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Thriving in the 21st century: the report of
the LLiDA project (Learning Literacies for the
Digital Age): Competency frameworks

3. Conceptual and competency frameworks relevant to learning literacies in UK HE and FE

Given the complexity of this area and the critical importance of the practices involved, it is unsurprising that we find a large number of competing frameworks for describing literacies of the digital age. They have been developed to meet different purposes, out of different theoretical and political perspectives, and using a wide range of terminologies from systems thinking to social science and critical theory. In this section we are interested in pragmatic frameworks designed to be of use to those implementing institutional strategies, policies and practices, in support of learning for the digital age.

Frameworks offer a structure for outlining concepts, values, and practices that constitute a particular area of activity. They usually reflect the worldview of the author(s)/producer(s) which in turn affects how readily people will accept, value and use them. Imposed frameworks, such as the school sector national curriculum, are often supported by checks, testing, training and resources to ensure they are being implemented appropriately. Other frameworks operate more as a guide and have less supporting resources. It has been difficult to identify which frameworks are informing current practice as they are not always acknowledged in a formal sense. The number of overlapping frameworks that exist to support various sectors in education actually reflects the complexities of educational institutions and the various interest groups both within and supporting those. Evidence from the audits and case studies shows that institutions often take a pick-and-mix approach to developing a framework that is appropriate for their own context. In this section we:

3.2 Outline several illustrative frameworks for understanding digital and learning literacies. Our selection criteria for these frameworks are that they:

- are relevant to the needs of learners in UK HE/FE, even where they have originated outside of this sector
- are relatively well used or referenced
- refer to, or can easily be adapted to refer to, both LEARNING as the overall goal, and the DIGITAL context in which learning takes place

3.3 Present a framework of frameworks, designed to support institutions and individuals within institutions as they consider mapping their own practices against this emerging agenda.

3.1 Review of frameworks

See LiDA wiki Frameworks page for a more comprehensive list of frameworks considered during the study <http://www.caledonianacademy.net/spaces/LLiDA/index.php?n=Main.CompetenceFrameworks>
The frameworks selected for consideration have been developed by many different bodies and reflect their viewpoints which clearly impacts on use, adaptation, acceptance and longevity. The frameworks are:

- international (such as)
 - i-curriculum - a European framework for defining information skills and a curriculum appropriate for living and learning in the digital age (Primary, Secondary and vocational education) <http://promitheas.iacm.forth.gr/i-curriculum/overview.html>
- national (such as)
 - Learning and Teaching Scotland. Curriculum for excellence <http://www.ltscotland.org.uk/curriculumforexcellence/>
- institutional (such as)
 - Glasgow Caledonian Academy (2008) I-Learn Framework http://www.caledonian.ac.uk/quality/strategy/documents/GCU_LTAS_APPX1_i-LearnFramework.doc.
- Sectoral (such as)
 - The framework for higher education qualifications in England, Wales and Northern Ireland 2007 Quality Assurance Agency for Higher Education <http://www.qaa.ac.uk/academicinfrastructure/FHEQ/EWNI/default.asp#framework>
- professional (such as)
 - General Medical Council (2003) Tomorrows Doctors UK policy document to support medical Schools includes curriculum framework <http://www.gmc->

From the previous conceptual review we have identified the following categories of literacy as most closely reflecting the current literature and discourse:

Learning to learn:

It is a key feature of the context for this study that 'learning literacy' or 'learning to learn', however contested these terms, mean something clearly different from academic literacy or study skills. This widening gap may be understood as the difference between formal and informal learning.

- Owned/defined by: the learner
- Learners addressed as: informal learner, self regulated learner
- Change dependent on learner perception of their own progression, differing needs at
- Owned/defined by: the academy, especially academic development, learning development, study skills
- Learners addressed as: students, prospective graduates in specific subjects
- Slow changing due to cultural values being embedded in institutional, disciplinary/professional/vocational, and wider social practices and expectations
- Ideologically not bound to any particular forms of representation (qualities of mind, habits of study etc) but in practice largely text-based.
- Challenged by school-based education practices which tend to value study differently (bite sized vs extended tasks, bounded problems and information spaces, interdisciplinary project work
- Challenged by popular practices around knowledge and representation e.g. cut and paste, sharing, informal spelling, essay banks, interdisciplinarity of applied knowledge practice

Information literacies

- Owned/defined by: the library
- Learners addressed as: researchers, information users
- Consciously slow-changing skills in a rapidly changing context.
- Assert cultural values (evaluation, reflection and judgement, critical awareness, provenance of sources, evidence, method) against rapidly changing technical capabilities e.g. search engines, cataloguing and curatorial technologies, data mining and other research capabilities, textual analysis, semantic search capabilities etc)
- Challenged by popular practices around knowledge and searching for knowledge, e.g. Google, Wikipedia as first ports of call. Also by open content.

Media literacies

- Owned by: contested (some located in specialist subject areas e.g. film, photography, cultural studies, media studies etc)
- Learners addressed as: consumers and producers of messages in a range of media
- Moderately fast-changing to keep pace with emergence of new media, e.g. gaming, media sharing sites. But like information literacies, assert value of some traditional academic practices e.g. critique, review, scepticism, originality and creativity, as well as some new values - currency, cool, reputation, point of view, audience, montage, cross-cut perspectives
- Challenged by popular practices of editing, re-editing, distributed creativity; supported by popular practices of rating, reviewing, democratisation of creative productivity, illegal content

Communication literacies/skills

- Owned by: contested (some professions require particular forms of communication; some overlap with use of digital tools below)
- Learners addressed as: communicators, social participants
- Fairly rapidly changing to keep pace with emerging new technologies, networks, devices and forms of tele-presence. Again some values are asserted across communicational media, e.g. in acceptable use policies, netiquette etc: listening, turn-taking, facilitation, mediation, respect.
- Challenged by popular practices of highly informal communication including flaming, dissing, etc. Also challenged by proliferation of communication channels - making it difficult for institutions/tutors to control communications around study.

ICT/digital skills

- Owned by: technology developers, designers and support staff

- Learners addressed as: technology users
- Very rapidly changing skill-set, requiring constant updating. Skills often acquired from more competent peers, though sometimes through institutional provision. Agile adopters will use help menus, online discussion forums and user groups, trial and error.
- Different times of their lives – may have periods of re-learning, new learning
- Challenged by teachers expectations of learner understanding and perceptions of their own learning capacity
- Challenged by learner expectations of need and capacity to adapt to re-learning or new learning

Employability

Employability is a complex term and deserves some untangling here. On the one hand, it denotes a generic set of skills around planning, reflecting, self-analysis and self-presentation which are typically introduced to students towards the end of their study time, sometimes by a careers service or guidance team, to support progression into work. On the other hand, it denotes a potentially narrower requirement to be responsive to the needs of graduate employers, and to embed the Government's skills agenda into subject-based provision.

The latest figures from the CBI show that only 20% of posts in the average company (median) require graduate level skills, but that less than 30% of employers feel confident of being able to meet that skills requirement. Using figures for STEM graduates only, there is an indication that employers are more concerned about the quality than the quantity of graduates. <http://www.cbi.org.uk/pdf/cbi-SteppingHigher.pdf>. It would seem, then, that employers could play an important role in redefining the qualities of graduates from post-compulsory education.

But what qualities do employers look for when employing graduates? A recent survey of 500 company directors suggests that general personal qualities were uppermost in their minds: *honesty and integrity, reliability, being hardworking, a positive attitude, punctuality, meeting deadlines and team working*. The only competences cited in this list were basic literacy, numeracy, and communication skills, which are covered in our spectrum. (Communication, literacy and ICT skills are also three of the Government's key skill sets.)

Looking at the evidence of what skills employers are actually prepared to pay for, however, graduates command higher salaries if their subject-specialist skills are in demand, and job adverts/person specs almost always specify technical skills very carefully (programming languages, databases, specific development systems and methods). Employers will pay directly for training on the job if it leads to improved productivity and/or enables the business to respond to an immediate challenge or opportunity. http://www.culture.gov.uk/reference_library/media_releases/5548.aspx

So neither the stated nor the underlying values of graduate employers seem a good guide to the lifelong, lifewide needs of learners to remain in productive work. Indeed, one of the most striking trends in employment over the last 20 years has been the rising number of different jobs a person can expect to have over the life course, with periods of self-employment, consultancy, unemployment, unpaid caring for others, community/voluntary work etc taking up significant parts of the average working life. Flexibility, adaptability, and a willingness to move between employers and alternatives to employment, would seem to be more valuable to learners than the capacity to secure that first graduate job¹. Also, as people spend a lower proportion of their life course in paid employment, other qualities than those valued by employers may be prioritized by society e.g. active citizenship, caring for others, being creative, being a (conscientious) consumer.

This is not to deny that both individual learners and educational institutions are highly motivated to ensure curricula equip graduates for work. Terms for this which are not readily accommodated under other literacies are employed here, for example:

- managing career and CPD
- managing reputation and professional identity
- business skills, enterprise, entrepreneurialism

Citizenship

¹ One of the main reasons consistently cited by employers for investing poorly in training and workforce development is that workers will use their new skills to change jobs or demand higher wages.

Like employability this category is problematic in that it represent a lens through which a wide range of other literacies can be viewed, rather than a separate literacy in its own right. Components of 'citizenship' which do not appear in other literacies of the digital are referenced here, for example:

- social and political participation
- acting ethically, responsibly and safely
- addressing sustainability

Framework	Date	Producer/Creator	Audience	Main focus	Commentary
<p>European Charter for Media Literacy http://www.euromedialiteracy.eu/index.php and UK Charter for Media Literacy http://www.medialiteracy.org.uk/</p>	<p>2006</p> <p>2007</p>	<p>EU</p> <p>Media Literacy Task Force including representatives from UK Film Council, Channel 4, BFI, BBC, ITV, Skillset, Media Education Association, British Board of Film Classification</p> <p>International, Sectoral (Schools, Colleges), National</p>	<p>Broad audience including educational institutions, companies, government bodies, public</p>	<p>Media Literacy</p>	<p>Common European Charter with a highly visible UK arm. Charter provides definitions of media literacy and a list of competencies providing a framework for a range of agencies. Aims to develop a common understanding and vision for media literacy.</p> <p>Two sets of signatories on both websites. UK signatories include a range of media bodies, schools and colleges. Recent initiative so too early to assess impact.</p>
<p>i-curriculum - a European framework for defining information skills and a curriculum appropriate for living and learning in the digital age (Primary, Secondary and vocational education) http://promitheas.iacm.forth.gr/i-curriculum/overview.html</p>	<p>2004</p>	<p>Futurelab was UK partner</p> <p>International, Sectoral (Schools), National</p>	<p>Primary, secondary and vocational education sectors</p> <p>policy makers, teachers and other educators and the producers of digital resources.</p>	<p>Digital literacy Information Literacy</p>	<p>Outcomes of a European project including Germany, Greece, Romania, Spain and the UK. Outputs include a review of each country's existing curricular frameworks, case studies, the framework and mapping of concepts of digital literacy onto the current and projected school practices.</p> <p>Interesting for its attention to Street's (2004) 'social literacies' work and the development of a matrix which had three elements for each literacy/skill identified:</p> <ul style="list-style-type: none"> operational curriculum (learning to use the tools effectively) integrating curriculum (technologies applied within the curriculum) transformational curriculum(changes to what we know) which is similar to the framework developed for this study.

					Although a project that ended in 2005 the website still exists and the matrix is highly relevant to digital literacy discourse today for both its definitions, mapping and matrix. What is not evident though is evidence that people have taken on this framework and used it, either in a national context or by schools at an individual level.
Typology of knowledge, skills and competences: clarification of the concept and prototype http://www.ecotec.com/europeaninventory/publications/method/CEDEFOP_typology.pdf	2005	Centre for European Research on Employment and Human Resources Groupe European Commission and CEDEFOP	Broad audience including educational institutions, companies, government bodies, public	Employability, Credit transfer, qualifications and competences	Research report which examined existing classifications and typologies of knowledge, skills and competencies across Europe and developed a prototype typology within the framework of European qualifications frameworks. Provides a very useful literature review and useful examples of framework use in different sectors in various countries. Describes the UK approach as functional
Seven pillars of information literacy http://www.sconul.ac.uk/groups/information_literacy/papers/Seven_pillars.html	2003	SCONUL Working Group on Information Literacy National, Professional, Sectoral (HE)	Librarians	Information literacy	Established information literacy framework which was developed from earlier information skills work (1999) and updated in 2003. The framework is widely accepted by the UK academic library community and is used as the basis for many HE institutional approaches to support information literacy. The framework is very similar to other national frameworks, including: The Seven Faces of Information Literacy (Australia) Bruce, C. (1997) http://sky.fit.qut.edu.au/~bruce/inflit/faces/faces1.ph Australian and New Zealand Information Literacy Framework: principles, standards and practice Bundy (2004) http://www.anziil.org/resources/Info%20lit%202nd%20edition.pdf Big six: Information & Technology Skills for Student Achievement (US) Eisenberg (2001) http://www.big6.com/2001/11/19/a-big6%e2%84%a2-skills-overview/ In 2006 a JISC funded project examined information skills frameworks in relation to the UK key skills framework and

					<p>developed a further model for the post 16 sector. The Big Blue information literacy model (UK) 2006 http://www.library.mmu.ac.uk/bigblue/index.html</p> <p>Information literacy frameworks such as the seven pillars model are often viewed and implemented in a generic way and applied across a range of learning contexts by librarians. This has generally kept ownership in the hands of librarians and kept information literacy support outside of the subject curricula, although several librarians have made efforts to work with academic teams and embed the literacies covered by this framework. (refs).</p> <p>Information literacy frameworks have sometimes been marginalised in discussions around digital literacy, or academic literacy because they are viewed as being about library skills and not relevant to the subject curriculum, raising issues around understandings and perceptions amongst different practitioners. Many journal articles fail to acknowledge the rich literature and practice from the information literacy sector which reflects the divisions within institutions around planning and provision.</p>
<p>Tomorrows Doctors http://www.gmc-uk.org/education/undergraduate/undergraduate_policy/tomorrows_doctors.asp</p>	2003	<p>General Medical Council</p> <p>Professional, National</p>	Medical schools	Academic literacy Professional literacy	<p>UK policy document to support medical Schools which includes a curriculum framework. This is an example of an imposed framework with supporting mechanisms to encourage adoption, testing and compliance. Medical graduates must meet the 'principles of professional practice' Good Medical Practice (2001) to ensure that the public receives an appropriate standard of practice.</p> <p>Vocational and professional qualification frameworks will be the key driver for curriculum development and delivery, with the incorporation of other broader generic frameworks (such as information literacy, digital literacies) likely to be a secondary consideration.</p> <p>For subjects without imposed standards of professional or vocational practice the supporting frameworks are likely to</p>

					include a range of sources, such as professional bodies, institutional/school frameworks and other generic frameworks. It is difficult to find evidence of these frameworks and how they are used in practice as much of this activity is hidden within academic departments.
I-Learn Framework http://www.caledonian.ac.uk/quality/strategy/documents/GCU_LTAS_APPX1_i-LearnFramework.doc	2008	Glasgow Caledonian Academy Institutional	Learners and staff from central services and academic schools	Academic literacy Information literacy Digital Literacy Employability skills	<p>Several institutions are in the process of developing frameworks for academic, information and digital literacies. A significant issue in implementing such a framework is the extent to which the approach is collegiate or imposed. In order to be effective at an institution-wide level frameworks need to be embedded within key institutional strategies and requires a commitment to curriculum re-design and development.</p> <p>The I-Learn Framework at Glasgow Caledonian University (GCU) is an example of this approach and faces challenges incorporating existing traditional practices with the newly articulated vision. A collegiate approach is central to the GCU strategy to ensure 'buy-in' and engagement with the framework. Pilots are currently under way to identify appropriate strategies for incorporating the framework into the curriculum.</p> <p>The framework is informed by a range of existing frameworks both from within the UK, such as the SCONUL Seven pillars framework and the Skills for Scotland strategy, and also a range of GCU initiatives around self-regulated learning, employability and work-based learning. This pick and mix approach allows institutions to develop frameworks that are appropriate to their own contexts. The GCU has employability as a significant driver and the framework reflects this.</p>
The framework for higher education qualifications in England, Wales and Northern Ireland http://www.qaa.ac.uk/academicinfrastructure/FHEQ/EWNI/default.asp#framework	2007	Quality Assurance Agency for Higher Education National, Sectoral (HE)	Academic staff, Managers	Academic Literacy	<p>A broad qualifications framework, based on defined outcomes, not a credit framework. Institutions have choice in how to achieve the outcomes, but must be able to demonstrate how their curricula supports learner progression.</p> <p>Links to other frameworks – such as Higher education credit framework for England: guidance on academic credit</p>

					arrangements in higher education in England
QAA subject benchmark statements http://www.qaa.ac.uk/academicinfrastructure/benchmark/default.asp	Varied	Quality Assurance Agency for Higher Education National, Sectoral (HE), Professional, Subject	Academic staff	Academic Literacy Professional Literacy	<p>In practice professional and vocational subject benchmarks identify literacies more specifically and are of key importance to academic practitioners in the field. See also the Tomorrows Doctors entry.</p> <p>The QAA offers a range benchmarks according to level and specific needs:</p> <p>Honours degree subject benchmark statements Master's level subject benchmark statements NHS/Department of Health subject benchmark statements Scottish subject benchmark statements</p> <p>The Communications, Media and Film and Cultural Studies benchmark, for example, provides very specific skills framework and outlines expectations of students studying an honours degree in this discipline. Not all of these benchmarks will have been updated to take account of the need to incorporate or acknowledge the need for different/new skills for a digital age.</p>
Curriculum for excellence http://www.ltscotland.org.uk/curriculumforexcellence/	2007	Learning and Teaching Scotland National, Sectoral (Schools)	School teachers, Managers	Academic Literacy Communication skills	<p>Curriculum for Excellence is a significant reform in Scottish education which describes the purposes of learning from 3 to 18 and entitlements for all learners.</p> <p>This is another example of an imposed framework and there are significant supporting mechanisms to implement the initiative. Support includes training, guidance, curriculum development tools, and a range of resources. The framework acknowledges the extent of transformational change that institutions will need to undergo to implement this curriculum effectively and acknowledges the long term nature of such an undertaking.</p> <p>CfE was developed through a long process involving teachers to ensure engagement and buy-in, and aims to build on and acknowledge good practice.</p> <p>There are also moves to transform the national curriculum in England and Wales with hints of this acknowledging the impact</p>

					<p>of web.2 technologies and the skills required to utilise these effectively in a school context.</p> <p>http://www.guardian.co.uk/education/2009/mar/25/primary-schools-twitter-curriculum</p>
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Table 3.1 Academic Literacies. Review of key frameworks illustrating the scope, various owners, literacies and factors affecting use.

3.2 Framework of Frameworks

Top-level terms, framing ideas	Component competences, capabilities, literacies	Practices – what competent learners do	Digital practices – what competent <i>digitally enabled</i> learners do
Learning to learn, metacognition 2 3 4 5	Reflection Strategic planning Self-evaluation, self-analysis Organisation (time etc)	Manage time and study commitments Balance learning and life Know where and how to access support Construct strategies for learning, articulate goals Reflect on own learning and progression	<i>Use digital tools to manage time and commitments</i> <i>Use digital networks and online resources to fit learning into life</i> <i>Access support online including learning communities</i> <i>Diagnose learning needs</i> <i>Choose appropriate learning tools (see below)</i> <i>Use digital tools to record and reflect on progress</i>
Academic practice, study skills 6 7 8 9 10	Comprehension Reading/apprehension Organisation (knowledge) Synthesis Argumentation Problem-solving Research skills Academic writing	Understand subject-relevant academic material Synthesise academic discourse and knowledge Identify or collect relevant evidence Critically evaluate arguments and evidence Scope, investigate and solve problems typical of the subject Construct reasoned argument Cite sources appropriately Break down/analyse research question	<i>Apprehend academic ideas using a variety of media</i> <i>Organise academic ideas using digital tools</i> <i>Present academic ideas using a variety of media</i> <i>Use digital argumentation and analysis tools</i> <i>Use digital tools to gather or identify evidence</i> <i>Use digital bibliographic tools</i> <i>Analyse data tools</i> <i>Use specific subject discipline related tools (e.g. CAD)</i>

2 Cartwright, Kelly B. (Ed.) (2008). Literacy Processes: Cognitive Flexibility in Learning and Teaching. NY: The Guilford Press
Cartwright, Kelly B. (Ed.) (2008). Literacy Processes: Cognitive Flexibility in Learning and Teaching. NY: The Guilford Press <http://edrev.asu.edu/reviews/rev731.htm>

3 Quintana, C et al. (2005) A Framework for Supporting Metacognitive Aspects of Online Inquiry Through Software-Based Scaffolding in Educational Psychologist, V4, N4. pp 235-244
<http://www.informaworld.com/smpp/content~content=a784751538~db=all>

4 McGuinness, C (1999) From thinking skills to thinking classrooms, DfES, 1999 <http://www.dcsf.gov.uk/research/data/uploadfiles/RB115.doc>.

5 Hoskins, B and Deakin Crick, R (2008) Learning to Learn and Civic Competences: different currencies or two sides of the same coin? Centre for Research on Lifelong Learning <http://active-citizenship.jrc.it/Documents/learning%20to%20learn/Learning%20to%20Learn%20and%20Civic%20Competences%20FINAL%20final.pdf>

6 i-curriculum - a European framework for defining information skills and a curriculum appropriate for living and learning in the digital age (Primary, Secondary and vocational education)
<http://promitheas.iacm.forth.gr/i-curriculum/overview.html>

7 The framework for higher education qualifications in England, Wales and Northern Ireland 2007 Quality Assurance Agency for Higher Education
<http://www.qaa.ac.uk/academicinfrastructure/FHEQ/EWNI/default.asp#framework>

8 Undergraduate levels framework (OU, UK) 2005 - Centre for Outcomes-Based Education <http://www.open.ac.uk/cobe/docs/KnowAbout/FS4-LevelsFramework.pdf>

9 OU Open Learn Learning framework <http://openlearn.open.ac.uk/mod/resource/view.php?id=188602>

10 General Medical Council (2003) Tomorrows Doctors UK policy document to support medical Schools includes curriculum framework http://www.gmc-uk.org/education/undergraduate/undergraduate_policy/tomorrows_doctors.asp

	Specific subject discipline skills as appropriate		
Information literacy ^{11 12 13 14 15 16}	identification accession organisation evaluation interpretation analysis synthesis application	Recognise/identify need for information Locate and obtain the required information resources Assess the objectivity, accuracy, reliability and relevance of resources Organise, set out and manage resources Analyse, reinterpret, compare, apply etc information e.g. using models, frameworks, protocols Produce new combinations or interpretations of information	<i>Use search engines, academic databases and journals, repositories etc</i> <i>Aggregate and reaggregate information on task/topic basis</i> <i>Evaluate online resources</i> <i>Rate, comment on, review resources online</i> <i>Use digital data analysis tools and protocols</i> <i>Use digital tools to manage information locally and remotely</i> <i>Share, repurpose, enrich information resources in online communities</i>
Communication and collaboration skills ^{17 18 19}	Teamwork Networking 'Speaking' and 'listening' skills (see below for different media)	Find, join and build communication networks Facilitate groups Share ideas Build knowledge collaboratively Project identity	<i>use digital technologies to participate in/manage networks</i> <i>use digital technologies to share and co-build knowledge</i> <i>maintain appropriate levels of privacy</i> <i>manage digital identity and reputation</i> <i>(Computer Supported Collaborative Work) CSCW</i>

11 i-curriculum - a European framework for defining information skills and a curriculum appropriate for living and learning in the digital age (Primary, Secondary and vocational education)

<http://promitheas.iacm.forth.gr/i-curriculum/overview.html>

12 Seven pillars of information literacy (UK) SCONUL 2003 http://www.sconul.ac.uk/groups/information_literacy/papers/Seven_pillars.html

13 The Big Blue information literacy model (UK) 2006 <http://www.library.mmu.ac.uk/bigblue/ppt/themodel4.ppt> <http://www.library.mmu.ac.uk/bigblue/index.html>

14 Australian and New Zealand Information Literacy Framework: principles, standards and practice 2004 <http://www.anziil.org/resources/Info%20lit%202nd%20edition.pdf>

15 Eisenberg (2001) Big six: Information & Technology Skills for Student Achievement (US) <http://www.big6.com/2001/11/19/a-big6%e2%84%a2-skills-overview/>

16 Bruce, C. (1997) The Seven Faces of Information Literacy (Australia) Bruce 1997 <http://sky.fit.qut.edu.au/~bruce/inlit/faces/faces1.php>

17 CSCW matrix <http://en.wikipedia.org/wiki/CSCW>

18 i-curriculum - a European framework for defining information skills and a curriculum appropriate for living and learning in the digital age (Primary, Secondary and vocational education)

<http://promitheas.iacm.forth.gr/i-curriculum/overview.html>

19 The NHS Knowledge and Skills Framework (NHS KSF) (2004) Dept. of Health. Appendix 2 Core Dimension 1 : Communication

http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4090843?IdcService=GET_FILE&dID=5786&Rendition=Web

Media literacy (also 'visual' and 'audio' and 'video' literacies) ²⁰ ²¹	Critical 'reading' Creative production	Understand notions of audience, viewpoint and persuasion Understand how media messages are designed Critically explore meanings Produce messages in a range of media Develop personal style	<i>Understand how digital media work in terms of audience, viewpoint, design</i> <i>Produce messages in a range of digital media</i> <i>Link across media and communicate hypertextually</i>
ICT/digital/computer literacy ²² ^{23 24}	Keyboard skills Use of capture technologies Use of analysis tools Use of presentation tools General navigation/UI skills Adaptivity Agility Confidence/exploration	<i>Readily adopt new tools and explore their functionality</i> <i>Choose and use a range of different tools as appropriate to the situation</i> <i>Capture information and evidence digitally</i> <i>Present information and evidence digitally in a range of media</i> <i>Use help menus and other intrinsic support to build new skills</i>	
Employability Employability encompasses all or many of the other skills but is included here as a distinctive framework for theorising about and organising these skills, i.e. the production of the learner as a competent worker/employee. Component skills are those distinctive to this framework: the CBI is also concerned with literacy, numeracy, communication, ICT ^{25 26 27 28 29}	Self-management Teamworking Problem solving Business and customer awareness Innovation/enterprise	Negotiate a position Find and present solutions tailored to needs Produce innovative solutions Present oneself and ones capabilities to prospective employers/clients Manage risk appropriately Continually update skills	<i>Use digital technology to present self and manage reputation</i> <i>Use digital technology to manage CPD</i>

20 UK Charter for Media Literacy (2006) <http://www.medialiteracy.org.uk/>

21 Media literacy (Ofcom - UK) 2007 - Office of Communications http://www.ofcom.org.uk/advice/media_literacy/

22 i-curriculum - a European framework for defining information skills and a curriculum appropriate for living and learning in the digital age (Primary, Secondary and vocational education) <http://promitheas.iacm.forth.gr/i-curriculum/overview.html>

23 Digital transformation: a framework for ITC literacy 2002 - International ICT Literacy Panel

http://www.ets.org/Media/Tests/Information_and_Communication_Technology_Literacy/ictreport.pdf

24 i2010 - (EU) 2007 initiative equipping people with ICT skills looking at eCompetancy and a pending Digital Literacy Review

http://ec.europa.eu/information_society/activities/einclusion/policy/competences/index_en.htm

25 Employability encompasses all or many of the other skills but is included here as a distinctive framework for theorising about and organising these skills, i.e. the production of the learner as

<p>Citizenship Digital citizenship encompasses many other skills but is included as a distinctive framework for theorising about and organising these skills, i.e. the production of the learner as a competent citizen or member of wider society^{30 31 32 33 34}</p>	<p>Participation and engagement Ethicality/responsibility Political, social, personal responsibility</p>	<p>Participate in social groups in a range of roles Behave ethically in professional and personal situations Be safe when interacting with groups and individuals</p>	<p><i>Understand digital rights and responsibilities</i> <i>Manage digital identities</i> <i>Manage issues of privacy and data ownership</i> <i>Understand moral and human rights in a digital context</i> <i>Understand issues around safety and protection in a digital context</i></p>
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a competent worker/employee. Component skills are those distinctive to this framework: the CBI is also concerned with literacy, numeracy, communication, ICT.

26 Student Employability Profiles, 2004/5, Higher Education Academy, ESECT and Council for Industry and Higher Education Includes a glossary of competencies
<http://www.heacademy.ac.uk/resources/detail/Employability/employability542>

27 UK Commission for Employability and Skills (2009) The employability challenge: full report, Appendix C <http://www.ukces.org.uk/pdf/8080-UKCES-Employability%20ChallengeFinal.pdf>

28 Employability skills map, University of Kent. <http://www.kent.ac.uk/careers/sk/skillsmap.htm> (2008)

29 Winterton, J et al. (2005) Typology of knowledge, skills and competences: clarification of the concept and prototype. Centre for European Research on Employment and Human Resources Groupe http://www.ecotec.com/europeaninventory/publications/method/CEDEFOP_typology.pdf

30 Again, digital citizenship encompasses many other skills but is included as a distinctive framework for theorising about and organising these skills, i.e. the production of the learner as a competent citizen or member of wider society

31 Citizenship For 16-19 Year Olds In Education And Training, FEFC, 2000 http://www.qca.org.uk/qca_4858.aspx

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