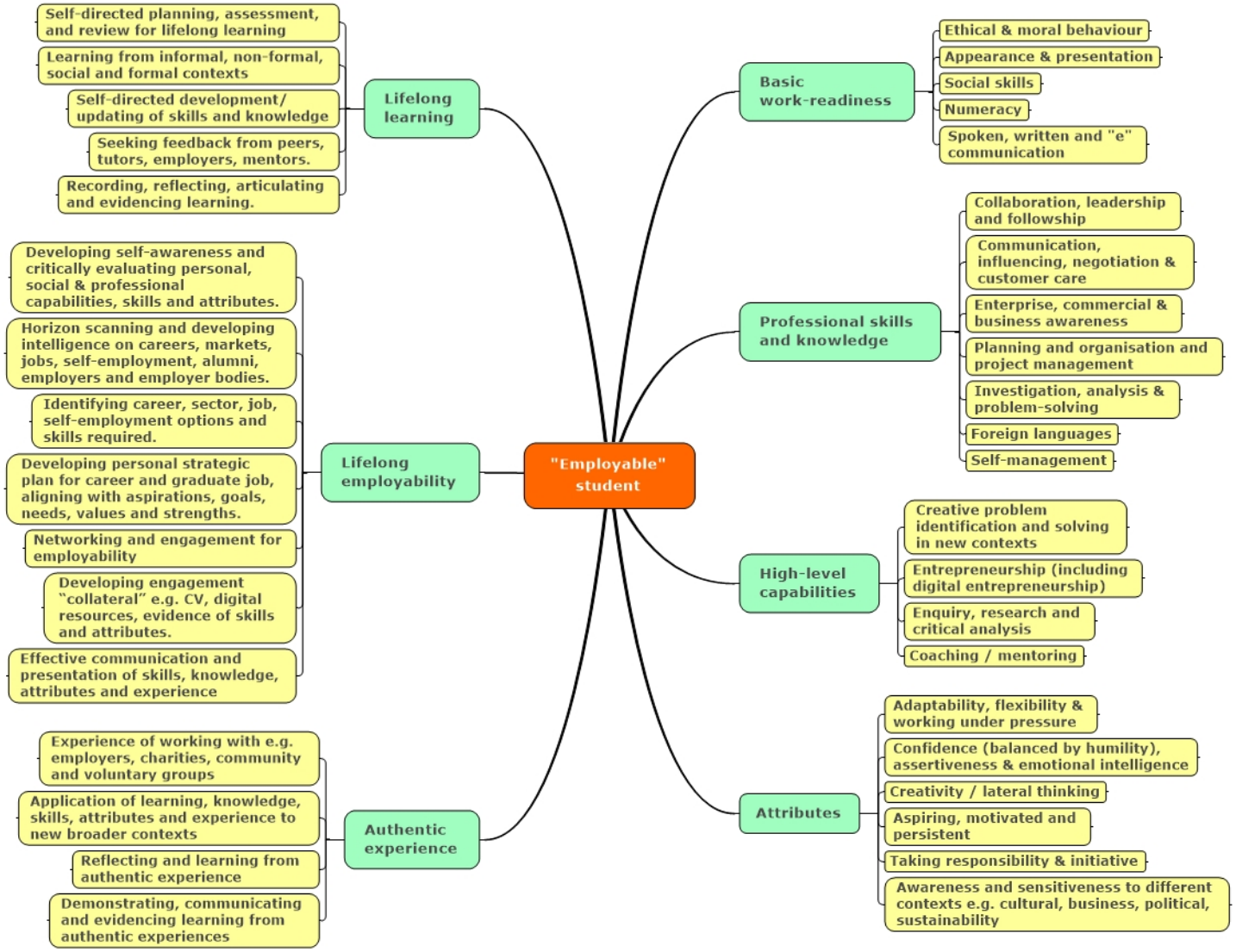
Employability lens on the Six Elements of Digital Capability

This is a version of the Jisc 'Six Elements of Digital Capabilities' model, developed to support student-facing staff working in Careers and Employability roles and curriculum staff working to embed employability issues into the curriculum.
It draws on the work of the Jisc Developing Student Employability project, e.g. on the model of the 'employable student' produced by Peter Chatterton for that project (reproduced here with permission)



So learners can demonstrate...			… universities and colleges need to offer
ICT proficiency		Use of a range of ICT-based **devices**: laptops, desktops, tablets, smartphones, relevant digital instruments and equipment. Use of generic **tools**: productivity software (text editing, presentation, spreadsheet, basic image editing); web browser and search engines; digital capture devices such as a camera, video camera, audio recorder, and associated editing software, digital communications such as email, text, skype, online meeting. Basic **operations**: download and upload materials; manage digital files; back up files; tag digital materials; sign on to and use organisational systems and cloud services; manage profiles; manage privacy and sharing. Use of a range of up-to-date **software and applications relevant to their subject area** and chosen employment. Use of ICT applications to work **productively and efficiently** e.g. through time, task and project management; working fluently across different software/apps and services to **achieve complex tasks**. Choosing, **adapting and customising** devices, software/apps and services to meet personal and situational needs. Finding solutions, **solving problems** and developing work-arounds when devices and applications fail. **Adopting** new digital technologies as they evolve and are proven useful. (At higher levels) **Computational ways of thinking** and working, e.g. abstraction, recursion, decomposition, modelling, problem solving (heuristics), algorithms, coding, systems design. **Design, development** and maintenance of ICT-based environments, interfaces, applications, services, systems etc.	**Authentic experiences** of using ICT in meaningful contexts e.g. • to address real problems of the subject area; • to address real problems of an employer, community group, student group; • in work-based or work-like settings; • in support of learners' own interests and aspirations. **Range and variety** of ICT devices and applications used in a curriculum context. **Open, flexible digital environment** to support students' self- and peer-learning, and informal development of ICT skills e.g. in social groups, societies, clubs, volunteering. **Support for BYOD** and for students using institutional technologies **Teaching staff with confidence** in their use of ICT and a n understanding of how ICT is changing relevant workplaces, professions, and practices. **Student partnership** models to recognise and further students' digital skills. Badges, ECDL advanced or other **opportunities for students to accredit** their ICT skills See the Digital Student Experience benchmarking tool for more details.
Information, media and data literacy (*critical use*)	**Information literacy**	Ability to **find, manage and organise** digital information; to search using search engines, indexes or tag clouds with appropriate terms; to find information in wikis, blog posts, scholarly journals, e-books and web sites; to organise information using files, bookmarks, content management software and tagging. Ability to **judge** whether information online is trustworthy and relevant; to distinguish different kinds of information e.g. academic, professional, personal, political. Ability to **apply** information for writing reports and presentations, and in	Relevant **information-based activities** in the curriculum **Library staff** with expertise in information literacy and in uses of information in the workplace. See ANCIL and InformAll for more details

		other learning activities. Ability to **share** information with others; to use curation tools such as pinboards, social bookmarking, personal aggregators to bring information together in new ways; to record and manage information for future access and use (personal or shared). Knowledge of **copyright** and plagiarism and open alternatives such as creative commons licensing; ability to use appropriate referencing for digital materials.	
	Media literacy	Ability to **access, edit and share** digital media for personal, social, professional and academic purposes; to curate and repurpose digital media from shared sites. Ability to **make sense** of messages in a range of digital media – text, graphical, video, animation, audio, haptic, multimedia. Knowledge of **copyright** and alternatives such as creative commons. (At higher levels) Appreciation of how digital messages are designed e.g. for particular audiences, purposes, effects; understanding of **digital media production** as a profession and a practice.	Opportunities to express and share ideas in **a range of digital media** e.g. presentations, blog posts and wiki edits, graphics, video, audio, animations, curations. Opportunities to participate in **authentic practices** of digital professionals. **Careers/employability staff** with expertise in the use of digital media
	Data literacy	Ability to **collate, manage, access and use** digital data in spreadsheets and other media. Ability to **record and use personal data** to support learning and personal development; to ensure personal data is secure and use privacy settings appropriately; to follow legal, ethical and security guidelines when using other people's data. (At higher levels) Ability to **analyse data** in databases and spreadsheets by running queries, data analyses and reports; ability to manage and mine large bodies of data for relevant information.	Relevant **data-based activities** in the curriculum. Access to **authentic data sets** of the subject area or profession. Experience of using **metrics.**
Digital creation, scholarship and innovation (*creative production*)	**Digital creation**	Ability to **design and develop** new digital materials e.g. posts, podcasts, web pages, wiki entries, digital video, digital stories, presentations, infographics, animations, video and audio files. Ability to **share and showcase** digital artefacts with an awareness of audience and purpose. (At higher levels) ability to **code and design** apps/applications and interactive elements; to design digital games, virtual environments and interfaces.	Opportunities to engage in **digital production** in a curriculum and/or professional context. **Flexible assessment** schemes which support digital outcomes. **Reward/recognition for digital creativity**, e.g. cohort award, prize sponsored by employers, development/enterprise fund.
	Digital research and scholarship	Ability to **collect data** and evidence using digital tools e.g. data capture, video, audio; to design and administer online surveys; to use social media to capture evidence and feedback. Ability to **analyse data** and evidence using qualitative and quantitative	Opportunities to engage in **authentic scholarship** of the subject area or profession Opportunities to **demonstrate achievements** in digital

		tools; in doing so to **answer questions and solve problems.** (At higher levels) Ability to make **new discoveries** and generate new hypotheses and ideas.	enquiry, research and analysis, recognising that these are key to the expectations employers have of graduates.
	Digital innovation	Ability to find and promote **new ways of doing things** with digital tools, apps and media;to see new opportunities that arise from digital developments. (At higher levels) Ability to **develop new products and services** for a digital marketplace; ability to act as a **digital change agent**, entrepreneur or champion.	**Futures thinking**, horizon scanning, blue skies development or other open ended enquiry embedded into the curriculum, especially with a digital aspect. Opportunities to participate in **student change agent** scheme or similar. Opportunities to work in **innovation/development** e.g. as part of work experience, internship, research-led teaching. See Jisc Summer of Innovation programme and Change Agents Network.
Digital communication, collaboration and participation (*participating*)	**Digital communication**	Ability to communicate with other people in a **range of digital media** e.g. email, presentations, blog posts, video conference, photo sharing, text, twitter, online forums, understanding the differences between these media. Ability to **design digital communication**s for different purposes e.g to persuade, inform, entertain, guide, advise, support clients. Respect for the **different ways of communicating** in different media and in different spaces e.g. personal, social, academic, professional. Respect for the **privacy** of others and of communications. Recognition of digital media's potential to intimidate, shame and harass and of our responsibility not to engage in these behaviours.	Opportunities to participate in a **wide range of communication** activities and settings, some of them authentic settings of the profession or subject area. **Digital well-being**, digital respect, 'coming of digital age' or similar course provided (e.g. with the students' union) See 'Coming of Digital Age' motion from the NUS.
	Digital collaboration	Ability to **work in digital teams**, groups and projects to produce shared outcomes or meet shared goals. Ability to **use collaborative tools** e.g. file sharing, shared writing/drawing tools, project management tools, shared calendars and task lists; and to **take part in collaborative online environments** e.g. webinars, discussion groups, flash meetings. Ability to **work productively across borders** : organisational, cultural, professional, national and linguistic.	Opportunities to **learn with students from other cultures** and from other subject disciplines. Opportunities to **use collaborative tools** in groupwork.
	Digital participation	Ability to **participate in a range of online networks** around subject of study and personal interests/ambitions. Ability to **share digital resources** e.g. links, bookmarks, images, text; to enrich digital resources e.g. with reviews, comments, 'likes', annotations. Ability to build, value and manage **online contacts** and to research **impact** in online networks e.g. using analytics. (At higher levels) Ability to **build networks** and collaborative	Opportunities to **participate in authentic networks** of practice online, to build online contacts. to begin developing an online presence and footprint. Opportunities to **reflect on personal contribution and impact** and to collate/showcase evidence of participation. **Careers and employability staff** with expertise in digital

		opportunities e.g. facilitate online exchanges, answer questions, collate answers,welcome new participants, launch new sites/groups, open up new connections and conversations.	networking. All of the above require an **open and flexible digital environment,** supportive of communication and sharing across organisational boundaries.
Digital learning and personal/professional development (*learning*)		Ability to **identify and assess a need** for learning e.g. using digital self-assessment, planning or reflective tools. Ability to **participate in digital learning opportunities** e.g. online courses, podcasts, tweetfests, discussions. Ability to **identify and use appropriate digital learning resources** e.g. quizzes, online tutorials, simulations, open lectures. Use of digital media to **engage in learning dialogues** e.g. with tutors, mentors, experts, other students; to be proactive in these dialogues e.g. seeking feedback. Use of digital tools (personal or organisational) to: **organise and plan** learning; **manage** learning time and tasks; **record** learning events/data and use them later for review, reflection and evidencing of achievement; undertake **self-assessment** and participate in other forms of digital **assessment and feedback.** Ability to **manage attention and engagement**; to remain motivated and directed when engaged in digital learning.	**E-portfolio** or similar opportunity for learners to continually capture, reflect on, manage and showcase evidence of their learning and achievements. **Diagnostic and discovery tools** to support learners' self-assessment and review, and develop a pro-active engagement in their own learning. **Teaching staff** with expertise in supporting digital learners and developing lifelong habits of digital learning. **Learning support/academic practice staff** with expertise in supporting digital learners and developing lifelong habits of digital learning.
Digital identity and wellbeing (*self-actualising*)	**Digital identity management**	Ability to **manage digital profiles** carefully and make sure they are suitable for different settings e.g. personal, professional, academic; **care of digital reputation** when posting and communicating online; management of privacy settings. Ability to **maintain a digital portfolio** or CV, and/or a personal blog with links to evidence of achievement; to make outcomes of learning and other achievements **accessible in digital forms** e.g. to employers. Horizon scanning and ability to **identify career and other development opportunities** relevant to personal aspirations.	**Careers and employability staff** with expertise in digital identity and reputation management. Opportunities to build a positive digital profile through ongoing **digital record of achievement**. Opportunities to **research opportunities** for work, career paths and other life choices and to be supported in making decisions.
	Digital wellbeing	Ability to choose and use digital technologies in ways that **support well-being and safety,** and respect the well-being and safety of others; to act positively against cyberbullying and other damaging online behaviours; to consider the rights and wrongs and the possible consequences of online behaviour. Ability to **track and use personal or learning data** to support living and learning more effectively; to engage in digital citizenship, **community action**, volunteering, charity and political action. Recognition that digital engagement can cause distraction and stress; ability to manage digital stress and to **switch off** when appropriate Ability to manage online and real-world interactions in ways that support healthy relationships with other people.	**Digital well-being**, digital respect, 'coming of digital age' or similar course provided (e.g. with the students' union) A **supportive digital culture** in which safety and responsibility issues are addressed and bullying is not tolerated. **Access to personal learning data** and the tools to use it to track progress and achievements. See 'Coming of Digital Age' motion from the NUS, 'Code of Practice on Learner Analytics' from the NUS/Jisc

Reverse mapping: Employable student onto digital capabilities and development opportunities

Aspects of employability		**Aspects of digital capability**	
Attributes	*Adaptability, flexibility and working under pressure* *Confidence and emotional intelligence* *Aspiring, motivated and persevering* *Taking responsibility and initiative* *Awareness and sensitivity to different contexts* *[Creativity/lateral thinking]*	Resilience, repertoire, experience of a range of digital devices, services, applications etc in use ICT confidence Management of time, task and attention Communicate effectively across boundaries Digital creation, innovation problem solving, computational thinking	ICT proficiency + Digital identity and well-being Digital communication Digital creation
High level capabilities	*Creative problem identification and solving* *Entrepreneurship* *Enquiry, research and critical analysis* *Coaching/mentoring*	Applying computational modes of thinking Finding work-arounds, problem solving etc Identifying new digital opportunities within and beyond the organisation; change agency Digital scholarship; judgement in use of digital data/info/media Becoming a digital champion/mentor to others	ICT proficiency Digital innovation Digital scholarship Information literacy Learning
Lifelong learning	*Self-directed planning, assessment and review* *Learning from informal and formal settings* *Self-directed updating of skills/knowledge* *Seeking feedback from others* *Recording, reflecting, articulating and evidencing learning.*	Identify a need for learning Participate in digital learning opportunities Identify and use appropriate digital learning resources Use digital media to engage in learning dialogues Use digital tools to: organise and plan learning; manage learning time and tasks; record learning events/data and use them later for review, reflection and evidencing of achievement; undertake self-assessment and participate in other forms of digital assessment.	Learning
Lifelong employability	*Self-awareness and -evaluation* *Horizon scanning and developing intelligence* *Identifying opportunities and skills required* *Developing personal plan for employability* *Networking and engagement for employability* *Building evidence of achievement* *Communication and presentation of evidence*	Identify and assess a need for learning Identify opportunities in the digital environment Record learning events/data and use them later for review, reflection and evidencing Participate in digital networks of practice Maintain digital portfolio or similar	Digital identity and well-being + Learning Digital participation Learning
Professional skills	*Collaboration, leadership and followship*	Use digital tools to work collaboratively on tasks	Communication,

and knowledge	*Communication, influencing, negotiation and customer care* *Enterprise, commercial and business awareness* *Planning, organisation and project management* *Investigation, analysis and problem solving* *Foreign languages* *Self-management*	Design digital communications for different purposes e.g. persuade, inform, entertain, advise, support. Develop new products and services Use ICT applications to work productively / efficiently Use digital research methods to answer questions, resolve problems Remain motivated and directed in digital settings	collaboration and participation Digital innovation ICT proficiency Digital scholarship Learning
Basic work readiness	*Spoken, written and e-communication* *Social skills* *Appearance and presentation* *Ethical and moral behaviour* *Numeracy*	Communicate in a range of digital media Manage digital reputation and footprint Act responsibly and ethically in digital settings; consider consequences of online behaviour. Collate, manage, access, interpret and use digital data	Communication Digital identity Data literacy