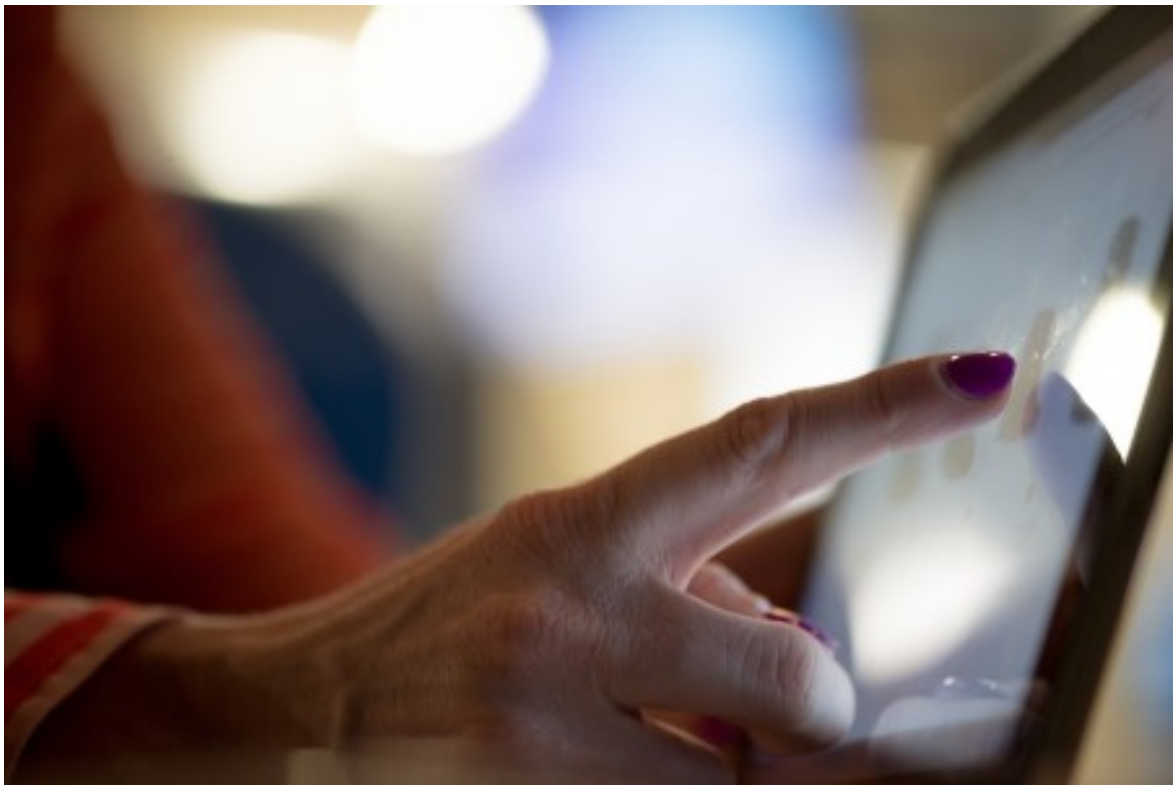
Digital CapabilitiesFramework

THE FUTURE IS DIGITAL



UNIVERSITY of TASMANIA

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Background

What are Digital Capabilities?

Digital capabilities equip an individual to live, learn and work in a digital society (Jisc, 2014b). They encompass literacy, fluency, confidence and skills (Beetham, 2017), relating to attitudes as well as to actions. They focus more on acquiring transferable skills like behaviours and practices than the digital technologies themselves. Digital capabilities will vary according to discipline requirements, roles and responsibilities and will also reflect the culture and infrastructure of the University of Tasmania.

Why are Digital Capabilities important?

Digital capabilities allow individuals to adapt and thrive in a contemporary learning environment and to contribute to a global society. Our staff's digital capabilities will underpin the innovative design of learning resources and pedagogical practices in course and curriculum design and delivery. They will also facilitate student development and inspire student engagement and understanding.

Conscious development of digital capabilities has individual and organisational benefits (Jisc, 2014b):

- providing quality education in flexible and innovative ways
- meeting expectations and needs of a diversity of students through an enhanced learning experience
- improving employability and higher skills in a digital economy
- attracting more students in a global education market
- improving processes, systems and building organisational capacity
- maximising the value of investments in learning technologies, content and services

About the Framework

The *University of Tasmania Digital Capabilities Framework* is one of the University's *The future is digital* strategic initiatives. The framework is a guide for Colleges and Divisions to facilitate optimal use of digital technologies in courses as well as engagement between students and staff.

The framework mirrors others throughout Australian and international higher education institutions. Most of the existing frameworks are based on the original Jisc project (Jisc, 2014a), including the same six, interrelated elements:

- ICT proficiency (core to all elements)
- Information, data and media literacies
- Digital creation, problem solving and innovation
- Digital communication, collaboration and participation
- Digital learning and development
- Digital identity and wellbeing

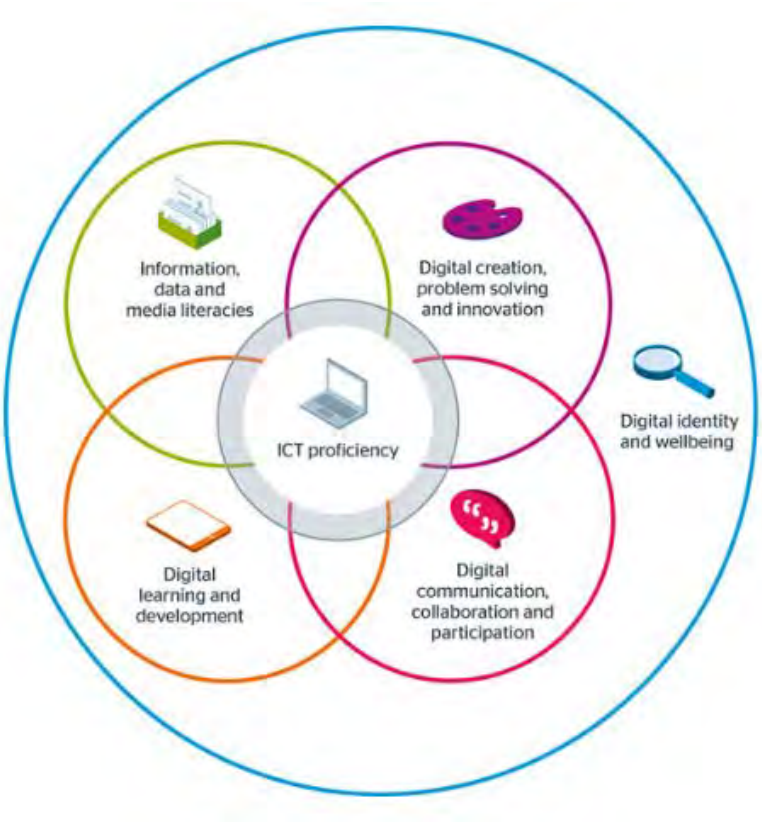

Figure 1 Jisc Digital capability framework (2019)

The *Digital Capabilities Framework* is based on work completed by La Trobe University work (2018). It includes:

- the six digital capability elements (as defined by Jisc)
- a framework for staff, with a subset of capabilities for teaching staff
- a framework for students
- examples of attributes and capabilities
- and a reliance on shared responsibility for the development of digital literacies

The framework is designed to serve as a starting point for ongoing conversations about existing digital practices. It is also intended as a reference point for further development of these practices. The framework will help individuals, disciplines and organisational units to align their understanding of digital practices to their scholarly and professional purposes. The aim is for each of these groups to improve their proficiency in these areas over time. The framework articulates indicative capabilities and conceptualises digital capabilities as practices embedded in learning, teaching and professional activities.

Staff will be encouraged tailor competencies and approaches within The *Digital Capabilities Framework* to their disciplinary and functional needs.

Digital Capabilities Framework for Staff

The framework outlines essential attitudes and capabilities required by professional staff, academic staff, researchers and graduate researchers. It also includes specific capabilities required by teachers which will, in turn assist their students with developing their own digital capabilities.

The framework can be used:

- to help individuals identify their own strengths and preferences
- as a performance development resource between individuals and supervisors
- to develop position descriptions
- to identify and assess the spread of attitudes, capabilities and confidence within a department or team

Examples of each capability are expressed at either 'Proficient' or 'Expert' levels. Requirements to meet either level will vary depending on the specific staff role. The level 'Proficient' is classified as competency in a set of technical skills; the level 'Expertise' is classified as the application of these technical skills to discipline requirements.

The Framework is designed to start conversations about the activities and resources required to reach 'Proficient' and how to share knowledge and skills among peers and the wider community. In building digital capabilities, it is envisioned that everyone will serve a resource for others across the University. Where transition from 'Proficient' to 'Expert' is expected, Disciplines or Colleges should provide a clear pathway on how individuals can make the progression.

The development of capabilities requires more than technical competence; it can be assumed that staff who are confident, curious, open, critical and resilient will develop their digital capabilities more quickly. Staff who display these qualities, in conjunction with an ethical and student-focused approach, will also hasten the development of digital capabilities in the University's students. Ideally, all staff and students will be supported and guided by leaders who model desired digital behaviours, and embrace technology-enhanced learning and the digital environment as a core part of their leadership role ((Davies, Mullan, & Feldman, 2017).

Digital Capabilities for professional staff, academic staff, researchers, graduate researchers

ICT proficiency & productivity		
For example: *Are you comfortable using fundamental devices like a mouse, keyboard, tablet, smartphone, printer, camera?* *Are you familiar with basic functions in software to create documents, presentations, spreadsheets?* *If you download files, can you find them again?*		
Proficient	***Expert***	***College/Discipline Examples***
Use a range of digital devices via their interfaces (mouse, keyboard, touch screen, voice control etc.)	Work across a range of devices and services (personal and institutional), connecting them as and when appropriate	
Use a range of digital applications and services: access these from different devices and networks	Use specialist digital tools appropriate to role and/or subject specialism	
Use basic productivity software, web browser, writing/presentation and numerical software	Cope with technology problems: find solutions or work-arounds	
Use digital capture devices such as a digital camera	Adapt and customise applications and systems to suit personal needs and preferences	
Choose and use the right digital tool to the task, to suit personal needs and preferences	Assess the benefits and constraints of different digital tools	
Adopt new and upgraded systems (with appropriate support when necessary)	Set up shared solutions for team working, e.g. document sharing	
Log onto and use institutional systems as required by role	Look for ways of integrating technologies, e.g. synchronizing devices and services	
	Explore new technologies and experiment with established ones	

Information, data & media literacies

For example:
Do you trust your ability to recognise and avoid "fake news"?
Do you have various options for finding fulltext of published papers?
Where do you store your data? Does anyone else know it's there?
Do you know if there are copyright restrictions on your teaching materials?

	Proficient	*Expert*	*College/Discipline Examples*
Information	Find, access and evaluate digital information	Use a range of open content with an awareness of different licences	
	Organise digital information for personal use through files, tags, bookmarks and curation tools	Curate, organise and share digital information for use by others	
	Be aware of the provenance and credibility of digital information	Manage information in data bases and other content systems	
	Be aware of and follow the rules of online copyright and reference appropriately	Record and preserve information for future access e.g. creating appropriate metadata records	
Data	Collate, manage, access and use digital data in databases, spreadsheets or other data-based media	Use a range of software applications to manipulate raw data	
	Interpret data in databases or spreadsheets by running queries, data analyses and reports	Ethically mine and link data from a variety of sources	
	Visualise and find patterns in data	Analyse large digital datasets and a variety of data types	
		Curate, organise and share digital data for use by others	
		Use data analytics from a range of sources to draw conclusions	

		Interpret diverse kinds of data and present such data in ways that others can readily understand it	
Media	Read and make sense of communications in a range of digital media, e.g. text, graphic, video, animation, audio, haptic	Produce original digital media content with an appreciation of accessibility, purpose and audience	
	Judge messages in digital media for credibility and relevance	Produce interactive media	
	Re-edit and repurpose digital media content	Understand digital media production as an industry and a technical and creative practice	
	Design effective digital communications, incorporating different media, including social media, as appropriate		

Digital learning & development

For example:
Do you willingly experiment with new technologies?
Has digital technology enabled effective new practices?
Have you created guides to help others with specific software or online tools?

Proficient	***Expert***	***College/Discipline Examples***
Collect evidence and data using digital tools and methods	Discover, investigate, develop and share new ideas using digital media	
Design online data collection tools, e.g. survey instruments, system data logs	Critically evaluate the impact of digital developments and interventions	
Analyse and make sense of data using digital tools	Develop new digital tools, processes and methods in the subject area or research field	
Use digital media to communicate scholarly ideas		

Digital communication, collaboration & participation

For example:
Can you create shared documents for concurrent editing by collaborators?
Do you foster a productive and supportive team environment online?
Does social media work well for you to attract interest in your outputs?
Are you a considerate and respectful webinar host?

Proficient	***Expert***	***College/Discipline Examples***
Communicate effectively in a variety of digital media and digital forums (email, text, video etc.)	Build digital teams and working groups, develop collaborative practices and environments	
Collaborate effectively using shared digital tools and media	Build, facilitate and maintain new digital networks	
Be aware of different cultural, social, professional and personal norms (etiquette) when communicating	Develop a digital communication strategy	
Participate in digital networks		
Be safe and respectful online		
Participate in social and cultural life using digital services		
Create positive connections and build rapport in digital settings		

Digital creation, problem solving & innovation

For example:
Do you follow good practice when designing content for the web?
Do you know how to make documents, presentations and online materials accessible?
Can you help others to solve problems using digital technologies?
Do you reuse and remix open education resources for your teaching?

Proficient	***Expert***	***College/Discipline Examples***
Create new digital artefacts and materials	Generate new digital projects, new discussions/debates about digital issues, new online spaces and communities	
Adopt new digital tools, processes and methods	Design apps/applications, games, virtual environments, simulations,	

	interactive environments and interfaces	
Make decisions and solve problems based on digital evidence	Share the approaches you've used, to help others	
Participate in innovative projects, communities and discussions	Develop new digital tools, processes and methods	
	Act as a digital advocate or change leader in an organisation	

Digital identity & wellbeing

For example:
If I "Googled" you, what would I find?
How do you appear on social media?
Do you keep your digital data secure?
Are you able to guide students to practise internet safety?
Can you "switch off" from your smart phone at the end of the day?

Proficient	***Expert***	***College/Discipline Examples***
Develop and project a positive digital identity e.g. social /professional network profile	Keep personal profile(s) up to date with publications, achievements etc.	
Tweet and/or contribute to blogs	Monitor digital footprint and impact across networks	
Use digital media to foster personal relationships and community actions	Collate and curate personal materials across networks, creating a coherent digital identity or narrative	
Look after personal health, safety, relationships and work-life balance in digital settings	Manage at least one professional blog or website	
Manage digital stress, workload and distraction		

Supplementary framework, for Teaching Staff

Teaching Staff		
Proficient	***Expert***	***College/Discipline Examples***
Use available classroom technologies to ensure an engaging, active learning experience, e.g. presentation software, live polling, live access to web sites	Design online materials that are accessible, engaging and relevant to students' learning needs	
Encourage use of students' own digital devices to support active learning in the classroom	(Re)Design subjects and courses to include digital learning outcomes and associated activities and assessment regimes	
Set up digital activities for students to undertake independently and in collaboration, e.g. problems, scenarios, quizzes, design tasks, presentations, building web or wiki pages, collating online resources	Incorporate innovative digital methods into teaching	
Provide access to engaging content relevant to the subject area and appropriate to different students' learning needs	Teach courses wholly online using a variety of methods: discussion, webinar, online resources and activities, set tasks	
Support online discussion	Use open platforms to deliver learning resources and opportunities beyond UTAS, e.g. via iTunesU, TED, MOOCs, OERs, social and sharing media	
Set up and deliver online assessments	Deliver a coherent, supportive and satisfying learning experience to students in digital environments	
Provide feedback to students in digital formats		

they find accessible and actionable	Conduct reviews of digital teaching presences using established quality frameworks	
Set up online peer review and feedback, e.g. within the LMS (MyLO)		
Provide a blended learning experience consistent with the University's Blended Learning Model, with an appropriate mix of online/ face to face, independent /guided/collaborative activities		

Adapted from La Trobe University. (2018). *Skills for a digital world: digital literacies framework - enabling a digital future*. Retrieved from Victoria: https://www.latrobe.edu.au/library/teaching-support/digital-literacies-framework

Digital Capabilities Framework for Students

Development of student capabilities is a shared responsibility with students which relies on a partnership between staff across different roles and units within the institution. The *Framework* guides learning designers and educators to embed digital capabilities within their curriculum design and within the broader student experience. Some capabilities may need to be contextualized for different disciplines and required proficiency will be nuanced to these disciplines.

Students' development of digital capabilities will be enhanced in those who are confident, curious, resilient and reflective.

ICT proficiency and productivity		
UTAS graduates are:		*College/Discipline Examples*
	Active and self-directed, seeking out digital resources and participating fully in digital learning opportunities	
	Self-managing, developing strategies for independent study that reduce digital distractions and enhance digital benefits	
	Self-aware, using digital technologies to suit personal learning preferences and needs	
UTAS students will have opportunities to:		
	Access high quality digital learning materials in their chosen subject area	
	Use digital technologies to participate actively in learning, e.g. voting, quizzes	
	Take part in virtual learning experiences with other students, e.g. webinars, online discussions, virtual and gaming worlds	
	Submit assignments and receive feedback digitally; present work to other students in digital media	
	Use digital tools to develop independent habits of study, e.g. note-taking, curation, digital capture, reference management, virtual research	
	Use digital quizzes and diagnostic tools to better understand their own learning needs and preferences	

Information, data and media literacies		
UTAS graduates are:		*College/Discipline Examples*
	Critically, selecting and evaluating resources according to the needs of the situation	
	Enquiring, posing questions and looking for meaningful answers	
	Analytical, seeing patterns in data and using information to solve problems	
UTAS students will have opportunities to:		
Information	Formulate questions and search terms as starting points for their own digital research	
	Find relevant digital information using, for example, search engines, filters, indexes, tag clouds	
	Organise information using, for example, files, bookmarks, reference management software, tagging	
	Judge whether information is trustworthy and relevant, e.g. by querying its provenance, authorship, date, host site, contextual cues	
	Distinguish different kinds of information, e.g. academic, professional, personal, and political	
	Re-present or apply information in new contexts, e.g. for assignments or presentations, in summaries or analyses, for problem solving or argumentation	
Data	Collate, manage, access and use digital data in databases, spreadsheets or other data-based media	
	Interpret data in databases or spreadsheets by running queries, data analyses and reports	
	Visualise and find patterns in data	

Media	Make sense of messages in a range of digital media, e.g. text, graphical, video, animation, audio, haptic, multimedia	
	Edit, curate and repurpose digital media	
All capabilities	Use curation tools such as pin boards, social bookmarking, personal aggregators to collate and re-present digital materials	
	Use appropriate referencing for digital materials: know the rules of digital copyright and open alternatives such as Creative Commons	
	Upload, tag and share digital materials (information, media and data)	

Digital creation, problem solving and innovation		
UTAS graduates are:		*College/Discipline Examples*
	Creative, using digital tools and media to create new artefacts and express new ideas	
	Innovative, actively exploring new ways of using digital technologies	
	Enterprising and entrepreneurial, considering how digital technologies could be used for social or economic benefit	
UTAS students will have opportunities to:		
Create	Design and create new digital materials, e.g. posts, podcasts, web pages, wiki entries, digital video, digital stories, presentations, infographics, posters	
	Capture, edit and produce digital media, e.g. video and audio	
	Design apps, games and interfaces, and/or code new interactive elements (advanced)	
Innovate	Use digital technologies to complete learning tasks and assignments in new ways	
	Discuss how digital technologies used in study could be of benefit in terms of employability and enterprise	
	Explore and recommend new apps or digital tools to other students	

Digital communication, collaboration and participation		
UTAS graduates are:		*College/Discipline Examples*
	Highly networked	
	Culturally and inter-culturally aware, respecting different norms and communicating effectively across cultures	
	Generous, recognising and supporting the contributions of others	
UTAS students will have opportunities to:		
	Communicate with staff, students and specialists using a range of digital media, e.g. email, presentations, blog posts, video conference, text, twitter, online forums	
	Participate in authentic networks of practice (professional, subject- specialist etc.) using twitter, linked-in, subject specialist communities, blogs or other social media	
	Experience different norms for communicating, e.g. personal, social, academic, professional	
	Design digital communications for different purposes, e.g. to persuade, inform, entertain, guide and support	
	Work in a digital team to produce shared outcomes using, for example, file sharing, shared writing/drawing tools, project management tools, shared calendars and task lists	
	Take part in collaborative online environments, e.g. webinars, discussion groups, flash meetings	
	Participate online with people from different cultural, social and language backgrounds	
	Share digital resources, e.g. links, bookmarks, images, presentations, text documents	
	Take the lead in digital interactions, e.g. facilitating, supporting, prompting, summarising, amplifying messages across networks	

Digital learning and development		
UTAS graduates are:		*College/Discipline Examples*
	Scholarly, respecting values of open enquiry, open sharing and peer review in digital settings	
UTAS students will have opportunities to:		
	Collect research data using digital tools, e.g. data capture, video, audio	
	Design and administer online surveys	
	Analyse research data using qualitative and quantitative tools	
	Discuss how digital technologies are changing research and practice in the subject area	

Digital identity and wellbeing		
UTAS graduates are:		*College/Discipline Examples*
	Knowledgeable about being safe in digital spaces where the boundaries of public and private information may be unclear	
	Respectful of others in digital spaces where distance and/or anonymity may encourage negative behaviours	
	Socially and globally responsible, acting as a digital citizen and online advocate for their values	
UTAS students will have opportunities to:		
	Set up and manage a digital profile in a professional or academic setting	
	Build a CV or portfolio of work, and/or a personal blog with links to learning achievements, in a format accessible to potential employers	
	Consider the risks of cyberbullying, flaming and other damaging online behaviours and how to avoid or redress them	
	Consider legal, ethical and security implications of the use of digital data in their subject specialist or professional field	
	Consider environmental and sustainability implications of emerging digital practices in their subject specialist or professional field	
	Track and use personal or learning data to help them learn more effectively	
	Use digital media to engage in actions that have an impact beyond UTAS, e.g. grand challenges, citizenship research, community actions, volunteering, political and environmental actions	

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