 to access other University resources.
Students mentioned smartphones as useful for checking emails and accessing timetabling information, managing appointments and doing online searches. A small number of respondents stated that they own a smartphone but do not use it in relation to their studies, with some students finding the small screens impractical for this purpose. A fair number of participants said they were unable or had difficulties accessing their emails through their smartphones.
Only 18.5% (140) of respondents commented further on the use of smartphones to support their learning. Respondents wished for wider wifi coverage, clearer instructions on how to connect to the University network, Blackberry support, and for more parts of the University network (including Blackboard and the Unicorn library catalogue) to be delivered in a more mobile-friendly format.

Use of technology for studying

97.9% (519) of respondents ‘agree’ or ‘strongly agree’ that owning a computer is essential for their studies.

78.3% (412) feel that the University expects as much ‘as expected’ from them in terms of IT skills. 10% (53) think that the University expects ‘too much’ or ‘much too much’, whereas 11.6% (61) feel it expects ‘too little’ or ‘much too little’.
78.3% (412) have never attended a drop-in training session (DI&L) or course provided by ITS.

Comments on the University’s facilities for learning and teaching

Only 18.7% (101) of participants made further comments on the University’s IT facilities or learning and study spaces. Feedback given in this part of the survey largely reflected comments elsewhere, with respondents asking for wider wifi coverage, more power sockets for laptops, clearer instructions and signposting of IT facilities and services available, extended opening hours for the Library, and more comfortable, quiet study spaces.

Appendix IV: Focus group feedback

This focus group was run to elicit views and experiences relating to digital literacy practice, awareness and aspirations. It was deliberately designed to draw out the 'grumbles' from the delegates (as these are the things which have the greatest need for change). Comments from the project researcher are included in square brackets [ ] illustrating where there are clear differences of view/access to information.

Policy/Strategy

Good

- Policy available on student web pages [rules & regs, no strategy, not student/consumer friendly]
- Student presentation skills workshops
- Library – Digital Resources
- Library – E-journals policy
- We have all the University policies in one place now on the governance website – How has this been publicised? [OK, check that site out - does it *really* have them all? many of them?]

Standard

- VPs know policies exist [Though, they don't know of guidance e.g. This Is Me]
- Things to do: Employability – guidelines for students social networking – communicate to them – through lecturers (Careers?) 2/3 year
- Talk in their language – what will push buttons for students? [Both gaps]

Bad

- Guidelines for social networking for students – don't know
- Employability – guidelines to help – tailored towards them [bad, really?]
- Students don't know student handbook rules
- SILOS
- Name an open access publication
- Everything needs a policy, needs a committee, needs a sign off, needs a subcommittee, by which time it is out of date
- Charging/Resources/Phones
- Apps – lack of policy
- Lack of agility

Infrastructure

Good

- When it works, Eduroam is fantastic

Standard

- Are we over committed to single providers (e.g. Microsoft) [?gap]
- No more PRS voting/text message voting software [a plea, or a complaint?!]
- Tickets – good when it works. Bad when told 'It's a known issue'
- Info is often there – knowing where to look

- Tech tables
- Wireless = good but need more

[Most issues resolved within SLA, but no education on how to avoid given, so get repeats]

Bad

- Checklist needed pre-loading videos etc
- Committee rooms aren't very digital
- Phones, power sockets, ad hoc repairs e.g. rewiring
- Lack of physical space and access to PCs at peak times in library
- Security of personal devices – carrying and looking after devices
- Continuity. Turnover of key staff who manage web sites
- Reputational issues
- Wireless is intermittent – actually terrible [cf ITS view that it covers campus and is adequate]
- Staff don't have mechanisms to support student needs i.e. mobile access to Blackboard
- Who has ultimate sign-off? User? Digital Development? ITS? CDoTL? CSTD? IMPS? Library? Student Services?
- Each department/school needs approval to set up Twitter or Facebook – But how do people know about this? Where is this policy?
- Lack of a single approach/more co-ordination re: schools/departments and staff/students
- Quality of search function (metadata) is not good
- Video conferencing: what is available? Blackboard Collaborate, Skype, lack of knowledge of policies and practice

Support

Good

- Support for Endnote when we can download it
- CSTD proactive at developing courses and open to suggestions
- Staff know about training courses and attend
- Staff in ITS/DPS etc and Library very friendly, approachable and helpful
- Digital Development section are FAB!!
- People support
- Can't and shouldn't separate digital literacies support from study practices – researching – use of appropriate evidence – use of Google etc.
- Communities of practice – willingness

Standard

- IT skills workshops
- RED Award development sessions
- Pre-sessional training for mature students
- Staff sessions on Twitter and Facebook (recruitment)
- Staff: digital training courses and networking only promoted to those who are already engaged
- What students know: ITS Helpdesk

Bad

- Oversubscribed courses – quite passive
- Sessions needed on how to use LinkedIn (staff/students)
- Students don't know about IT training
- RUSU – don't proactively promote digital issues in connection with uni
- 'How to use Unicorn' training session in Library – not clear and made no sense
- Research needs vs corporate needs [in a research led institution (not corporation!) why do these differ?]
- Know who to ask
- Conflicts of corporate image vs. teaching flexible

Practice

Good

- Email – use 'conversation view' to group emails
- Produce podcasts and webinars – in your own time; able to revisit
- QR code stickers to help students access Study Advice
- Library News
- Twitter: can dip in and out of it
- Twitter – Communications Office: we find out interesting things about UoR and its people that wouldn't otherwise know
- Facebook: student societies; VPs joining in with other networks and groups
- RUSU: website, email, Facebook – engage with students; lots of response (compared to email)
- UniApps
- ITS Twitter [when allowed to function properly, engage in conversation]

Standard

- Dropbox
- Overlap between work & private life (private and public persona)
- Tweet can be gone in within a few minutes – might be missed by audience
- Non-branded slides
- Twitter & Facebook need to be approved by Digital Development [Probably a 'Bad']

Bad

- Email takes too much time
- Email: too much
- Statements
- Forward/Forward emails
- Acronyms
- RUSU - Twitter: not engaged (each VP has an 'official' VP account); have got followers but don't tweet
- Need somewhere to take laptop if broken

- Internationals ‘clump’ together (social exclusion) – in life and on Facebook

Expertise

Good

- Emails good for record-keeping
- Pockets of good practice in University around digital stuff – a few good groups looking at digital issues e.g. SNOW etc

Standard

- Scale of 1-10 students think of themselves as about 6/7. Not sure what the potential is or how to measure digital literacy. [HUGE point here; unrealistic self appraisals, goes both ways, applies to staff and students]

Bad

- Risk averse – [should] celebrate failure
- Perception: culture of non-adoption (change is not good)
- Some academics view social media as ‘graffiti with punctuation’
- Senior boards always want it simple… vs Practitioners want it working and safe
- Students: RUSU VPs would rather phone as quicker and more personal
- Students: Email is boring and uncool and spammy
- Students: Communication is disjointed – would prefer a central filter of info (careers/training etc)
- Some staff (possibly the majority) not interested AND not well-equipped
- Lecturers can’t use projector is lecture theatres
- Staff perceived as being lower skilled than students, but the gap isn’t an issue

Stakeholder views/needs/expectations

Good

- We can never expect to be perfect – having unmet needs drives us forward [from Pat]

Standard

- Interaction with stakeholders – from ITS is good and bad
- BYOD – Bring Your Own Device
- We all do a good job but very quietly

Bad

- BYOD? Not ready yet… Policy/support/infrastructure
- Compulsory out of office
- Messages for academics to leave for students
- Inappropriate use of social media (disparaging comments)
- Lack of policy re: acceptable use (reputational issues)
- Online presence available in different languages
- Needed: compulsory overview in Freshers’ Week on how to use University systems

- Public lectures – should be filmed and downloadable after the event
- Lack of awareness of services on offer
- WiFi map around campus should be available. For example a sign available saying 'WiFi here' around campus
- Employer engagement (industry in general) relies on fast response of email – which the University does not have a universal policy on e.g. forwarding an email to SEECC which is 2 months old from an employer – NOT GOOD and loses good contacts
- Central Social Media resource (RUSU have one!)
- Email policy on replying – Academics to students especially over the holiday period

It should be emphasised that the points from 'The Good, the Bad and the Ugly' workshop are views of participants, categorised into Good/Standard/Bad groups by them, and may be at odds with one another or other people's interpretations

Appendix V: Interviews and case studies

Digitally Ready project – case study 1

Introduction: Emily Goodhand, Copyright & Compliance Officer, Information Management and Policy Services; Governance Directorate CASE STUDY
Context: **Advanced user of Social Media to raise professional profile**
Engagement: Emily's trigger for using Digital Technology was for 'keeping in touch'. She has lived and worked in the UK and abroad. Her father worked in IT and from being a young child she used a lot of role play and adventure games with remote users. She was an early adopter of chat rooms, *MSN* messaging*; ICQ* and *AOL* messaging. She has progressed through several email accounts including *Hotmail* and *Yahoo* and has a *Google* account for professional purposes. She likes investigating technology but would not describe herself as a 'techie'. She went to University in 1998 when she was vaguely aware of the 'internet' but began using it in earnest around 2000 in the 'computer room'. She used email extensively to communicate with a friend who was on placement in the USA. She describes herself to be 'slow on the uptake' on a mobile phone but did find text messaging very exciting. Emily has been very influenced by friends who are into Apple products and received an *iPod* as a present 2 years ago (but it did take her three weeks to get it out of the box!) She felt daunted by it and didn't quite 'understand'. When she did she found it surprisingly easy to use. She has been encouraged by friend to play games using the technology available with *Apple* Products. Smart phones had always seemed a luxury product but she now considers this essential. She is considering her purchase of a new laptop but feels that she will stick with a Windows based product. At the moment she is using a borrowed laptop. Currently Emily uses Digital Technology for staying in touch and for organizing her social life – in particular *Facebook*, texting and calendar via her *iPhone*. She is concerned that if anything went wrong with her *iPhone* that would be a disaster. She feels that she need to do more about backing up. Emily uses her *iPhone* for taking digital photos but she also has a digital camera. She never prints her photos out but publishes them to *Facebook*. Back up is on her hard drive and memory sticks. Emily is a co-driver on car rallies . This community of interest does use a website. Dates from the calendar on the website are texted to her and she is able to automatically enter these into her calendar. Payments for rallies are not done on line but by cheque sent by post or by credit card. The community is described as 'old school' but one rally last year did run a *Twitter* feed.

Emily's other interest is In-Line Ice hockey – this community is younger and makes use of websites with links to forums, message boards, blogs, facebook events. Participants are able to use on-line banking for transferring money for match fees.

Emily is a very keen advocate of on-line banking which she feels is very secure but worried what she would do if she ever lost her security key. She buys goods and services on line and always looks for the 'https' url as the sign for a secure site. And always uses her credit card for more secure transactions.

Facebook privacy settings are set quite low though – however she has refrained from publishing her date of birth to avoid identity fraud. She did however recite an incident where she dropped her passport in a pub. A few days later a chap contacted her having found the passport and found her though Facebook. They met and the passport was returned safely. Another friend mistakenly picked up the wrong suitcase. He was contacted a few days later when the children of a middle-aged couple contacted him to let him know their parents had his brand new *Mac* laptop safely in their possession. They apologised for entering his laptop but had managed to find him through *Facebook.*
Emily is quite startled by the information that is available about individuals on 192.com
Emily's top three technologies are : Google search ; internet banking; Facebook. She is not a fan of most Google products – although she has a Gmail account she does not really like the lay out and the way it is set up. She has tried and dismissed Google Wave and Google Buzz . She has Google Plus but does not use it but does like Google Circles.
For any IT problems she phone her brother who works in the IT industry as a Software Engineer. Any problems on her iPhone – she contacts a friend who is a 'Mac Geek'. A friend has set up a Facebook group 'I fix I stuff'.

Cross over between living and work.
Emily uses her personal *iPhone* to access the University's Outlook exchange. She has blurred the division between work and play and will regularly work outside of work hours using the technology as follows. She is happy to answer work queries at all hours. She has friends on Facebook who are colleagues but restricts herself to discussing social rather than work issues in that environment.

Working
There was no special pre-requisite for skills in Digital Technology for her role as Copyright & Compliance Officer, however she was very familiar with researching and networking through the JISC mail list 'CopySeek' – (for HE & FE & Copyright practitioners)
Since coming to her role she has taken the principles of that mail list and adapted them to *Twitter.*
Initially she had a perception problem about *Twitter* however during the courses of her work – she had to examine Terms and Conditions of Use for *Flickr, Facebook, YouTube, LinkedIn* and Twitter for presentations to photographers and ended up signing for a *Twitter* account. She did not find it easy to use initially but slowly grew to use more of its functionality for research and entering into dialogue about Copyright. Through *Twitter* she gained an in-depth knowledge of 'Fair dealing issues' and it suggested to her that she should set up a 'Copyright for Education Blog'. For this she used *Google's Blogger* – she was not aware of *Word Press* at this time, had tried and did not like *Tumbler . She* did not really consider this to be a University account so didn't occur to her to ask the University for help in setting up the blog.

Attainments

As 'Copyright Girl' she started using *Twitter* in June 2009 and currently (January 2012) has over 6,000 followers. Emily extended her use of LinkedIn to pull the Twitter feed directly into her LinkedIn account. She finds the groups function of *LinkedIn* particularly useful. Emily is Vice-Chair of the Libraries and Copyright Alliance and she represents the Education sector. In this traditional environment she has initiated the use of a closed *Facebook* group for collaborative working.

Evaluation:

Her experience of using social media has not presented her with many problems. Her tone of voice is kept neutral rather than contentious. She feels that there are a lot of angry people out there on Twitter and tries to avoid arguments. She uses emoticons liberally throughout her social media places.

She is careful not to click on links which may sometimes contain viruses.

Emily is very much a self starter in Digital Technology – if she gets stuck she tends to use her network of colleagues to assist in solutions to problems rather than going through official help desks. She feels that she is too busy to look up solutions.

Emily has to give many presentations – and feedback has indicated that her presentations have been good but that the audience want to see dynamic content (beyond the PowerPoint). She has investigated Prezzie but felt a bit 'seasick'. She would like to integrate video into her presentations (without infringing any copright law). She feels as though she has hit a brick wall in her development in this area – she really wants to investigate different ways to engage her audiences but she is not sure where to go for help. The Digital Development team has advised her to seek advice from the Design and Print Unit and this is what she will do. She feels that there is a gap in University training resources in this area.

Digitally Ready project – case study 2

Introduction:
eLearning and Multimedia Specialist, in a self-financing unit of the University ; working in a team of one

Engagement:
Early adopter and developer. Very strong IT technical and design background specializing in Film and TV production; the development of electronic media; web site design; software and media training and development; multimedia production. Experienced in large corporation environments as well as Higher Education.
Outside of work strong interest in on-line gaming, film, collecting and using gadgets.
Early adopter of social media for personal use– believes that this has not been fully exploited in social and professional arenas – less impressed with Twitter than Facebook. Dislikes celebrity culture around social media.
Can see the potential for using social media on behalf of the unit but this is not within this role's remit.
Will invest time in learning how to use software. Keeps abreast of developments in new technology. 'If it can be done digitally, I will do it, if not I will build something.'
Has access to very comprehensive technology but as the unit has a degree of autonomy some of the systems have been developed in-house which makes for a digitally agile environment.
Some developments have not taken place e.g. Studio set up has been taken over by the photocopier machine.
Academic staff in the unit act with a degree of autonomy and do not engage with University systems such as shared calendars which is frustrating.
For technical help he will refer to on-line forums etc. 'Google is your friend'
For design and useability help he will talk to network of experts.
Very aware of legal and security considerations of publishing content on-line.
Strong beliefs in protection of Intellectual Property.
Believes that the boundaries of work and play are blurred and does not believe in differentiating between your work and social digital identity.
Would like to deliver all materials in a paperless system but academics reluctant to release IP.
Couldn't live without – the iPhone. Mac desktop.

Attainments:
Has developed the unit's e-Learning tools including lecture capture and transcoding of material and publication via DVD. Some materials are delivered via the VLE via podcasts via ipods.
Would have like to develop this further by having an on-line presence through iTunes (a project that the University started but stopped as other priorities were stronger)
Has suggested training students to make videos with flip cameras in order to create engaging recruitment tools.
Developed the unit's visual identity through digital photography; digital graphics design; web.
Attainments can be restricted by lack of people resource – this is a department of one.

Needs:
Personal development is an issue here. Skills and applications are more advanced that most of the rest of the University. Finds it hard to see how this strong digital role can be developed.
Suggestions for new ways of using digital technology are often not adopted by senior management.

Evaluation:

1. Infrastructure: Some systems in the University infrastructure ; other not - this is a period of change and frustration
2. Training and support: perception of lack of support in personal development; feels that there is lack of clarity from the University how staff should conduct themselves on-line. Lack of clarity of communication of practice particular in social media
3. Has offered to deliver *Photoshop* training for the University but this offer has not been taken up.

Digitally Ready project – case study 3

Introduction:
Lecturer, Classics, Department of; School of Humanities; Faculty of Arts, Humanities and Social Science (Early Career Teaching Fellowship for 3D Modelling of Ancient Rome)

Context:
Lecturer using technology to enhance teaching and research CASE STUDY

Engagement:
Classics and Ancient History Scholar. No professional IT training but always a keen interest in computing . Does not consider himself as a technical person and has always used 'off the shelf' software. (*Sketch-up and Cinema 4D* . Is a self starter and largely self-taught. Formerly a member of academic staff at Queens College, Oxford where started digital modeling and although this is a very unusual scenario for a Humanities scholar to be engaged in this area the college were happy to support this development. Digital modeling requires a high computing demand and budgets were not sufficient to cover this so personal favours were sought to use the college servers overnight to render images. Developed digital modeling extensively since moving to Reading and hoping to develop a book illustrated by the digital images from the modeling (in negotiation with Cambridge University Press). Also hoping to develop a Smart phone application (currently investigating sources of development resource possibly £3,000-£5,000)
Last academic year worked with an undergraduate classics student in the UROP (Undergraduate Research Opportunities Programme) to develop some of the buildings for the Ancient Rome project.

Attainments:
Developed a 3D model of Ancient Rome which has increased public facing and teaching portfolio and are used to illustrate research findings. Currently in discussion with BBC Scotland in a pitch for some modeling work based around the Romans in Scotland.
Very positive feedback from students when using the model in teaching. Has created an optional Digital Modeling module (CL3RC – Roman Cities) in the Undergraduate course. As part of the module runs a 2 hour workshop showing the students how to use the software. Students use the free version of the software 'Google Sketch' and have attained some nice results. Has created a similar module in the MA course.

Colleagues from the History of Art department have been inspired by this work and begun to use the software in their own teaching.

Needs:
Currently working on a 3 year project to develop a 3D model of Silchester Roman town.
Would like to develop the digital modeling further but constrained by the needs of the REF. Feels that the project creates 'impact' but the Impact framework may be too constricted for this project to be considered. This year hoping to engage a student to develop a digital model of an ancient Greek clock.

Evaluation:

Concerned that the University do not provide support for MAC users. Created MAC user email list. Any solutions to technical problems provided on-line using forums, tutorials; and printed instruction

guides.
Through the department there is only a budget of £200 per academic year to meet training and development needs, however £1,000 for software and £5,000 for Hardware (MAC) was applied for and received via funds from Centre for Development of Teaching and Learning and The University's Annual Fund. Received Teaching and Learning Fellowship and successfully bid for funds from the Teaching and Learning Fund to receive £18,000 over 3 years. Considering professional training days but finding cost a barrier.
Has attended a Business Development 'Commercialise' course.
Feels vulnerable pursuing the digital projects because of the emphasis on research output from academics.
Would be prepared to do a lunchtime seminar for other teaching staff to share experience.

Digitally Ready project – case study 4

Introduction: Student, SSE [vs09]
Context: **Final year student, actively engaged with start up companies. In fifth year at the University.**
Engagement: A keen programmer and advocate of appropriate technology use. He maintains his own blog which he regards as a diary rather than a means of dissemination, and is often surprised at how many people read it and comment on it. A Twitter user, although academic and work pressures have reduced the amount he uses it. Seldom uses Facebook these days.
Attainments: Self Starter Has developed several clients for third party systems, as well as working on the back-end systems, and is sought after as a developer by start-up companies. He engages with new technology and experiments, and is willing to share his experiences. He has gained jobs through his social media presence.
Needs: He needs to be able to retain the freedom to explore and experiment with technology, and hates the idea that a 'digital skill' commonly requested by people returning from industrial placements (in this case, training in how to video conference) could be made compulsory. He gets support and learns how to use new systems through searching (in his case, typically using Google) and through expert groups. He will turn to trusted friends and acquaintances for help and advice, as well. He avoids posting to social media if there are potentially legal grey areas, and tends to avoid the University supplied systems if at all possible.
Evaluation: Finds ITNG provides good and timely support and resources. Uses LinkedIn for finding people, but avoids groups (as they are spammy), but thinks training on LinkedIn might be useful for some people. He is problem/solution based – explores new software looking to see what issues it might solve, and evaluates whether there is a reasonable cost/benefit, especially in relation to effort invested. Feels that the University should have a greater degree of openness in communication. People should try to share, something which isn't seen from other students or staff.

Digitally Ready project – case study 5

Introduction: Student, SSE [vs08]
Context: **Final year student, actively engaged with start up companies. In third year at the University.**
Engagement: A keen programmer and advocate of appropriate technology use. Tries new systems and has experience of adapting existing systems for new uses.
Attainments: Self Starter He has gained jobs through his social media presence. Matches communications channels to audience, and finds learning new systems to be 2nd nature. Advocates that everyone should have their own domain name. Increasingly tends towards asynchronous communication as it allows for greater reflection and is more fault tolerant. Uses the web (both search and social) to help resolve problems when they occur. Uses a personal blog as a log of his activities, and regards it as an ePortfolio Publishes open-source software (also part of ePortfolio) Posts reviews on new technology
Needs: Could do with there being guidance on issues relating to using the correct form of address (Dear Sir/Madam, use of name, using 'Hi' as an informal greeting) in email. Regards search engine skills as very important
Evaluation: Good at identifying own needs, and exploratory approach leads to being ready for new developments. Identifies a strong approach to how to learn new systems as being a key element in digital literacy.

Digitally Ready project – case study 6

Introduction:
Student, SSE [vs10]

Context:
Second year IT student

Engagement:
Secretary to professional body, engaged with teaching others (charity) how to use social media for institutional purposes

Attainments:
Recently started using online banking, grandmother is better at texting. Uses Facebook for social and for project groups.
Skype user, for contact with close friends and family. Has fall-back plans in case of poor network performance.
Uses telepresence a lot for work.
Maintains separation of identities between social networks/other tools.
Maintains Facebook privacy settings.
Uses VLE a lot, always on laptop.
Institutional Email is only used for formal Uni communications, no cross-linking between personal and institutional accounts.
Uses Google mainly for search, changes to it if computer is set up to default to another one.
Learned to navigate and use VLE easily, transitioning from an intranet (which was easier to use)
Makes use of the persistence of information on social networking software to be able to refer back to earlier points in conversations.
Dropbox user.
Wikipedia – takes the contents with a pinch of salt, but finds it often gives a reasonable summary and is a starting point.

Needs:
Not aware of version control software (relevant to academic discipline), scholar.google.com, books.google.com, or advanced search techniques ('-', using 'site:' etc)
Knows about a range of support services and training, but doesn't think they would be useful.

Evaluation:

Identifies own needs and acquires skills to address them.

Happy with infrastructure, in general, with occasional problems with WiFi.

Uses personal network, or online forums to get support when necessary, and to learn new skills. Finds 'help' functionality is often poor, but willing to explore software, which is preferred learning approach.

Might see a need to develop an online brand in the future, maybe join LinkedIn, but initially wants to work for company, and not convinced it is necessary yet.

Digitally Ready project – case study 7

Introduction:
Gerry Leonidas, Senior Lecturer, Typography and Graphic Communication, Department of; School of Arts and Communication Design; Faculty of Arts, Humanities and Social Science CASE STUDY

Context:
Senior Teacher and Researcher – Early Adopter. Independent learner. Very experienced used of a wide range of digital technology. Not trained on Web CMS.

Engagement:
Interview focused on teaching, research and admissions
Highly engaged in a range of social media
Departmental level - many initiatives involving social media including Twitter to aggregate news, Facebook, LinkedIn and a Departmental blog for networking and Recruitment and Admissions work.
Around a third of staff have engaged – others not so that can result in an inbalance of work in this area in the Department.
The Department uses external sites such as Tumbler (typefacedesign.tumblr.com) used to showcase student work and to demonstrate 'real jobs'. There are also a number of staff personal blogs.
Is aware of University Imagebank but doesn't know where or how to upload.
Uses 'Dropbox.com' extensively – when this application became available use of the dropbox facilty in Blackboard dropped considerably. Now has a paid account.
Security on line using 3rd party application: :feels that there are other security issues more important – like the structure of the building itself.
Works in a MAC environment – laptop, iPad (personal one used for professional purposes); iPhone (feel this is more secure than the laptop as it is easily wiped remotely) All these necessary for teaching in a design environment.
All the Department's students expect to bring their own laptop and pay for their on licences in InDesign, Photoshop. Project based skills are taught throughout the course and students will experience using HTML , CSS and text editors around those projects as well as specialist typeface design.
Feels that IT Departments in HE will need to start adjusting as more staff will start to use their own equipment.
An early foray into DIY web design was well ahead of any web infrastructure that was available in the University – now managed bas a collaborative enterprise of graduates.
Runs a number of short high visibility CPD courses for professionals – would like to produce a microsite for participants – where participants cann annotate, record and the site be used as a marketing tool.
Would like those participants to be able to borrow from the library for limited periods (ths current system does not allow this)
Would like to be able to customize email in Blackboard as is possible in the Employee Self-Service.
Would like to see more integration of 3rd party systems such as RISIS and Trent.
Would like to have a more flexible approach than current processes allow.
Feels finance systems have particular useability problems – would like to be able to track on-line finances for particular projects. E.g. for CPD courses.
Anticipates serious delays when faculty offices are integrated – some part of the system are still paper based – has experienced losing potential international students because of the lack of an integrated system.
Feels that the student recruitment pathway is opaque – there is no way of tracking what pieces of information a student receives. Some prospective students (particularly from some of the Arab States and from Middle East will message via Facebook and there is no way of recording this

‘conversation’. Privacy issues.
Would like to develop video showcases to be published via channels such as iTunesU as part of a ‘rad trip idea to international universities.

Attainments:
Self starter.

Evaluation:

Frustration with building facilities – Department needs more screens with projectors for type of project based teaching and this is reflected in feedback from students particularly on the CPD courses. Digital printers are often placed at remote corners of the building. UoR does not compare favourably with other universities’ conference and teaching facilities.

These are limiting factors for growth in the department.

Frustration with University processes. Web CMS training takes too long. There are more flexible tools on line such as Wordpress. Feels that the process of getting a Wordpress account is unwieldy. Has been difficult to get news items published via CMS.

University Twitter convention Uni_Rdg does not leave enough characters for the rest of the e.g course- missed opportunity for branding.

Very excited by the internationalization project – some of the summer courses are almost entirely attended by international students – would like to see participants to be able to book not only the course on-line (only just available) but also accommodation.

Is the University ready to address issues of self-publishing - see Apple new text book authoring tools – makes it easy to convert to ebooks for iPads – they are annotable, editable and updatable – version control issues? – Who will own what?.

Academics training need re social media for professional development - will the University recognize and value this as part of the job?

Digitally Ready project – case study 8

Introduction:
CASE STUDY

Context:

Professor of Learning Technologies, Systems engineering; currently on study leave concentrating on writing up research, but normally involved in lots of admin and teaching; last year school director of post grad studies ensuring our post grads progressed from recruitment to graduation which includes things like ensuring they had the right skills to search for resources online; also teaches programming to undergraduates, which is a different set of digital skills to most student needs.

Engagement:

'I am a geek so I use tech a lot' An early adopter.

Living : parents- while they were alive and living in Yorkshire, got them set up with an email account via their TV/phone supplier, and they were able to send regular message to say what they were doing; occassionally used Tesco online groceries to get them supplies when they were unwell.

Friends & family Communicates with friends and family a lot online using sat nav, mobile phone, lap top, desk top, digital camera: etc. On holiday needs a lot of chargers - feels that and the move towards standardization will help. Concerned that hotels either charge a lot for access or can't believe you have more than 1 device per room. When going on holiday with the grown up children and partners, used google docs to agree menu and shopping; used a google spreadsheet to keep track of wedding invites and responses.

Recommends :Skype for online meetings; GoTo meeting; mobile phone (an Android smart phone) for internet access when out; the iPad for casual use, its light weight (fits in handbag); Twitter for quick information; Endnote; Adobe Connect to run meetings

Tends tend not to reject technology doesn't get on with - just doesn't use it much e.g. PDA

If something goes wrong most things can be solved by Googling the error code or talking through with husband, an engineer

Finds the blurred boundaries between work and play tricky – doesn't particularly segregate life so does not have a 'work identity'. This does not present any real problems apart from occasionally sends emails from wrong account

Work :

For own tutees/supervisees – lets them know if they don't get a response (or out of office) to an email - they should send it again in a couple of days, as gets far too much email and things get overlooked. Students seem to take that on board. Communicates with some via twitter .....but again there is an ethos - if they send a DM - assumes should reply, if students are just chatting then may or may not respond.

Doesn't like Blackboards approach to email i.e. a student sends a mail to "Instructors" and all the instructors receive it but don't know if the others have got it - or replied

Describes Blackboard as 'clunky' i.e. difficult to navigate, you don't know if a forum has new posts, unless the subscribe is turned on (then you get far too much email), lists of students can end up sorted on surname and then a field that is not first names

For solutions to these sorts of problems - mostly self reliant, but some problems beyond control - like limits on space etc when mailing ITS help can resolve, some things are in CDoTL

remit and so talking to them (some bits of Blackboard are customied)
There is the SELC school elearning coordinators forum where teaching staff can share best practice or resolve problems with the VLE which meets once a term plus various Teaching an Learning events have showcased elearning practice. Some of these have been useful – other not but in those cases may not be the target audience. Not aware of any online discussion forum.

In the past has been on the Working Group that reviewed student email.

Most used tools : email - outlook exchange; Excel , Powerpoint, and Endnote, and Twitter, and stick notes (on the mac); Dropbox for collaboration within and beyond the University, (aware UCL have their own version of Dropbox) useful for Phd students to put revised chapters of theses there. Also been useful for versions of grant submissions.

Student feedback shows that they have gripes about technical things (clunky blackboard) but also endless chain emails from careers and others
They have suggested that they would like to be communicated by tweets over the weekend – they have found the new ITS blog helpful. Lots of students just don't read their Reading emails because there is so much stuff they consider junk

Feels University should get view of what already is happening in Digital Technology; look at best practice elsewhere; consider what budget is available. Need to get the buy in of all stakeholders

Pleased to see new VC's video - a good use of media, wonders if he will use other media. Aware that various VC, and the Principal at Royal Holloway tweet, feel that Paul Layzell (RH) gets it just right

Attainments:

Self Starter

Development: sees something interesting and if time tries it, if no have time knows others will try it and if it is good will mention it again. Has links to a couple of technical people in the Knowledge Transfer Partnership that have associates looking for good tech to address their problems so often they highlight stuff that may have been missed. E.g. Saw Meeting Burner was in Beta and had been recommended so worth an experiment.

Needs:
Would like to see a University strategy about our digital services then to decide how to prioritise.
If money was no object believes a root and branch review of elearning/VLE/timetabling/RISIS etc would be useful. Recognises that if the University were to change to a single integrated systems there would be a lot of work, and some may find transitions painful. Need to look for what are small things that can be done to make peoples'

lives better. ITS systems are more robust, they know we would like single sign on. People need to know the pain that problems with the timetabling system causes at the start of each term for staff and students.
Evaluation: Understands the process for raising issues? i.e. small things via a ticket to ITS Larger projects need to be steered differently i.e. School Board of Studies to raise issues at that University Board for Teaching and Learning. Other wise self-starter.

Digitally Ready project – case study 9

Introduction: Alumnus, English [ts01]
Context: **English graduate, currently employed in IT support**
Engagement: Tries new systems, finds very few hold attention for long.
Attainments: Self Starter Has gained jobs in IT related fields through personal development and exploring the tech. Has identified key aspects of copyright and licencing issues, and is confident (though points out, not expert) that material posted does not infringe others' rights and own material is sufficiently protected Has been active in collaborative knowledge creation online.
Needs: Advice on digital tools while at Uni may have been useful Would like to have a 'competency framework' to be able to judge own skills
Evaluation: Good at identifying own needs, and exploratory approach leads to being ready for new developments. Identifies a strong approach to how to learn new systems as being a key element in digital literacy. Makes use of Creative Commons licencing to publish own materials on the web. Has little use for social networking, has had accounts on all major services and finds email and document sharing cover most needs and feel natural.

Appendix VI: Stakeholders

The Stakeholder analysis from the project plan identifies the key interests and stakes:

Stakeholder	Interest / stake	Importance (H/M/L)
Students	**Needs:** Awareness of digital literacies, development of capabilities for learning and employability **Offe**r: Feedback on project	High
University senior management Deputy Vice-Chancellor Pro-Vice Chancellor (T&L) Faculty Directors of Teaching and Learning	**Needs:** Support the aims of the University's enhancement priorities Support School L&T plans Enhance the T&L profile of the University **Offer:** High level support for project, ability to influence other institutional key stakeholders	High
University T&L Enhancement support staff	**Needs:** Support the aims of the University's enhancement priorities Opportunity to improve pedagogic approaches **Offer:** Use of established networks and contacts to support implementation and piloting Advice and support to project Scope for external dissemination through networks	High
University Academic, Research administrative and support staff (including the Centre for Staff training and Development, Centre for the Development of Teaching and Learning, Library, Student Employment, Experience and Careers Centre)	**Needs:** Awareness of own digital literacies, development of needed skills and capabilities **Offer:** Feedback on project objectives Testing, piloting and evaluation of project outputs Scope for dissemination of project	High
Employers	**Needs:** Student skills and capabilities for employment **Offer:** Advice	High

	Support Feedback on project	
JISC	**Needs:** Contribution to the JISC 'networks' **Offers:** Financial and management support; advice and training	High
Other JISC projects	**Needs:** Learning from other institutions, Cluster meetings **Offers:** Advice and support through the project Evaluation Group	High
Wider HE community	**Needs:** Resources to enhance teaching and learning **Offers:** Demand for project outputs Opportunities for cooperation and collaboration	Medium
Professional bodies and associations such as SEDA, ALT, HEA, etc.	**Needs:** Resources to enhance professional development **Offers:** Demand for project outputs Opportunities for cooperation and collaboration	Medium

Appendix VII: School E-Learning Co-ordinators Meeting 23 November 2011

The School E-Learning Co-ordinators meet regularly to share experiences and develop communal practice. However, their role is not always well-recognised within their Schools, and this particular session was run to help them to bond, identify their own goals and to discuss the digital literacy agenda.

Roles/Level/Schools/Departments

- Library Learning Support Co-ordinator (Library staff & Blackboard course for students)
- School E-Learning Co-ordinator Psychology (Blackboard website; school, department, group courses; support for staff; e.g. different venue)
- E-Learning Co-ordinator (academic) REP
- Variety of job titles although what is done for the school overlaps
- Construction Management Courseware Support Officer
- Law IT Support Technician
- ICMA – New Media Manager (push barriers of Blackboard); Day to day Blackboard support; School administrator (Laura J. – invite)
- Business School Resource Manager (get Greenlands – Blackboard)
- ITS – IT Trainer
- CDoTL – Richard
- Pat: Teaching/Support/Student… SSE, CDoTL
- Lindsay: Student Office; Blackboard and Web Administrator
- Becky: Teaching and Learning Support (Admin) (SAPD)
- Anne: SELC + Department E-Learning dissemination (Academic)
- Enza: Teaching (Academic) – E-Learning development at departmental level (Modern Languages)

Examples of technologies uses

- Blackboard
- Web 2.0 (find who) – tool within role
- Technology – paper – wiki e.g. tutorial – use of wiki, web
- Arranging seminars via wiki
- Paper
- Electronic files
- Version control
- Doodle
- Outlook & Exchange; web version of Outlook
- Oxford Brookes
- Assess 200 U/G (undergraduates)

- Google docs
- Student evaluation
- Polling via mobile phone
- Polling in classroom
- Text wall
- VLE discussion board
- Online journal
- Proactive use of Blackboard
- Turnitin
- Paperless
- Blackboard; Blended Learning/Distance Learning
- Use of video/Wimba/Web (surveys)/Skype/Jing
- Smartboard/Feedback learning/Turnitin/Presentations/Online/Pressie

Issues/Whines

- E-Learning is not restricted to Blackboard
- Frustrating to have to find so many workarounds
- Lack of training opportunities and support for e-Learning technologies other than Blackboard – not well supported to explore other technologies
- Pressure to use Blackboard even when other technologies seem more appropriate
- Lack of funding for specialist software (e.g. cartography software for Geography students)
- Distance learning via iPhone/iPad not Blackboard compatible
- Infrastructure – support both end
- Complexity of troubleshooting, Turnitin Helpdesk especially peak periods
- CMS – only way is via Drop In And Learn session
- Formatting of text into Blackboard portals – sanitise via Notepad
- Problem not technology but definite processes – RISIS enrolment
- Time/Training & support (own time/students)
- Organisational barriers (i.e. access to IT support)
- No channel for dissemination – need forums/workshops, opportunities for conversations and sharing
- Motivational issues i.e. often colleagues not on board

Role of SELCs

- Liasing with academics
- Important it is someone who is interested
- Sharing good practice
- Mentoring approach to training – informal 'buddying up'
- Set up blog for e-Learning champions: relevance of technologies to T&L; discuss how student participation using technology is assessed; educate students about what they are expected to put in and what they will get out of using technology
- Introduce and support other technologies as appropriate
- Forum for discussion
- Disseminate what is happening elsewhere
- Mentoring system for expertise
- Share best practice – collect best practice
- How can you access between meetings?
- Blackboard organisation/wiki/forum/discussion board to discuss how to broaden and strengthen
- Clarification of where experience lies
- Communication to University communities
- Set up research website – bigger than T&L
- Best practice e.g. Turnitin (= common subject) from members of UoR
- Exchange of information
- Find people in UoR who have practical experience of what you want to do e.g. distance learning; mobile learning
- Tips
- Exchange of ideas/best practice
- New T&L technologies/updates
- Opportunities for training/School-based training/By uni staff/Electronic via video with opportunities to ask for more help
- Acknowledgment of work and commitment – part of workload, i.e. reduce teaching
- Get students involved ?? (i.e. project, feedback) – student produced guides on how to use Blackboard

Appendix VIII: The Development Pyramid

(from http://radar.brookes.ac.uk/radar/items/34ca8303-b29f-ee91-24da-e88098af500c/1/)

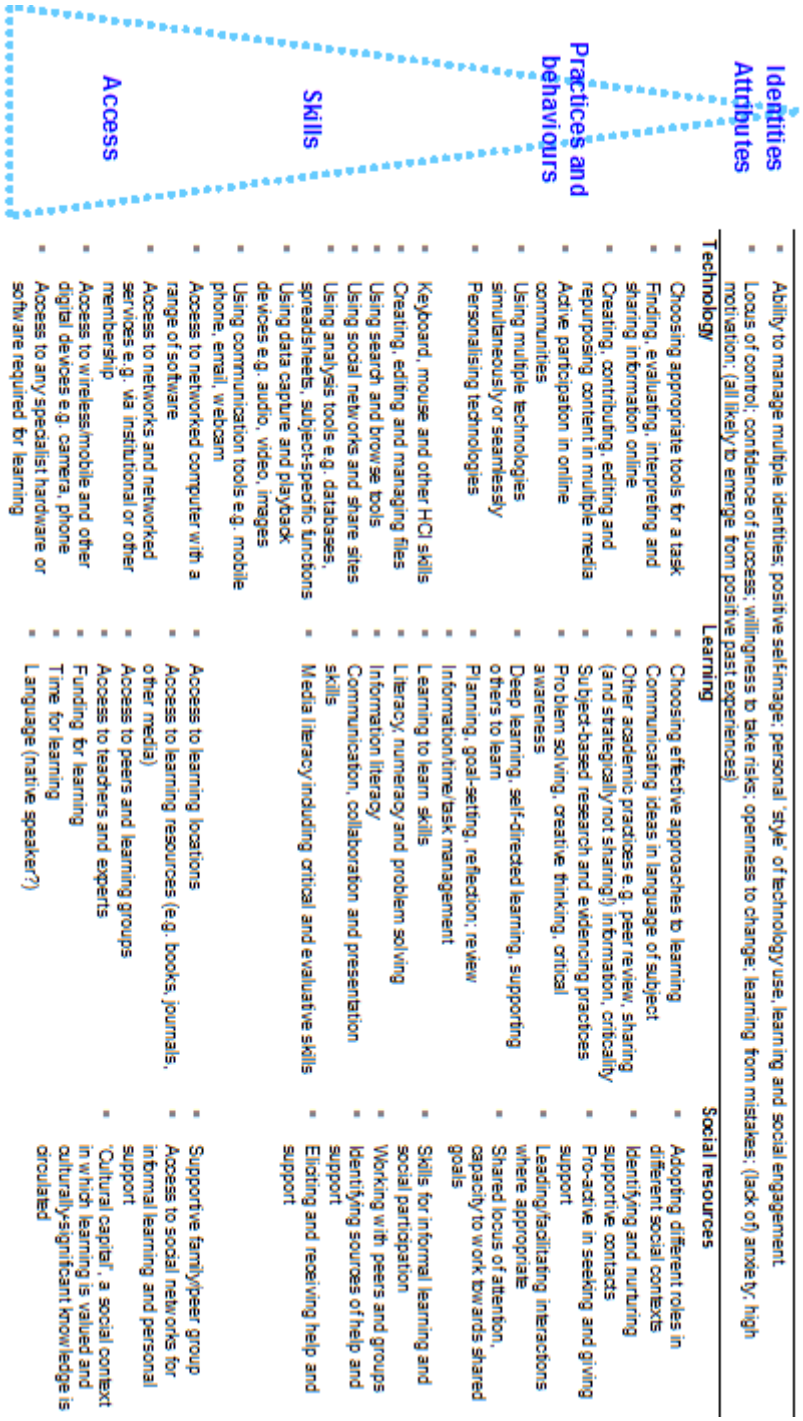


Figure 2 Developing Effective e-Learning, the Development Pyramid, key issues