Mapping Resources to Competencies: a quick guide to the JISC Developing Digital Literacies resources.

1.   Introduction

SCONUL has been working as a participating professional association in the JISC Developing Digital Literacies (DDL) programme, which ran from July 2011 to December 2013. During this process SCONUL drew upon the considerable expert advice available within its community, and worked in close collaboration with peer organisations and specific project outputs to explore new approaches to embedding digital literacy in working practices.

A baseline survey of SCONUL members raised key questions relating to bridging the gap in staff competences, identifying examples of good practice, the use of the digital literacy lens as a staff and student development tool, and opportunities for SCONUL to champion or lead on digital literacy. We looked closely at the outputs of the JISC DDL programme and themed and analysed them according to these key questions. This report offers some ideas for those faced with the challenge of developing these literacies, whether at a managerial or personal level. We have sign-posted resources around policy and strategic change management recognizing the importance of collaborative conversations within and across institutions. It is important that the ownership of digital literacies is shared across and amongst institutions and services and is not the purview of one stakeholder. This report serves as a starting point for readers to identify resources for the development of their staff, service and institution's digital literacies and capabilities.

2.   Context

As digital technology permeates every aspect of our lives, SCONUL has an obligation to reflect this in supporting its membership in the delivery of efficient, relevant and forward thinking services. Informed by on-going debates on graduate skills and employability, research training, digital library developments and learning and teaching using digital environments, SCONUL takes a lead role in supporting information professionals to deliver innovative information literacy teaching within HE institutions, and to contextualise this within institutional learning and teaching strategies (such as the Seven Pillars model). SCONUL also has direct influence on the digital research environment and on the information seeking behaviour of researchers.

In order to assess and benchmark the effectiveness of its own digital presence, its members' digital literacies and to propose changes to professional development where appropriate, SCONUL has been working as a participating professional association in the JISC Developing Digital Literacies programme, which ran from July 2011 to December 2013. During this process SCONUL has drawn upon the considerable expert advice available within its community, and worked in close collaboration with peer organisations and specific project outputs to explore new approaches to embedding digital literacy in working practices.

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This document explores resources and developments around the JISC Developing Digital Literacies (DDL) programme through a SCONUL lens. It considers the outcomes of the SCONUL baseline survey (2012) and maps key findings from the survey to relevant resources available through the JISC Design Studio resource, which collates project and association outputs from the DDL programme. The DDL programme has generated a large number of resources. This document is designed to help SCONUL members focus on those most relevant to them in the pursuit of developing digital literacies.

Hopefully this summary of some we feel are most relevant to SCONUL members will help to ignite or fan your interest in continuing to develop your service's contribution to the development of digital literacies in your institution. The threads that tie these outputs together are based on taking a strategic perspective to institutional change based on 'inter-departmental multi-stakeholder conversations' – involving not only librarians but other services as well as faculty and students in a unified process which acknowledges that digital literacies are not the sole 'property' of one department but the responsibility of the wider academic community. These conversations can be facilitated through careful examination of many of the links to resources in this document – and many more can be found on the JISC Design Studio. Developing networks and collaborations through these conversations will enable a cooperative stance and an informed approach is more likely to amplify the voice of the library in these conversations. This will help maintain our relevance in the changing information landscape. Following and citing good practice examples will continue to contribute towards making good practice common practice, and adopting and adapting formal CPD frameworks will contribute towards strategically meeting these aims. Using up-to-date tools for staff and student development will keep libraries on the cutting edge of development and delivery of digital literacies, and the more widespread use and continuing development of our Seven Pillars, and the new Digital Literacy Lens, will help to unify the sector and provide our stakeholders with a consistent message.

3. SCONUL Baseline Survey

The SCONUL baseline survey was designed to assess four main issues:

1. **Digital Literacies**: *The role of existing professional or competence frameworks which may include references to digital capabilities/literacies.*

    In the examination of various competencies required by staff involved in student support and academic liaison (IT, Information, Media, Communication and Collaboration, Digital Scholarship, Learning Skills) it was found that Digital Scholarship and Media Literacy were identified as key competences which had a low level of expertise and high level of importance. These competencies were

derived from the JISC definition of digital literacy, "those capabilities which fit an individual for living, learning and working in a digital society" (JISC, 2011). These are detailed in Appendix 1.

2. **Digital Literacy Lens of SCONUL Seven Pillars**: *Current levels of support offered by SCONUL to members for professional development, and if available where the focus is on digital capabilities/literacies.*

There were 53 respondents to the online survey, representing a c30% response rate. The respondents made favourable comments on how the current Digital Literacy lens of the Seven Pillars maps to the JISC digital literacy competencies, although some suggested that minor modifications could improve it slightly. We acknowledge that this sample, through its nature as SCONUL members, may be predisposed to support the lens. It was suggested that the tool would be useful in the communication and development of digital literacies in others and as a measurement tool for staff competencies.

3. **Current practices and initiatives**: *How SCONUL members support digital capability in individuals and institutions and linked to this, is how members currently develop their own expertise.*

Although some services are leading on institutional development of digital literacy strategy, the majority are working on this in partnership with academic departments and other service areas (particularly L&T development).

4. **Digital literacies and workforce development**: *How SCONUL members understand digital literacy and its relevance to roles/professional practice.*

Locally delivered role or sector-specific staff development was found to be the most popular approach, possibly supported (but not led) by academic study or SCONUL initiatives and shared across other relevant professional bodies.

The survey raised some key questions:

a) Where evidence suggests that staff are at either a novice/competent stage, but development is seen as essential what action is being taken to bridge the gap?
b) What are the examples of good practice in the field of staff development/digital literacy?
c) How valid is the digital literacy lens as a tool to be used, either with staff, or as a tool to underpin the development of student skills?
d) What opportunities exist for SCONUL to adopt a more strategic role to champion/lead on digital literacy?

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The following pages map each of these four questions to the outputs of the JISC Developing Digital Literacies programme, highlighting and providing links to those which we feel are relevant to help answer them and to provide invaluable resources to SCONUL members exploring the development of digital literacies in the educational sector.

1. Where evidence suggests that staff are at either a novice/competent stage, but development is seen as essential what action is being taken to bridge the gap?

These DDL resources provide evidence that other types of stakeholders are experiencing similar issues to SCONUL members in terms of the need for staff development in the area of digital scholarship. You may find these useful in reinforcing your case when developing institutional, departmental or service policy and strategy in this area, or if you are seeking to develop links across service areas.

Policy / strategy development / organisational change

In the baseline survey we examined how services were contributing to strategic development of their institution's digital literacy. The results indicate that a significant minority are directly contributing to institutional developments, but the majority of activity is being undertaken on a more local basis. The findings also suggested that many respondents were contributing in partnership with academic departments and other professional service areas. The projects below were working specifically on the area of institutional change and interdepartmental collaboration which may be of use to readers working in this area. Fundamentally, the recognition of digital literacies by policies, strategies and the organization leads to the release of funds and other resources to develop staff skills in this area.

Cardiff University (Digidol): ambitious project concentrating on facilitating organisational change to enable university-wide development of digital literacy identified the importance of internal communication and promoting good practice. Importance of embedding digital literacies in institutional strategies, cross-service conversations, barriers of time and skills, identified range of approaches to development including formal training, task-based and peer support [Baseline survey executive summary 1 (DL for Teaching and Learning), Baseline survey executive summary 2 (DL for Researchers and Administrators), INSRV DL strategy, Librarians social media forum case study, Strategies, Bridging the gap between practice and services]

University of Bath (PRIDE): similar to Cardiff University, PRIDE seeks to enable institutional change. Their examples of 'Faculty Learning Community' workshops illustrate their view of involving staff and students in this approach and importance of discipline-specific views on digital literacies [Introductory video]

Plymouth University (SEEDPOD): again, Plymouth are exploring effecting institutional change and the embedding of digital literacies, recommending auditing, senior management buy-in, and communicating through use of existing networks. They

suggest their Roadmap may be useful for those in other institutions making digital literacies more explicit, while their notes around effective change may resonate or inspire you.

Networks and collaborations

It is fully acknowledged that HE libraries do not exist in a vacuum and many of the issues SCONUL members face align to similar issues in other professional service departments. These resources highlight the value of developing networks and collaborations across services, as highlighted by the widespread collaborative nature of strategy development raised by the survey.

Heads of Educational Development Group (HEDG): familiar issues such as the barriers of time, workload, lack of resources, fear of new technology, conservatism of the organization and lack of strategic approach; opportunities of cross-departmental collaborative practices and work with students [Baseline survey pdf, Baseline survey (analysis) pdf]

University of Exeter (CASCADE): Exeter focus on post-graduate researchers (and professional services staff) as change agents. Their baseline survey highlights the relevance of discipline-specific resources, the barriers of time and resources, and the importance of strategy [Baseline report]

Standing Conference on Academic Practice (SCAP): survey of members responsible for academic development in research-intensive institutions identifies opportunities in using VLEs to drive digital literacy development, and collaboration with students when developing digital literacies and risks in discipline-specific imbalances leading to gaps in provision [Baseline survey pdf]

Good practice / case studies

As library practitioners continue to expand their skills in teaching and learning a deeper understanding of key issues in learning development and in student user needs becomes increasingly important. These resources are valuable examples of good practice and case studies.

Association of Learning Development in Higher Education (AldInHE): key issues for learning developers include use of social media and mobile technologies, issues of time and cost, value of good practice, local digital champions and case studies in improving delivery of training support. [Baseline report pdf]

Institute of Education (IoE): detailed user study exploring student attributes and the implications in the delivery of sustainable digital literacies, in collaboration with library and using SCONUL strategic vision [Key messages]

CPD frameworks

In terms of supporting the development of digital literacies within services, CPD events, compulsory appraisal targets and staff and self-development training programmes figure amongst the wide range of approaches taken across the survey participants. Some comparable services, such as those coordinating the activities of teaching administrators, take a profession-wide approach to CPD, mapping skills to frameworks. Those listed below reflect the issues around digital literacies for other services. SCONUL members will recognize many of these issues in their own practice, allowing them to engage more effectively across services.

Association of University Administrators (AUA): survey of digital literacies in HE administration and management highlights the importance of mapping effective and professional use of digital skills to CPD framework [Baseline report pdf]

VITAE: survey of researchers and professional staff involved in the development of researchers (including librarians) suggests high use of mobile technologies and low use of VLE, intranet and collaborative tools by researchers, and uptake of digital literacies training is limited and restricted by time, opportunity and cost [Baseline survey pdf]

Staff and Educational Development Association (SEDA): professional development framework for staff involved in learning technologies recognizes value of digital literacies: [Embedding Learning Technologies]

University College London (Digital Department): UCL focus on 'teaching administrators' as change agents, in collaboration with AUA and ALT. They suggest informing digital literacies development through detailed training needs analysis and map their TA skills to the AUA professional behavior framework [Mapping pdf]

2 a. What are the examples of good practice in the field of staff development?

In Section 1 we presented some useful resources relating to management issues such as developing policies, collaborations, case studies and CPD frameworks. In this section we focus on some specific tools which may be useful to those who already have policies in place but are looking for ideas and approaches useful in helping to achieve the objective of a digitally literate workforce. If you are interested in developing staff or your own skills in the area of Digital Literacies, these resources may be relevant to you. Here we look at frameworks and programmes for good practice delivery of staff development, supported by state-of-the-art tools and case studies of some of these approaches.

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Frameworks

These examples of skills mapping and professional development frameworks highlight the similarities between the experience in library services and other areas across FE and HE institutions, including researchers, university and teaching administrators.

Association of University Administrators (AUA): Mapping university administrators' skills with digital literacies shows how an audit of the attributes of your staff or yourself against existing JISC capabilities may help to identify gaps requiring development;

Staff and Educational Development Association (SEDA): Professional development framework is an example of formal accreditation for staff development across the board: VITAE: a combination of the use of the Vitae Information literacy lens (which is informed by the Seven Pillars) and the more detailed Researcher development framework planner is a valuable approach for those who recognize a need to focus on research as an element of staff development;

Cardiff University (Digidol): Learning literacies framework may help model the journey from 'awareness' to 'identity'; Subject librarians framework is a detailed example of applying this model to subject librarians involved in supporting learning literacies and would be a valuable tool in staff self-assessment exercises;

University College London (Digital Department): Mapping of TA skills for professional development is an accessible visual resource which could also be applied in staff self-assessment and career development planning;

University of Bath (PRIDE): Digital Literacy Attributes mapping exercises showing the importance of considering disciplinary differences in attributes, which will be useful to develop staff skills relevant to the academic focus of your institution.

Programmes

These various programmes are good examples of how formal training based on the frameworks may be used to enhance service quality through staff development.

Staff and Educational Development Association (SEDA): Embedded learning technologies programme is relevant to staff involved with learning technologies as part of their professional work;

Association for Learning Technology (ALT): CMALT (Certified Membership training prospectus) is a portfolio-based professional accreditation scheme for development of staff involved in the use of learning technology;

![SCONUL]

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University of the Arts London (DIAL): Teaching development guides may provide useful support in particular areas of these types of programmes,

University of Reading (Digitall Ready): Staff development diary shows the wide range of possibilities when developing staff programmes.

Tools

There is an enormous range of tools for staff development – these are just a few examples produced by the DDL projects and associations, some of which are immediately accessible online self-development resources, others being aimed at a higher level for use in training programmes.

Association of Learning Development in Higher Education (AldInHE): Learn Higher resources Professional development toolkit linking digital literacies with learning and pedagogy

Plymouth University (SEEDPOD): Guide to running an iPad workshop,

University of the Arts London (DIAL): Using iPads in technical workshops

University of Exeter (CASCADE): Developing the digital curriculum

Association for Learning Technology (ALT): OCTEL Open Course in Technology Enhanced Learning: MOOC for use in developing skills in technology enhanced learning.

University College London (Digital Department): useful document developed as an example of designing a PDP qualification

University of Bath (PRIDE): Resources for Faculty Learning Communities consultation workshops; Evaluating FLC: plenty of detailed resources around approaching digital literacy from a faculty perspective highlighting the importance of 'inter-departmental multi-stakeholder conversations'.

Case studies on specific approaches

Case studies can be very useful for inspiration and to provide real examples to participants in new processes. Although these examples focus on staff development are not taken directly from library environments they again show how experiences may connect across services.

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Plymouth University (SEEDPOD): Useful case studies (short videos) on using technology to enhance learning;

Association of Learning Development in Higher Education (AldInHE): Useful links to various case studies around implementing UKPSF, including online self-help resources (University of Reading), digital literacies in PGCert (LSE), and use of discussion boards (University of Bedfordshire) illustrating breadth of coverage across the sector.

Association for Learning Technology (ALT): Example of UCL staff engaged in CMALT (teaching administrators) programme, with more detail from AUA: work with ALT and Digital Department UCL and portfolio case study example from participant from Digital Department at UCL.

2 b. What are the examples of good practice in the field of digital literacy?

Some useful links in the development of digital literacies. These specific tools for teaching may provide ideas or inspiration.

Association of University Administrators (AUA): AUA Digital Toolbox: Useful collection of links to resources aimed at administrators and managers in HE, many of which would be useful to library staff (social media, blogging, time management etc);

University of the Arts London (DIAL): Library services example of 'Discover' researcher guides (Open Information Resources, Research Data Management, Zotero) and video presentation skills

Cardiff University (Digidol): comprehensive mindmap-style Knowledge Hub linking to online tools for managing, sharing, manipulating, finding, producing and communicating content;

Plymouth University (SEEDPOD): Digital Tools for Busy Academics is a basic introduction to online tools, many applicable to librarians such as Skype, Facebook, Wordpress, Slideshare. The more detailed Researcher skills guides provide a comprehensive resource to online resources for researchers including mindmapping, reference management, online surveys.

3. How valid is the digital literacy lens as a tool to be used, either with staff, or as a tool to underpin the development of student skills?

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Identify	Scope	Plan	Gather	Evaluate	Manage	Present
Understands:	**Understands:**	**Understands:**	**Understands:**	**Understands:**	**Understands:**	**Understands:**
The concept of digital literacy within an educational setting **The Internet** is not regulated but content may be structured and regulated in a variety of ways depending on the requirements of the provider **Technology** is constantly evolving and the exploration and evaluation of new and emerging information systems is a lifelong process **The lifecycle** of digital content, including issues around provenance, sharing and long-term access and preservation **The benefits and limitations** of using different forms of digital content, tools and technologies to meet specific needs	**Issues** around copyright, IPR and CC licences in relation to the use and creation of digital material **The need** to address issues of accessibility relating to digital content **The characteristics** of different digital publication formats, the functionality available within software platforms and the benefits and limitations of these in relation to the task **The impact** of online collaboration and networking as a means of developing, exchanging and communicating information	**How to** search for digital content using appropriate tools and techniques **The differences** between search tools (operating within and between environments), recognising their benefits and limitations **The impact** of sharing digital content **How the use** of different online communication tools can extend reach and enable teamwork and collaboration **Where to** locate and publish digital content for formal publication purposes and for information exchange purposes, appreciating the differences between the two	**The range** of different forms of digital publication and media, the different audiences they are designed for and how they are organised **Issues around** the popularity of a resource versus its academic quality **How digital** technologies are providing collaborative tools to create and share knowledge and the implications this has on gathering specific information. **The risks** of operating in a virtual world and how they can be mitigated **The importance** of appraising and evaluating results of online searches	**The need to** make choices in the use of different technologies to meet specific needs **Issues of** quality, accuracy, relevance, credibility, format and accessibility relating to digital information **How to** assess the profile and visibility of digitally published information using analytic functionality and tools **The need to** be a critical user of digital technologies **The importance** of citation of digital resources in learning and research contexts	**The need** to handle, store and disseminate digital information and data in a responsible and ethical way **Issues** of plagiarism **The principles** of citing and referencing digital sources and formats to enable verification **The need** to keep systematic records of digital sources using relevant technology **How** technologies can be used to personalise individual and shared digital environments **How** security profiles can be used to manage levels of interaction	**The need** to select a communication approach suitable for the audience **Issues** around accessibility of digital information, formats and compatibility with accessibility software **The importance** of online security and privacy **How to** communicate appropriately online **The need** to consider the digital self and ones online presence **That new** technologies allow for information in new ways (blogs, wikis, open access)
Is able to:	**Is able to:**	**Is able to:**	**Is able to:**	**Is able to:**	**Is able to:**	**Is able to:**
Recognise the importance of skills in locating, creating managing and sharing information through a variety of digital forms **Identify** gaps relating to the use, application or development of digital environments and tools **Continuously assess** how the use of digital content and tools could enhance academic practice **Recognise** where digital solutions can meet a specific information task or need	I**dentify** gaps in knowledge relating to digital tools or content **Identify** search tools for locating quality digital material **Assess** different digital formats and select those to meet current need **Use** new tools and technologies as they become available and evaluate them for suitability **Assess** how online collaboration can enhance academic practice	**Identify** appropriate online search techniques **Remotely access** external digital sources in order to extend opportunities for discovery **Assess** which form(s) of digital media best meets the criteria identified **Use different** online communication approaches to extend reach **Assign** meta-data tags to content to enable future discoverability	**Use a range** of digital retrieval tools and technology effectively **Access**, read and download digital information and data **Engage in** online collaboration and networking to access and share information	**Assess** the suitability of digital content for the intended audience **Assess** the quality, accuracy, relevance, credibility, format and accessibility of digital material **Read** online information critically, taking into account access restrictions **Maximise** discoverability of own digital material using indexing strategies	**Use** appropriate tools to organise digital content and data (social bookmarking, bibliographic software) **Cite and** reference electronic sources appropriately **Manage** digital resources effectively taking account of version control, file storage and record keeping issues **Personalise** the digital environment according to need	**Communicate** effectively in a digital environment, using appropriate tools, to meet audience needs, taking account of accessibility issues **Confidently use** the digital media appropriate for presentation **Develop** an online personal profile using appropriate networks and technologies **Stay** safe and, if necessary, private in the digital world **Select** appropriate publication and dissemination outlets to share information

Although the original Seven Pillars have had a major impact on the discussion of IL, and the framework is regularly mentioned throughout the JISC DDL material, there is minor evidence of DDL projects which discuss the use of the recently introduced DL lens on the 7 Pillars:

Cardiff University (Digidol): [Baseline survey executive summary 1 (DL for Teaching and Learning)], [Baseline survey executive summary 2 (DL for Researchers and Administrators)] VITAE: Information literacy lens, Baseline survey

In a consultation meeting between Vitae, SCONUL and representatives of the DDL projects Digidol (Cardiff) and Pride (Bath) it was agreed that Vitae would explore incorporating elements of DL into the existing IL lens on the RDF.

Although there appears to be support in the survey for the digital lens on the seven pillars, examples of its use are mainly anecdotal and not available in the public domain.

Examples of external use of the DL lens:

a) British & Irish Association of Law Librarians (BIALL):
http://www.biall.org.uk/data/files/BIALL_Legal_Information_Literacy_Statement_July_2012.pdf
b) OER from Leeds Metropolitan University:
http://repository.leedsmet.ac.uk/xerte_output/Sconul_7_Pillars/
c) Information Literacy from Portsmouth University:
http://www.port.ac.uk/library/help/skills/uplift/
d) Journal of Information Literacy article on Healthcare lens:
http://ojs.lboro.ac.uk/ojs/index.php/JIL/article/view/1813

Recognition has been made by some participants in the JISC programme that there may be some value in developing discipline-specific resources, and it may be appropriate when using the DL lens at a disciplinary level to consider the likelihood and influences of variations and commonalities in practice. For example the resources produced by University of Bath's Pride project identify digital literacy attributes for each Faculty and School within the University and their Faculty Learning Committees are a discipline-specific approach to collaborative investigation into digital literacies. These are not currently recognised by the lens.

It would be of value to promote the digital lens more widely in the SCONUL community, perhaps with a redesign to make it more readable. The dual-aspect of its use as a staff development tool and a learner skills audit tool has yet to be exploited to its fullest.

4. What opportunities exist for SCONUL to adopt a more strategic role to champion/lead on digital literacy?

It is suggested by the survey that SCONUL has an important role to play in assisting members to improve and develop the skills of library and information professionals. These recommendations have been drawn from the reflective comments in the survey (available on the Design Studio) and from the various outputs of the JISC DDL programme.

Staff development: Helping to bridge the gap

The '*inter-departmental multi-stakeholder conversations*' involved in developing and delivering digital literacy strategy is clearly recognized by numerous resources identified here. As a professional organization SCONUL has access to similar associations representing staff of other professional services within UK Higher Education. It is important that SCONUL exploit this access and maximizes its potential in engaging in collaborative cross-sector conversations and activities which are likely

to cause a trickle-down effect in policy and strategy development and enable the voice of the library to be heard within the drivers of future change within HE.

The preference for locally delivered or sector-specific staff development was highlighted by the baseline survey. It appears that members do not want SCONUL to direct them in their efforts, but support them. A 'hands-off' approach would allow each service to retain their individuality and reflect the personality of that institution. On the other hand it has also been suggested that a recognized digital literacy qualification would help in developing these competences. This could be adopted direct from existing practice (such as ALT / AldInHe, above) or be based on the content of the digital literacy lens on the seven pillars.

These two approaches are not mutually exclusive, but require detailed discussion if the optimum approach is to be identified.

Good practice in staff development and digital literacy

There are certainly widespread examples of good practice in SCONUL members staff development and resources in digital literacy. These are often developed by library professionals with a view to sharing them across the community, as recognized in the survey comments. The redesigned SCONUL website could act as a hub for sharing these practices and resources across services, promoting them through newsletters / email lists and other forms of communication. Locally organized events which reflect issues specific to that institution could be supported by visiting practitioners to promote their good practice. Digital resources such as webinars would greatly help in facilitating these events, and would reflect the nature of the topic in question.

The digital literacy lens

It appears that the digital literacy lens on the Seven Pillars is indeed relevant – but the evidence suggests it needs to be more widely promoted and taken up if we are to fully benefit from its value, and there is also indication that some time may be well spent investigating discipline-specific literacies. It would also benefit from a redesign to make it simpler and clearer. The Seven Pillars of Information Literacy have been widely recognized as an essential tool in modelling information literacy. Although the digital literacies lens is unlikely to have a similar impact it is currently underused and requires attention.

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Appendix

The competencies examined in the SCONUL baseline survey were derived from the JISC definition of digital literacy below:

"23. We propose defining digital literacy in as neutral a way as possible, following the lead of the European Union and the JISC-funded LLiDA project.

Digital literacy defines those capabilities which fit an individual for living, learning and working in a digital society

However, we are particularly concerned with those capabilities that are required and/or developed in the context of further and higher education, namely:

- ICT/computer literacy: the ability to adopt and use digital devices, applications and services in pursuit of goals, especially scholarly and educational goals.
- information literacy: the ability to find, interpret, evaluate, manipulate, share and record information, especially scholarly and educational information. For example, dealing with issues of authority, reliability, provenance, citation and relevance in digitised scholarly resources.
- media literacy, including for example visual literacy and multimedia literacy: the ability to critically read and creatively produce academic and professional communications in a range of media.
- communication and collaboration: the ability to participate in digital networks of knowledge, scholarship, research and learning, and in working groups supported by digital forms of communication.
- digital scholarship: the ability to participate in emerging academic, professional and research practices that depend on digital systems. For example, use of digital content (including digitised collections of primary and secondary material as well as open content) in teaching, learning and research, use of virtual learning and research environments, use of emergent technologies in research contexts, open publication and the awareness of issues around content discovery, authority, reliability, provenance, licence restrictions, adaption/repurposing and assessment of sources.
- learning skills: the ability to study and learn effectively in technology-rich environments, formal and informal, including: use of digital tools to support critical thinking, academic writing, note taking, reference management, time and task management; being assessed and attending to feedback in digital formats; independent study using digital/digitised resources and learning materials.
- life-planning: the ability to make informed decisions and achieve long-term goals, supported by digital tools and media, including, for example, reflection, personal and professional development planning, CV building, identity and reputation management, showcasing achievements."

JISC (2011) JISC Innovation Programme: Call for Projects in Developing Digital Literacies available at http://www.jisc.ac.uk/media/documents/funding/2011/04/digitalliteracie.doc [last accessed 28th Oct 2013]