Building digital capabilities framework

The six elements defined

Jisc data analytics
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Jisc building digital capabilities framework: the six elements defined

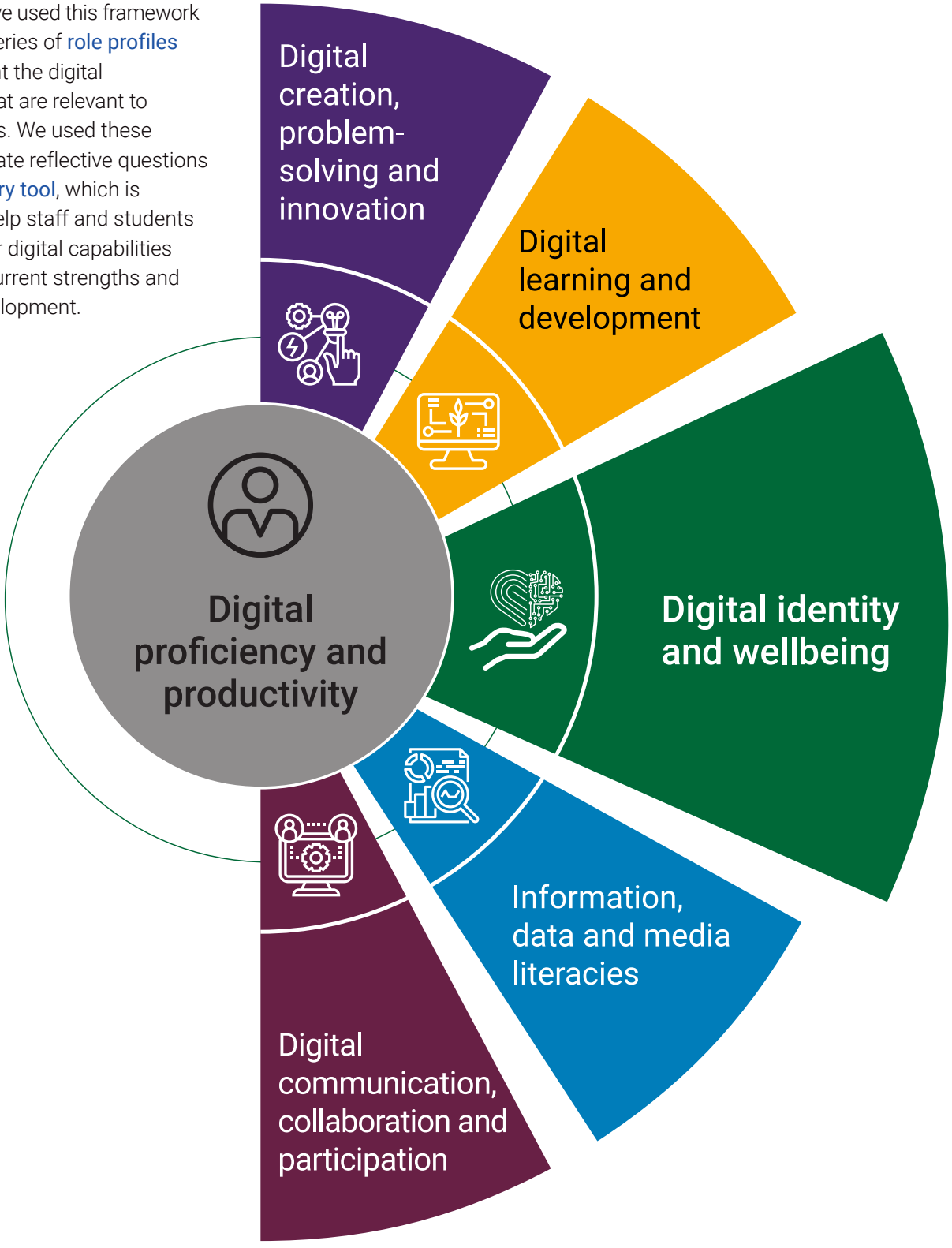
The Jisc digital capabilities framework has most often been used by digital leaders and staff with an overall responsibility for developing digital capability in their organisation. However, it can be used by staff in any role and by students in any educational setting.

Use the framework to:

- To support discussion and build consensus about the capabilities required in a digital organisation
- To develop a local framework or a locally adapted version of this framework
- To plan or review staff/educational development, for example ensuring that framework elements are included in professional development activities
- To plan or review a curriculum, by adapting this generic model to the demands of the subject area and course outcome. One approach has been to produce each element as a prompt card with ideas for digital activities on the reverse. Another has been to encourage staff and students in a faculty or school to devise their own version of the framework for use in the curriculum
- To structure and signpost development opportunities, for example mapping digital content to the framework, or signposting a workshop programme
- To inform digital capabilities badges for staff and/or students undertaking certain development activities or demonstrating certain practices
- To map digital expertise across different staff roles within a team, department, or the organisation as a whole, identifying gaps and recognising where digital expertise adds value

For more information on building digital capabilities please see: **digitalcapability.jisc.ac.uk**

At Jisc, we have used this framework to develop a series of role profiles which highlight the digital capabilities that are relevant to particular roles. We used these profiles to create reflective questions in the discovery tool, which is designed to help staff and students reflect on their digital capabilities and identify current strengths and areas for development.



Digital proficiency and productivity

Digital proficiency

Digital proficiency is the ability you have to use digital devices, networks, applications, software and services

How quickly do you pick up new tools and skills? Do you cope when technology doesn't work as expected, do you explore beyond the basic functions, and can you work things out for yourself? Proficiency concerns digital mindset more than the mastery of specific tools, which can be achieved by using different applications and developing your range.

Examples include:

- The use of digital devices, networks, platforms, systems, applications, Artificial Intelligence (AI), software and services
- The confident adoption of new devices, applications, (including Generative AI) software and services and the capacity to stay up to date with digital developments. The capacity to deal with problems and failures of digital devices, applications, software and services when they occur, and to design and implement digital solutions
- An understanding of basic concepts in computing, coding and information processing
- An understanding of accessibility, inclusion and equity issues in the use of digital devices, applications, software and services
- An understanding of the impact of technologies on the environment

Digital productivity

Digital productivity is how you use your digital skills to accomplish tasks

Can you choose the right devices, applications, software and systems for each task? Are you confident in using productivity tools and services provided by your organisation?

Can you adapt the tools available to your own needs and those of other people? A digitally productive person can function well in a complex digital environment but can also deal with distraction and overload.

Examples include:

- The use of digital tools and services to carry out tasks effectively, productively and with attention to quality
- The capacity to: choose devices, applications, software (including Generative AI) and systems relevant to different tasks having assessed their benefits and constraints; and to adopt and (where necessary) adapt digital tools to personal requirements and ways of working; work fluently across a range of tools, platforms and applications to achieve various complex tasks
- An understanding of how digital technology is changing practices at work, at home, in social and in public life

Digital creation, problem-solving and innovation

Digital creation

Digital creation is about digital production of content

From more technical work such as coding new apps to making digital images, documents and websites. Digital creative professionals have special techniques of digital production, but we all create digital items as a result of thinking and participating in a digital world. Mind maps, digital sketches, social media posts, or even selfies can be seen as expressions of digital creativity.

Examples include:

- The capacity to design and/or create new digital content such as writing, imaging, audio and video, digital code, apps and interfaces, web pages
- An understanding of different digital production processes including those generated by AI and the basics of editing
- An understanding of technical and intellectual accessibility related to producing digital content

Digital research and problem-solving

Digital problem-solving is your ability to solve problems, make decisions and answer questions

This includes using digital evidence, or using digital environments (such as simulations and virtual worlds) to test out solutions. Digital scholars have many specialist digital methods available, depending on their research area, but all of us take part in digital problem solving every day.

Examples include:

- The capacity to: use digital evidence to solve problems, make decisions and answer questions; collect and collate new evidence including AI generated evidence, evaluate the quality and value of evidence, and to share evidence and findings using digital methods
- An understanding of digital research methods and of different data analysis tools and techniques

Digital innovation

Digital innovation describes your willingness to try new practices and look for new solutions with digital technology

We all need to be able to assess the benefits and risks of using new digital applications as well as considering accessibility and inclusion aspects.

Examples include:

- The capacity to: identify, adopt and develop new practices with digital technology in different settings (personal and organisational, social and work-based); assess opportunities, benefits and risks of new digital applications including Generative AI, use digital technologies in developing new ideas, projects and opportunities
- An understanding of innovation, enterprise and project management in digital settings
- An understanding of technical and intellectual accessibility issues when reviewing new digital applications to ensure that people using them have an equitable and inclusive experience
- An understanding that innovating appropriately should respect existing ways of working and involve effective stakeholder engagement
- An understanding that digital innovation should contribute towards personal, organisational or social goals and targets for sustainability and environmental impact

Digital learning and development

Digital learning

Digital learning is the ability to turn digital opportunities into personal learning gains

In many ways this depends on our general readiness and motivation to learn, but in some ways digital learning makes particular demands. Habits of successful digital learners include: using a range of media such as apps, games and quizzes; participating in courses, discussions and learning networks; using digital tools to plan, reflect and showcase learning; monitoring and self-assessing; managing time and tasks.

Examples include:

- The capacity to: participate in (and benefit from) digital learning opportunities; identify and use digital learning resources; participate in learning dialogues via digital media; use learning apps and services (personal or organisational); use digital tools including Generative AI to organise, plan and reflect on learning; record learning events/data and use them for self-analysis, reflection and showcasing of achievement; monitor own progress; participate in digital assessment and receive digital feedback; manage own time and tasks, attention and motivation to learn in digital settings
- An understanding of the opportunities and challenges involved in learning online – and of own needs and preferences as a digital learner (eg access, media, platform and pedagogy)

Digital teaching

Digital teaching is the ability to support and develop others in digital settings

This might mean working in a teaching role or as part of a teaching team, or it might mean supporting development less formally, as an appraiser or mentor. As with digital learning, the underlying commitment to development must be there, but the digital tools for realising it present new opportunities and challenges.

Examples include:

- The capacity to make effective use of digital tools (including Generative AI) and resources to: support and develop others in digitally-rich settings; teach; work in a teaching or curriculum team; design learning opportunities; support and facilitate learning; be proactive in peer learning; design and adopt different modes of learning as appropriate (eg self-directed, blended, hybrid, hyflex, asynchronous/synchronous)
- An understanding of the educational value and potential of different media for teaching, learning and assessment, and of different educational approaches and their application in digitally-rich settings
- An understanding around technical and intellectual accessibility of content, pedagogical approaches, assessment and supporting digital learners

Information, data and media literacies

Information literacy

Information literacy is your ability to find, evaluate, organise and share information, whether you are using it for learning, research or professional purposes

Information specialists recommend we are creative in how we find information, but critical in how we judge its value and credibility. It can be useful to have a broad understanding of information-based practices such as copyright, referencing, and avoiding plagiarism.

Examples include:

- The capacity to: find, evaluate, manage, curate, organise and share digital information; interpret digital information for academic and professional/vocational purposes, and to review, analyse and re-present digital information in different settings; apply digital information to professional tasks such as problem solving and decision making
- A critical approach to evaluating information in terms of its provenance, relevance, value and credibility
- An understanding of copyright and open alternatives eg Creative Commons, and of the ability to reference digital works appropriately in different contexts to avoid plagiarism
- An understanding of technical and intellectual accessibility of digital information

Data literacy

Data literacy is how you handle data as a special form of information

Data is used in diverse ways within any organisation, from specialist professional use (eg research) to operational data informing a range of organisational activities.

Digital personal data is used in all areas of our lives. We all need a basic understanding of legal, ethical and security aspects when providing our own data or when handling data about someone else.

Examples include:

- The capacity to: collate, manage, access and use digital data in spreadsheets, dashboards, databases and other formats; analyse data by running queries, data analyses and reports; produce, visualise and interpret data in reports and presentations; work with financial and/or budget data in a personal or professional context (financial literacy)
- An understanding of: how data is used in professional and public life; legal, ethical and security guidelines in data collection and use including AI and Generative AI; the nature of algorithms; how personal data may be collected and used; the practices of personal data security; technical and intellectual accessibility of digital data, checking the T&Cs for safe useage

Media literacy

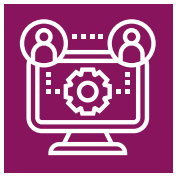
Media literacy covers all the ways you receive and respond to messages in digital media

This includes text, graphics, video, animations, audio, and media such as websites, simulations and games. Most of us also share and produce messages of our own, and that means we need to understand issues such as audience, accessibility, user design and impact. Media users need to ask why messages are designed as they are, how they affect us – and particularly how different media can be used for learning.

We also need to understand issues around ownership of digital media such as copyright, referencing, and avoiding plagiarism.

Examples include:

- The capacity to critically receive and respond to messages in a range of media formats – text, graphics, video, animation, audio – and to curate, re-edit and repurpose media, giving due recognition to originators
- A critical approach to evaluating media messages in terms of their provenance and purpose
- An understanding of digital media as a social, political and educational tool and of digital media production as a technical practice
- An understanding of copyright , AI and open alternatives eg Creative Commons, and of the ability to reference digital media appropriately in different contexts to avoid plagiarism
- An understanding of technical and intellectual accessibility of digital media



Digital communication, collaboration and participation

Digital communication

Digital communication is any communication using digital media and networks

The ability to communicate well includes using different channels such as video and instant messaging, photo sharing and chat. It also includes an awareness of different audiences, different norms and needs, and the changing boundaries between public and private communication.

We also need to think about how our choices around digital communication can exclude others.

Examples include:

- The capacity to: communicate effectively in digital media and spaces such as text-based forums, online video, audio and social media; design digital communications for different purposes and audiences including using AI; respect others in public communications; maintain privacy in private communications; identify and deal with potentially harmful digital communications
- An understanding of the features of different digital media for communication and of the varieties of communication norms and needs
- An understanding of technical and intellectual accessibility around digital communication

Digital collaboration

Digital collaboration is the ability to take part in digital teams and working groups to meet specific goals, using shared tools and media

Even when participants are physically in the same organisation, digital collaboration can be an efficient way to produce shared materials, to plan and run a project, or to work effectively across various boundaries and differences.

We also need to think about how some practices for digital collaboration can exclude others.

Examples include:

- The capacity to: participate in digital teams and working groups; collaborate effectively using shared digital tools and media; produce shared materials; use shared productivity tools; work effectively across cultural, physical, social and linguistic boundaries
- An understanding of the features of different digital tools including Generative AI for collaboration, and of the varieties of cultural and other norms for working together
- An understanding of technical and intellectual accessibility for effective digital collaboration eg providing choice, digital spaces for collaboration

Digital participation

Digital participation means taking part in a more open-ended way than collaboration, over a longer time, and in a range of different settings

This is how you join, facilitate and build digital networks, take part in a shared social and cultural life using digital services, build contacts and share ideas. Digital participation should always be safe and respectful, and not exclude other people.

Examples include:

- The capacity to: participate in, facilitate and build digital networks; participate in social and cultural life using digital media, AI and services; create positive connections and build contacts; share and amplify messages across networks; behave safely and ethically in networked environments
- An understanding of how digital media and networks influence social behaviour
- An understanding of technical and intellectual accessibility of digital networks and participatory spaces
- An understanding of the ways that digital participation can impact on the environment (eg carbon footprint of sending and storing emails)

Digital identity and wellbeing

Digital identity management

Digital identity is how you develop and project a digital identity – or several identities – and how you manage your digital reputation

Most of us have identities distributed across a range of platforms and media. Do you keep these separate, or aim to make them work together? How do you manage assets such as profiles, records of achievement, contacts and networks to achieve your personal goals?

Examples include:

- The capacity to: develop and project a positive digital identity or identities and to manage digital reputation (personal, professional or organisational) across a range of platforms; build and maintain digital profiles and other identity assets such as records of achievement; review the impact of online activity including AI and Generative AI, collate and curate personal materials across digital networks
- An understanding of the reputational benefits and risks involved in digital participation
- An understanding around inclusion aspects relating to opportunities for developing digital identities

Digital wellbeing

Digital wellbeing is about the impact of using digital devices, tools, services and systems on you as a person

It relates to how you look after your personal health, safety, relationships and work-life balance in digital settings.

You might use digital data and devices for personal health goals or in learning or work contexts, to participate in social activities or help out in your community.

We all need to manage digital stress, workload and distraction and know where to find help and support. We could all learn to use digital tools with more concern for each other and for the wider world.

Examples include:

- The capacity to: look after personal health, safety, relationships and work-life balance in digital settings; use digital tools in pursuit of personal goals (eg health and fitness) and to support participation in social and community activities; act safely and responsibly in digital environments; negotiate and resolve conflict; manage digital workload, overload and distraction; act with concern for the human and natural environment when using digital tools
- An understanding of the benefits and risks of digital participation in relation to health and wellbeing outcomes (eg ergonomics, environmental impact, managing finances, mental health)
- An understanding of the ways in which digital tools including Generative AI and services can both support additional needs or have negative impacts around equity, diversity and inclusion

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