

DIGITAL COMPETENCY FRAMEWORK

2026



Coordination and content

Direction du développement de la culture numérique
Sous-ministériat de l'innovation et de la performance

Collaboration

Direction de la transformation numérique
Sous-ministériat des affaires universitaires, de la recherche,
des relations internationales et du numérique
Ministère de l'Enseignement supérieur

Title of original document

Cadre de référence de la compétence numérique 2026

English version

Services linguistiques en anglais
Direction du soutien au réseau éducatif anglophone
Ministère de l'Éducation

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Source: Québec, Ministère de l'Éducation, *Digital Competency Framework 2026*,
<https://cdn-contenu.quebec.ca/cdn-contenu/education/Numerique/Cadre-reference-competece-num-AN.pdf>

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ISBN 978-2-555-04224-7 (PDF)
ISBN 978-2-550-79042-6 (French PDF)

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Introduction

This update to the *Digital Competency Framework* (hereinafter “the Framework”) published in 2019 aims to more closely align with current needs in education and to provide fresh content, particularly in light of recent developments in areas related to digital competency. This update also reaffirms the inter-level scope of the Framework, meaning that it applies to all levels of education, from preschool through higher education, as well as adult general education and vocational training. Moreover, as the development of digital competency concerns all members of society, this updated version places greater emphasis on a more diverse audience. Thus, while this framework is aimed primarily at stakeholders in the education sector, like its original version, it is also intended more broadly for all citizens living in a world transformed by digital technology. Furthermore, the rise of artificial intelligence (hereinafter “AI”) has led to a re-examination of the Framework in order to better align it with new societal challenges associated with AI.

From the outset, it is important to note that the three documents published in 2019—namely, the *Digital Competency Framework*, the *Digital Competency Development Continuum* and the *Pedagogical Guide*—have been incorporated into this version of the Framework. However, the Framework retains its structure of 12 dimensions, ensuring continuity and maintaining consistency with the work on digital competency already underway. This updated version is intended to be easier to use, eliminates some redundancy and clarifies the content covered.

Overall objective

The Framework addresses the development of digital competency. This refers to an integrated set of knowledge, skills and attitudes that enable confident, critical, creative, responsible and sustainable use of digital technology. Such use is grounded in respect for ethics, safety, individual and collective well-being, the environment and inclusion, with the aim of enabling people to learn, work and participate fully in society. Guided by the 12 dimensions outlined in the Framework, individuals—whether beginners or not—can develop their autonomy by leveraging digital technology in educational or professional settings, as well as in everyday life.

Moreover, a critical, responsible and considered mastery of digital competency should enable individuals not only to understand and navigate digital innovations, but also to harness their potential. Users are encouraged to take a critical look at these innovations before adopting those they deem relevant and useful. While it remains essential to understand and reflect on digital technology, including AI, it is also important to use them appropriately and responsibly when necessary. This proficiency should also enable individuals to select the appropriate tools and use them thoughtfully: for example, opting for screen-free activities when appropriate, or turning to digital technology when it makes a significant contribution to teaching, learning, or individual and collective well-being. By adopting this approach, individuals will be able to embrace innovation with discernment. In short, this Framework aims to foster the development of digital competency within the education community and Québec society, so that everyone can use digital technology independently and thoughtfully.

Guiding principles underlying the Framework

Many frameworks address issues related to digital knowledge, behaviours or attitudes. Although these documents deal with a common theme, the terms used to define the theme vary by region and context. This section outlines certain guiding principles on which the Framework is based, namely:

- use of the term *competency* rather than *literacy*
- adoption of a single digital competency, broken down into 12 dimensions, instead of *12 competencies* grouped within a single framework
- integration of AI as a component of *digital technology*

In the past, the term *literacy* focused strictly on the ability to read and write. Over time, its meaning has expanded to include skills related to the use of digital technology. Thus, the concept of *digital literacy* is used to describe skills associated with understanding, applying, analyzing and creating content in various digital contexts.

However, although the frameworks in which these terms are used may, in some respects, resemble digital competency frameworks, they tend to focus on skills related to research and accessing information. Digital competency involves not only complex practical skills, but also an ethical approach (digital citizenship) and the ability to critically assess the influence of digital technology and AI on our societies.

The term *competency* was therefore chosen because of its emphasis on digital citizenship, critical thinking and digital creation skills. Furthermore, this term facilitates the adoption of the Framework within Québec's education community, as it follows a competency-based approach. Learning activities aimed at developing digital competency can be easily integrated into those targeting subject-specific or cross-curricular competencies.

The decision to focus on *a single digital competency*, despite the existence of frameworks with multiple *digital competencies*, is primarily justified by the comprehensive view of digital technology usage that this approach provides, while ensuring consistency and flexibility across the 12 dimensions. In fact, this approach avoids the situation where each dimension corresponds to a single competency; however, digital competency encompasses attitudes and skills, as well as cultural, technical, critical and ethical aspects. Furthermore, selecting a single competency makes it easier to integrate it into other frameworks or institutional documents related to teaching and learning.

The definition of the term *digital technology* provided in the glossary (p. 44) explains the decision to include AI within the scope of this term. Digital technology is defined as "all information production, storage, processing, dissemination and exchange techniques and technologies, as well as information applications, including artificial intelligence systems." Any mention of digital technology in this document may therefore refer equally to AI and to generative AI. This also helps avoid repetition, making this text easier to read.

Update of the Framework

Systematic review of the scientific literature

An initial literature review, focusing specifically on digital competency, was conducted in the summer and fall of 2024. The objective was to analyze international initiatives published since the initial release of the [Digital Competency Framework](#) in 2019, with a view to identifying, among other things, emerging themes and innovative aspects. Frameworks, development continuums and reference documents published between 2018 and 2024,¹ in French and English, were included in this literature review, without regard to geographical characteristics, target audiences or levels of education, where applicable, given the inter-level nature of the Framework. Some 88 initiatives were thus identified and analyzed, providing a solid comparative basis for updating the Framework.

A second systematic review of the literature, conducted during the same period, focused on AI literacy. The objective was to better define this concept and the skills associated with its development. To this end, an analysis of publications released between 2018 and 2024 on the topic of AI literacy was conducted. The publications included scientific articles, systematic reviews and various other documents, such as government frameworks. We were particularly interested in the definitions and emerging themes of AI literacy, with a view to supporting its growing prominence as part of the work to update the Framework. A total of 353 documents were identified, of which 102 were selected for descriptive analysis, while 31 others, deemed essential, were subjected to a more comprehensive analysis using a thematic approach.

¹ This time frame was chosen to include the period during which the Framework was drafted, as certain publications may not have been taken into account at that time. The framework was published in 2019.

Consultations with the scientific and education communities

From winter to summer 2025, more than one hundred specialists from academic and professional circles participated in consultations aimed at updating the Framework. Their mandate was to conduct a critical assessment to improve the quality, relevance, reliability and scope of this framework.

A first group composed of experts in the integration of digital technology in educational settings as well as specialists in the post-secondary sector (e.g. faculty members, librarians) was consulted. Their in-depth knowledge of existing concepts, theories and frameworks ensured consistency between the scientific literature and the new version of this framework.

Subsequently, education consultants from a wide range of disciplines and educational pathways enriched the discussion with their in-depth understanding of real-world conditions. Their contributions made it possible to refine the content of the Framework to enhance its usefulness and ease of implementation.

Finally, a wide range of institutional partners—all committed to professional development and the integration of digital technology in education and higher education—were also consulted to provide additional insight into the needs of the field.

How to read the Framework

One competency, 12 dimensions

Like the first edition, published in 2019, this updated version of the *Digital Competency Framework* is organized into 12 dimensions (D). Two of these dimensions are central to the Framework: *Exercising ethical citizenship in the digital age* (D1), which embodies the purpose of the Framework and revolves around the development of digital citizenship, and *Developing and mobilizing technological skills* (D2), which represents the technical foundation of digital competency.

The 12 dimensions are interconnected: a single task may draw upon several of them, and the development of one often reinforces the others. For example, a learning activity can simultaneously foster collaboration (D5) and communication (D6), while requiring technological skills (D2) and raising ethical issues (D1). Moreover, the numbering does not imply a hierarchy. No dimension is tied to a single subject; they all apply to a variety of school or professional contexts, or to everyday life—an essential condition for fully developing digital competency.

Each dimension is broken down into elements, sample themes and concrete examples, as outlined in the following sections.

Elements of the dimensions

Each element begins with a gerund that specifies the targeted skills and is implicitly situated within the context of digital technology use. The elements within each dimension are based on four levels of thinking: *understand, apply, analyze and create*.

- The **Understand** level consists of elements aimed at remembering and understanding terms, tools or phenomena related to the dimension.
- The **Apply** level consists of elements related to the use of digital technology, such as tools and resources, within the context of the dimension.
- The **Analyze** level consists of elements that require an analysis or evaluation of digital technology or a phenomenon related to the dimension.
- The **Create** level consists of elements that focus on creation, development or design within the context of the dimension.

This four-level structure simplifies Krathwohl's adaptation of Bloom's Taxonomy, so that certain levels—such as *remembering* and *understanding*, or *analyzing* and *evaluating*—are grouped together. Furthermore, while the *analyzing* level is clearly distinguished from the *applying* and *creating* levels, the proposed progression is nuanced and emphasizes both the critical stance of *analyzing* and the creative stance of *creating*.

The four levels provide a progressive structure: generally speaking, the skills acquired at a lower level are essential for advancing to the next one. However, the actual complexity of a task depends on the context, audience and pedagogical constraints. Thus, critically *analyzing* the reliability of digital sources (validity, bias, traceability) might prove more challenging than *producing* a slideshow using a template. The elements therefore allow for back-and-forth movement between levels. For example, an activity involving the *creation* of a prototype could be used to identify criteria that will then guide the *analysis* of other prototypes.

In this way, the Framework adopts a developmental approach based on levels of action. The “beginner, intermediate, advanced” levels from the Development Continuum published in 2019 have been removed to avoid any confusion with the overall evaluation of the individual. In fact, these terms were misleading: they could just as easily describe the difficulty of a task (an “advanced” activity) as suggest the overall profile of the person (an “intermediate” user). As a result, instructors found themselves judging either the difficulty of the activity or the learner’s perceived level, without clearly defining the focus of evaluation. The Framework therefore moves away from these labels and focuses observation on what the individual demonstrates at a given level of action, depending on the task and its context. In practice, pedagogical activities should be designed first with a level (learning objective) in mind and then by adjusting the complexity according to the context (learners, subject area, program of study), so as to allow the instructor to observe, during the evaluation phase, how the individual mobilizes their digital competency.

Sample themes

Non-exhaustive lists of general themes and specific subthemes are provided for each of the 12 dimensions of the Framework. These suggestions offer valuable avenues for teaching and exploring a dimension, understanding its nuances and internalizing it. It should be noted that certain multifaceted themes and subthemes may transcend the dimension in which they are identified and be addressed in other dimensions. For example, digital sobriety can be addressed within the dimension *Exercising ethical citizenship in the digital age* (D1), from the perspective of adopting intentional digital practices, such as choosing to use tools with a lower environmental footprint (e.g. sending a voice message rather than a video, using existing stock images rather than generating new ones with AI). It can also be addressed within the dimension *Developing critical thinking with regard to the use of digital technology* (D11), by encouraging students to reflect on the environmental, economic and societal impacts of repairing a device rather than replacing it.

The identified themes and subthemes address concepts related to digital technology, including those related to AI. For example, digital learning tools, a subtheme proposed under the dimension *Harnessing the potential of digital resources for learning* (D3), may or may not incorporate AI features, depending on the context. Thus, themes related to AI literacy are integrated into the various dimensions of the Framework.

Concrete examples

Concrete examples illustrate how the dimensions of the Framework can be applied in a variety of contexts. They show how a dimension can manifest itself in the lives of different people, depending on their role or situation. For each dimension, examples are provided for five contexts, corresponding to five distinct groups of people. These are just examples; there are many different ways to apply these dimensions.

- **A preschooler, or an elementary or secondary school student:** anyone enrolled in a school program, from preschool through Secondary V. In the Québec education system, this generally refers to young people aged 4 to 17.

Adult supervision appears to be a determining factor in the responsible integration of digital technology.²

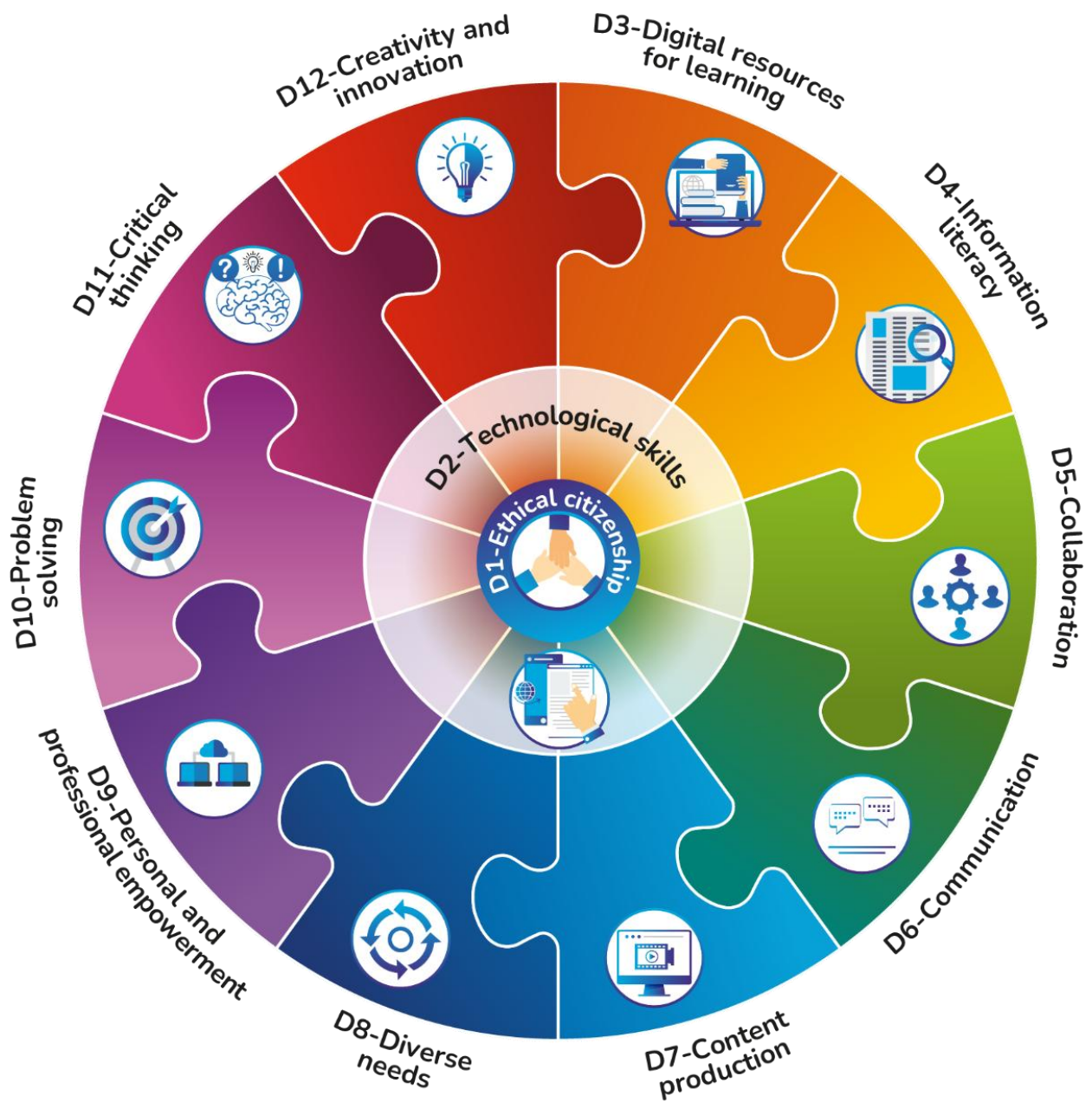
- **An adult learner:** any adult enrolled in a program of adult general education, vocational training, college or university.
- **A teacher:** any person who performs teaching duties, regardless of the subject matter or curriculum taught, at all levels of education.
- **A school staff member:** any person working in an educational setting and whose main responsibilities do not involve teaching. This includes, but is not limited to, administrators, education consultants, remedial teachers, speech therapists, psychoeducators, special education technicians, guidance counsellors, librarians and daycare supervisors.
- **A citizen:** any person actively participating in society, carrying out personal, professional or community activities.³ This includes but is not limited to workers, parents, seniors and immigrants. This category also encompasses the other four groups when they are not in their school roles.

² As emphasized by the Select Committee on the Impacts of Screens and Social Media on Young People's Health and Development, it is essential to highlight the issues related to screen time and students' ages. The development of digital competency should not simply mean increasing screen time without considering its educational value. Adult supervision appears to be a determining factor in the integration of digital technology, and screen-free activities help students apply certain subject-specific competencies.

Assemblée Nationale du Québec, *Select Committee on the Impacts of Screens and Social Media on Young People's Health and Development: Report* (Québec: Assemblée Nationale du Québec, 2025), <https://www.assnat.qc.ca/en/travaux-parlementaires/commissions/csesj-43-1/index.html>.

³ Educational activities are excluded here, as the activities in question are carried out by the groups of citizens mentioned above.

Visual representation of the Framework





1. Exercising ethical citizenship in the digital age

The dimension *Exercising ethical citizenship in the digital age* is at the heart of the Framework, as it embodies the ultimate goal of the Framework: to foster digital citizenship among individuals. It also supports the other 11 dimensions by promoting core interpersonal skills. Exercising ethical citizenship means cultivating a social awareness of digital issues in order to use digital technology in a responsible and thoughtful manner.

Among other things, digital technology can serve as a lever for citizen engagement in a world where the social and technological spheres are inextricably linked. This dimension therefore requires an understanding of various digital-related issues, while promoting adherence to the general principles applicable to all the other dimensions of the Framework.

Elements	
Understand	Explain ethical issues related to the use of digital technology.
Apply	Adopt responsible digital practices, taking ethical issues into account.
Analyze	Predict the potential effects of digital technology use on oneself and society, taking ethical issues into account.
Create	Develop ethical principles for digital technology to promote social cohesion.

Sample themes	
Mental and physical health	▪ Digital well-being (e.g. emotional intelligence) ▪ Sense of self-efficacy ▪ Digital sobriety (e.g. mindful use) ▪ Ergonomics and eye health
Norms, rules and responsibilities	▪ Online civility ▪ Intellectual property (e.g. copyright) ▪ Academic integrity (e.g. no plagiarism) ▪ Digital governance (e.g. laws) ▪ Frameworks for AI use ▪ Human agency

Sample themes	
Ethical digital design	▪ Respect for privacy ▪ Consent and privacy policies ▪ Explainability ▪ Transparency ▪ Algorithmic bias (e.g. training data)
Cybersecurity	▪ Safe practices ▪ Protection of personal and sensitive data ▪ Passwords and authentication ▪ Security software (e.g. antivirus, firewall) ▪ Identity theft and phishing ▪ Cyber resilience
Socializing online	▪ Online civic engagement (e.g. crowdfunding) ▪ Online content moderation ▪ Online hate speech ▪ Online harassment (e.g. cyberbullying) ▪ Sexual violence (e.g. sextortion)
Environmental responsibility	▪ Sustainable development ▪ Energy consumption ▪ Eco-friendly use of digital technology ▪ Eco-friendly data storage ▪ Eco-friendly electronic waste management

Concrete examples

- **A preschooler, or an elementary or secondary student** explains to their peers the issues surrounding privacy and the risks associated with cyberbullying during an awareness workshop on respecting others online (e.g. personal photos and photos of others, social media).
- **An adult learner** completes their coursework in accordance with institutional guidelines governing the use of digital tools in order to uphold the principles of academic integrity and intellectual property.
- **A teacher** sorts through and deletes old files and documents stored online to reduce digital clutter and minimize their environmental impact.
- **A school staff member** leads a group discussion on the ethical issues surrounding digital technology at their school, with the aim of providing guidelines for its use and promoting responsible digital practices.
- **A citizen** checks the source and content of an email before opening an attachment or clicking on a link to avoid a phishing attempt and to protect their personal data.

2. Developing and mobilizing technological skills



The dimension *Developing and mobilizing technological skills* is central to the Framework, as it forms the technical foundation of digital competency. It enables individuals to use constantly evolving technologies by understanding how they work, their applications and their effects. This dimension encompasses a variety of technological skills, ranging from basic operations to the advanced use of digital tools. Some of these tools are considered “tangible” (e.g. computers, tablets, printers), while others are considered “intangible” (e.g. software, applications). This dimension also incorporates computer science and concepts related to AI, fostering a more structured understanding of digital technology. In this way, it supports all the other dimensions by equipping individuals to use digital technology in a sensible, appropriate and thoughtful manner.

Elements	
Understand	▪ Explain how digital tools and their features work (e.g. similarities, differences). ▪ Describe the fundamental concepts associated with computer science and AI.
Apply	▪ Mobilize various digital tools in a range of activities. ▪ Use specialized digital tools, including those that support computational thinking and those equipped with AI.
Analyze	▪ Select tools based on how they work and their features, as well as the desired objectives and the context for use. ▪ Analyze emerging digital trends and their impacts across various fields.
Create	▪ Develop or adapt a digital tool using one’s knowledge and skills in computer programming.

Sample themes	
Digital tools and hardware components	▪ Websites, apps, platforms, software ▪ Network connectivity (e.g. Wi-Fi, Bluetooth, mobile data) ▪ AI-powered tools (e.g. narrow AI, general AI) ▪ Artificial intelligence and generative AI ▪ Cloud computing ▪ Types of data (e.g. big data) ▪ Large language models ▪ Internal components (e.g. graphics card, processor, internal hard drive) ▪ External components (e.g. screen, mouse, keyboard, touchpad)
Technical procedures	▪ Routine actions (e.g. saving, uploading, downloading, copying and pasting, cutting, scrolling)

Sample themes	
	▪ Troubleshooting and solving technical issues (e.g. common errors, software crashes) ▪ Prompt engineering and searching ▪ Data processing ▪ Content formats (e.g. video, image, text, audio)
Computing	▪ Computational thinking ▪ Computer programming ▪ No-code, low-code, or natural language programming ▪ Data literacy ▪ AI literacy ▪ Algorithms (e.g. predictive) ▪ Decision trees and artificial neural networks ▪ Natural language processing ▪ Machine learning and deep learning ▪ Robotics ▪ Quantum computing

Concrete examples

- **A preschooler, or an elementary or secondary school student** browses the Web and is able to troubleshoot technical issues on their own (e.g. Wi-Fi connection, restarting a digital device).
- **An adult learner** uses general-purpose or specialized tools related to their educational or professional field, such as content creation tools, reference management software or a programming language.
- **A teacher** uses and experiments with digital tools to understand their features and incorporate them into lesson planning, teaching and evaluation.
- **A school staff member** adapts the features of an existing digital tool to enable effective management of information collected from parents, such as parental consent forms, important notices and medical records.
- **A citizen** learns how to use digital tools to file their income tax return online.

3. Harnessing the potential of digital resources for learning



The dimension *Harnessing the potential of digital resources for learning* aims to support, enrich and personalize learning by leveraging digital technology, whatever the age of learners or the educational setting. In this way, it helps diversify pedagogical and andragogical practices while fostering individual engagement in a variety of learning contexts. In addition, this dimension promotes the individual's agency in the selection and critical use of digital tools for learning purposes. It aims to encourage thoughtful use guided by a pedagogical intention and based on the relevance and quality of the resources used.

Elements	
Understand	Describe how digital tools and resources can support learning in a purposeful way.
Apply	Use digital tools and resources independently in a way that is tailored to a specific learning situation.
Analyze	Determine the relevance and potential of the digital tools used, taking into account the challenges associated with their use in promoting learning.
Create	Develop or adapt a resource for a specific learning situation using digital tools.

Sample themes	
Digital pedagogy	▪ Instructional design ▪ Online delivery models (e.g. hybrid, distance, bimodal) ▪ Digital and remote assessment ▪ Digital educational projects ▪ Adaptive and personalized learning ▪ Learning analytics
Digital educational tools and resources	▪ Learning tools (e.g. online dictionaries, flashcard generators) ▪ Office suites (e.g. word processors, spreadsheets) ▪ Automated feedback tools ▪ Digital educational resources ▪ Open educational resources ▪ Learning Management Systems ▪ Serious games and gamification with educational intent ▪ Immersive technologies (e.g. virtual and augmented reality, simulations) ▪ Media (e.g. podcasts, short videos) ▪ Chatbots (e.g. intelligent tutoring systems)

Concrete examples

- **A preschooler, or an elementary or secondary school student** uses an educational app on a digital device, such as a computer or tablet, with a specific learning objective in mind, in order to visualize and enhance their learning—for example, understanding fractions or the standard unit circle.
- **An adult learner** adapts a digital tool to help them plan, organize and track their learning, for example by customizing a digital calendar.
- **A teacher** evaluates the suitability of digital educational resources that can enhance their teaching practices and boost learner participation, particularly by examining tools that make short video clips more interactive.
- **A school staff member** implements digital educational projects tailored to the specific needs of students.
- **A citizen** uses mobile apps and websites to practise and improve their skills in a new language.



4. Developing and mobilizing information literacy in the digital age

The dimension *Developing and mobilizing information literacy in the digital age* refers to the process of establishing a relationship with information in an environment shaped by new forms of interaction, knowledge and understanding. It is part of an iterative process that involves planning, researching, analyzing and using information, as well as sharing, reorganizing or creating it. This process is based on informed judgments about the credibility and relevance of the sources analyzed, in order to make sense of information while taking into account the specific characteristics of the digital context. Thus, this dimension supports digital citizenship grounded in a culture of information literacy that equips individuals to gather information properly in a digital context.

Elements	
Understand	Name examples of situations where a need for information requires a research strategy.
Apply	Implement or adapt a research strategy to meet a need for information by carefully selecting keywords when searching, using search tools and organizing the information gathered.
Analyze	Evaluate the relevance and comprehensiveness of search results, including the reliability and relevance of sources (human or AI-generated), to rigorously address the need for information.
Create	Develop original content by using relevant information in a structured manner, while respecting copyright and demonstrating intellectual integrity.

Sample themes	
Plan and carry out an information search	- Keywords and search queries - Advanced search (e.g. search filters, Boolean operators) - Information resources (e.g. virtual libraries, databases, search engines) - News media (e.g. traditional, digital and mass media) - Information research specialists (e.g. librarians and subject matter experts) - AI-powered search tools - Information monitoring - Information overload - Filter bubbles and echo chambers

Sample themes	
Evaluating and using the information	▪ Credibility of sources ▪ Nature of the information (e.g. advertising, caricature, opinion, facts) ▪ Reliability and truthfulness of the information ▪ AI-generated informational content ▪ Copyright (e.g. citing sources) ▪ Media and information literacy ▪ Rumours, conspiracies and fake news ▪ Misinformation, disinformation and malinformation ▪ Deepfakes and manipulation ▪ Confabulations and hallucinations ▪ Algorithmic biases (e.g. content filtering)

Concrete examples

- **A preschooler, or an elementary or secondary school student** performs a Web search using relevant keywords and analyzes multiple results in order to find reliable and diverse sources that help them improve their understanding of a given topic.
- **An adult learner** effectively uses a variety of research tools, including specialized and scientific ones, to conduct rigorous research on a given topic, using both traditional search engines and specialized AI tools in a relevant and thoughtful manner.
- **A teacher** consults multiple sources covering the same current event related to their subject area in order to assess the reliability of the media outlets and to debunk any misinformation that students might believe.
- **A school staff member** reviews recent meta-analyses found in scientific databases in order to produce a literature review for their peers.
- **A citizen** recognizes that some of the sources they consult reflect other people's opinions and that it is essential to consult reliable and diverse sources to support their own reflections, particularly regarding polarizing current events.

5. Collaborating using digital technology



The dimension *Collaborating using digital technology* involves making the most of appropriate digital tools to interact, co-create and get organized with the individuals involved in various projects. This dimension highlights the role of digital tools in supporting online collaborative practices. It draws on interpersonal skills to foster respectful and productive collaboration with others. In this way, digital technology enriches collaborative experiences.

Elements	
Understand	Describe opportunities for collaboration in a digital environment, drawing on the appropriate tools to support it.
Apply	Contribute to collaborative activities that make use of digital technology, being aware of one's role within a group and demonstrating interpersonal skills.
Analyze	Determine the suitability of the digital tools used to facilitate group work based on the needs and collaboration context.
Create	Create a digital environment that meets the group's needs and the collaboration context by structuring the use of a set of tools.

Sample themes	
Online collaborative practices	▪ Collaborative writing and idea sharing ▪ Assignment of roles and responsibilities ▪ Coordination and management of the collaboration (e.g. tasks, schedule) ▪ Viewing or tracking changes made by contributors ▪ In-class and outside-class work sessions ▪ Synchronous and asynchronous modes, in person or remote ▪ Virtual communities (e.g. communities of practice)
Digital tools that facilitate collaboration	▪ Virtual walls ▪ Digital project management tools ▪ Collaborative office applications (e.g. texts, presentations, videos) ▪ Web conferencing platforms ▪ Meeting assistants (e.g. meeting summaries) ▪ File storage and sharing platforms ▪ Learning Management Systems

Concrete examples

- **A preschooler, or an elementary or secondary school student** collaborates with peers in a digital environment to complete a task, such as creating a mind map to illustrate a given concept and then sharing it.
- **An adult learner** contributes to and revises a group project, using digital collaboration tools and combining synchronous and asynchronous interactions, with the assistance of an AI agent as needed.
- **A teacher** uses a variety of digital tools to develop instructional materials together with their peers.
- **A school staff member** creates a secure, collaborative online space to enable all individuals working with a particular student to access and share relevant information, including observation notes and intervention reports.
- **A citizen** joins an online community to plan a family event, which makes it easier to communicate and organize.



6. Communicating using digital technology

The dimension *Communicating using digital technology* refers to the transmission of information or an idea from one person or group to another through digital channels. This interaction requires a nuanced understanding of context-specific norms, which will vary depending on the situation. Users must select, from among several communication channels, the one best suited to their message, purpose and audience, while tailoring their message accordingly. For example, some social media platforms are associated with professional use, while others are designed for more personal or informal communication. An understanding of the ethical issues related to digital communication, detailed below, is also essential to the development of healthy, appropriate and safe practices.

Elements	
Understand	Explain digital communication norms and their relevance to maintaining healthy, appropriate and safe communication practices.
Apply	Communicate by adapting one's interactions to the context, the recipient and the purpose of the exchange, while adhering to the norms specific to the digital communication situation.
Analyze	Assess one's own communication skills in light of the context, the purpose of the exchange and the recipient, as well as whether one's own communication is in line with the relevant digital communication norms.
Create	Develop digital communication strategies tailored to the requirements of different contexts, recipients and interactions.

Sample themes	
Digital communication channels	▪ Video conferencing and video calls ▪ Email and instant messaging ▪ Voice messages ▪ Forums and discussion platforms ▪ Personal and professional social media ▪ Voice assistants

Sample themes	
Digital communication norms according to context	- Choice of communication channel - Communication formats (e.g. text, voice, images) - Interpersonal communication - Levels of language - Abbreviations (e.g. text message language) - Emojis and memes - Management of notifications
Ethical issues related to digital communication	- Permanence of digital footprints - Confidentiality of communications and personal information - Anonymity (e.g. personal information, voice, photographs)

Concrete examples

- **A preschooler, or an elementary or secondary school student** contacts another student or their teacher through an appropriate communication channel to clarify the instructions for an assignment completed outside of school hours.
- **An adult learner** selects a digital communication channel appropriate to the nature of the interaction—personal, educational or professional—in order to communicate effectively with the other person.
- **A teacher** uses digital tools to provide rich and dynamic feedback on submitted work, such as audio comments, annotations or links to resources.
- **A school staff member** coordinates various videoconferencing features, such as hand raising, screen sharing and chat, to ensure effective, smooth and respectful communication among all stakeholders in an individualized education plan, including the student’s parents and members of the school team.
- **A citizen** uses videoconferencing tools to stay in touch with family and loved ones.



7. Producing content using digital technology

The dimension *Producing content using digital technology* consists of developing various types of content, according to the needs, objectives and context, using digital technology. It involves an active process in which the user may, depending on the situation, be required to create, edit, publish and share content.

The final format may be digital or non-digital, but technology is always involved in the process. For example, a user might create a poster online and then print it to display on a wall, or design a model online with the intention of producing a tangible version.

Other people's work may feed into this process, which means that special attention must be paid to rights related to creation, use and distribution. In addition, generative AI offers numerous applications that can support the production of text, images, 3D images, sound, music, and even videos.

Elements	
Understand	Identify the principles related to intellectual property as well as content usage and distribution rights, particularly when such content is used in personal projects.
Apply	Mobilize appropriate digital tools and data (e.g. text, audio, images) to meet production needs.
Analyze	Explain the benefits of using digital tools at different levels of the content production process in terms of their relevance and the desired objectives.
Create	Produce , using digital tools, a variety of content tailored to the intended audience.

Sample themes	
Content production	▪ Multimodality and/or interactivity ▪ Podcasts and short videos ▪ Design and printing of images and 3D objects ▪ Generative AI assistance for content production (e.g. text, images, 3D images, video, computer code)

Sample themes	
Content sharing and production rights	▪ Content formats ▪ Content-sharing applications and platforms ▪ Content directories (e.g. royalty-free image libraries, open educational resources) ▪ Licences and production rights ▪ Integrity in the use of AI (e.g. transparency and accountability) ▪ Legality of the data used to train an AI model ▪ Disclosure of AI-generated content

Concrete examples

- **A preschooler, or an elementary or secondary school student** creates a digital infographic to present a summary of information gathered on a given topic.
- **An adult learner** uses a digital mind map to organize their ideas and, if necessary, to support their arguments in the context of an academic or professional project.
- **A teacher** plans a short video to address specific learning needs, then records, edits and publishes it using appropriate tools.
- **A school staff member** develops a toolkit that brings together various useful, relevant and open-source digital resources so they can be used in an educational setting while respecting the principles of intellectual property.
- **A citizen** produces content using digital tools to create digital art (e.g. 3D modelling) and shares it on social media.



8. Using digital tools to address diverse needs

The dimension *Using digital tools to address diverse needs* aims to promote equity, diversity and inclusion through digital technology, so that every individual can reach their full potential. It calls for the development of an inclusive digital culture, where the choice of a digital tool must take into account the evolving needs, abilities, limitations and preferences of each person, in a spirit of respect.

The use of custom adjustments, with or without AI, should be considered in order to better meet a variety of needs, both for oneself and for others. For example:

- An individual might use dictation software to reduce the cognitive load associated with certain activities, even if they do not have any difficulties with reading or writing.
- A teacher might be open to using various digital formats for an assignment (e.g. text, visuals, audio, video).

This dimension also aims to promote digital equity, so that everyone can access technologies and use them effectively through accessible interfaces and in suitable environments.

Elements	
Understand	Describe the potential of digital technology and the specific features of digital tools to meet diverse needs (one's own needs or those of others) in relation to a given task.
Apply	Use digital tools tailored to different individual needs to carry out a variety of tasks, taking an inclusive and adaptive approach.
Analyze	Compare the effectiveness of the digital tools used or proposed based on the task requirements.
Create	Design or adapt digital resources to make them accessible and inclusive in order to facilitate the completion of a task, whatever the needs of the individuals may be.

Sample themes	
Meeting the diverse needs of all individuals	▪ Digital flexibility to support learning ▪ Digital-enabled differentiated instruction ▪ Accessibility settings (e.g. font size and colour, captions, visual contrast, reduction of distractions) ▪ Accessibility and variety of digital formats and content (e.g. text, visuals, audio, video) ▪ Personalized and adaptive learning paths ▪ Universal design for learning ▪ Reading assistance tools (e.g. text-to-speech) ▪ Writing assistance tools (e.g. voice dictation, word prediction) ▪ Correction assistance tools (e.g. spell checker, dictionary, feedback) ▪ Multimodal chatbots ▪ Adaptive tutoring systems
Equity, diversity and inclusion	▪ Digital inequalities (e.g. access, usage, level of proficiency) ▪ Training and knowledge updates about digital technology ▪ Access to digital tools (e.g. computers, high-speed Internet, office software, AI tools) ▪ Representation of diverse groups online

Concrete examples

- **A preschooler, or an elementary or secondary school student** identifies a digital tool that meets their needs and the requirements of a learning situation, such as a text-to-speech app or an audiobook for listening to texts.
- **An adult learner** uses digital translation tools to facilitate their understanding of texts and access materials in multiple languages.
- **A teacher**, in collaboration with other school staff, develops an adaptive and personalized educational path, with the help of AI, as well as learning activities and resources designed to meet the specific needs of each learner.
- **A school staff member** compares digital and non-digital tools they plan to use during a writing assignment with a student who has graphomotor difficulties, in order to identify the advantages, disadvantages and potential of each one.
- **A citizen** customizes the display settings on their mobile device (e.g. contrast, font size and colour) to make it easier to use.



9. Mobilizing digital technology for personal and professional empowerment

The dimension *Mobilizing digital technology for personal and professional empowerment* refers to engaging in a process of lifelong discovery and improvement by using digital tools and resources. This dimension promotes individuals' ability to take the initiative to seek information and pursue training based on their areas of interest as well as their personal and professional needs. It encompasses both the personal sphere, which focuses on developing various aspects of daily life and fostering personal growth (e.g. participating in sports, developing manual and practical skills), and the professional sphere, which centres on continuous development, particularly through in-service training. A discovery component bridges these two spheres, opening up future possibilities for all ages (e.g. exploring career paths). In this way, digital technology fosters personal development.

Elements	
Understand	▪ Explain how digital technology can support autonomous lifelong learning by facilitating access to various tools and resources. ▪ Identify how digital technology can be used at different levels of the professional integration process, such as job searching, recruitment or skills recognition.
Apply	▪ Participate in online learning activities that support personal development (e.g. exploratory activities). ▪ Use online networking platforms to build and maintain relationships in order to identify professional opportunities.
Analyze	▪ Evaluate the effectiveness of the digital tools and resources used in self-directed learning, in line with personal interests. ▪ Analyze the impact of one's digital presence on own personal and professional life, including in areas where these spheres tend to overlap (e.g. social media).
Create	▪ Develop a self-directed learning plan that incorporates digital tools and resources to achieve personal and professional development goals. ▪ Create or improve various digital resources, such as a resumé (CV), a portfolio or a professional profile, to document projects, achievements and goals in order to facilitate job placement or professional development.

Sample themes	
Personal development	▪ Informal online learning activities ▪ Virtual communities (e.g. communities of practice) ▪ Virtual mentoring and coaching ▪ Chatbots ▪ Online self-directed learning (e.g. webinars) ▪ Micro-certifications and massive open online courses (MOOCs) ▪ Digital skills badges
Professional development	▪ Digital networking ▪ Professional social networks ▪ Job searching (e.g. job posting websites) ▪ Digital CVs and professional portfolios ▪ Digital monitoring (e.g. trends and developments in one's field) ▪ Starting a business using digital tools

Concrete examples

- **A preschooler, or an elementary or secondary school student** identifies digital content related to their personal interests, such as sports, science or the arts, in order to explore various fields.
- **An adult learner** uses digital tools to search for jobs and expand their professional network, for example by participating in an online networking event or consulting specialized websites.
- **A teacher** commits to professional development by participating in online continuing education aimed at improving their teaching practices, for example through a professional learning community, a conference, a symposium or a webinar.
- **A school staff member** develops a digital monitoring strategy to stay up to date on the latest developments in their field and continue their professional development.
- **A citizen** uses online tutorials, an AI assistant or virtual workshops to learn about a topic or develop a new skill (e.g. sewing, knitting, playing a musical instrument or a sport).



10. Solving various problems using digital technology

The dimension *Solving various problems using digital technology* involves leveraging digital technology to address different situations. It encourages individuals to consider if and how digital technology can facilitate problem solving and whether it is appropriate to use it. This involves using digital technology at various levels of the problem-solving process. This could be a school-related problem (e.g. efficiently planning study sessions for an exam), an everyday problem (e.g. optimizing a travel route), or a work-related problem (e.g. automating a repetitive task in a spreadsheet). This dimension promotes the development of a reflective approach to digital technology with a view to problem solving.

Elements	
Understand	Determine whether digital technology can be used to find an appropriate solution to a given problem.
Apply	Draw on various digital resources to implement or adapt a solution based on the characteristics of the problem.
Analyze	Assess the relevance and effectiveness of digital technology for each step in the problem-solving process.
Create	Create a solution to a problem by programming or combining digital resources.

Sample themes	
Problem-solving process	- Existing solutions (e.g. tutorials and support forums) - Relevance of digital solutions (e.g. usefulness, usability, feasibility, value) - Mind maps and concept maps - Visualization or graphical modelling tools - Programming (e.g. writing code) - Chatbots with reasoning capabilities (e.g. reasoning and logic)
Digital optimization	- Efficiency optimization - Workflow improvement - Added value of digital tools (e.g. online dictionary) - Automation of simple, repetitive tasks (e.g. sorting, sending, auto-fill) - AI agents (e.g. autonomous tasks) - Smart controls (e.g. sensor-triggered actions)

Concrete examples

- **A preschooler, or an elementary or secondary school student** uses an app to better visualize a problem (e.g. math, time management) and find an appropriate solution.
- **An adult learner** seeks assistance from a chatbot to use the most relevant features of a spreadsheet to solve a scheduling problem related to balancing work, family and studies.
- **A teacher** analyzes the results of a teaching approach did not allow students to achieve the intended learning objective in class, in order to determine how digital technology might or might not improve the implementation of the approach.
- **A school staff member** designs a digital tool to collect information and assess students' needs (e.g. behaviour management), after observing certain limitations in their previous interventions.
- **A citizen** uses various digital resources (e.g. smart home apps, energy provider websites, online simulators) to test and adjust their electricity consumption.



11. Developing critical thinking with regard to the use of digital technology

The dimension *Developing critical thinking with regard to the use of digital technology* involves adopting a reflective, nuanced and intentional approach to digital technology and its implications. It aims to cultivate the ability to reflect—before, during and after using digital technology—on its benefits, limitations, risks and possibilities, for oneself, for others, and for society as a whole.

Critical thinking is based on skills (e.g. articulating a line of reasoning) as well as personal characteristics or attitudes (e.g. intellectual curiosity) expressed through reflection and action. By making digital technology the subject of analysis, reflection and action, this dimension contributes to a critical and civic-minded engagement with digital technology.

Elements	
Understand	Identify the benefits, limitations, risks and possible uses of digital technology as they emerge in various spheres of society and across different potential uses.
Apply	Adapt one's use of digital technology according to a critical reflection on digital technology and on one's own practices.
Analyze	Critically evaluate digital technology before using it, drawing on knowledge, skills, personal characteristics and attitudes.
Create	Think of approaches and solutions to reduce the risks associated with digital technology and help improve society.

Sample themes	
Critical reflection, self-criticism and self-correction	- Benefits, limitations, risks and opportunities of digital technology, including AI - Consequences, dynamics and impacts of digital technology (e.g. cognitive impact) - Needs and choices regarding digital technology use - Digital sobriety (e.g. repairing a device, screen time) - Cyberaddiction (right to disconnect)

Sample themes	
Effects and impacts of digital technology	On the economy - Transformation of the labour market - Remote work - Influencers - Digital capitalism and tech giants - Commodification of personal data - Targeted advertising - Attention economy - Sharing economy (e.g. open-source software)
	On the environment - Sustainable development (e.g. global digital infrastructure) - Ecological footprint - Planned obsolescence - Energy optimization (e.g. smart energy management) - Smart agriculture (e.g. sensor-optimized irrigation) - Server farms
	On society - Digital equity - Digital sharing of knowledge and support resources - Social mobilization and virtual communities - AI solutions for society (e.g. preventing car accidents) - Privacy - Surveillance mechanisms (e.g. geolocation) - Algorithmic bias - Opacity (lack of transparency) - False sense of trust - Anthropomorphism - AI sensitive to nonverbal communication (e.g. gestures, facial expressions) - General AI, superintelligence, quantum AI, etc.

Concrete examples

- **A preschooler, or an elementary or secondary school student** identifies manipulative strategies used in online advertisements, such as idealized images and targeted ads, while browsing their favourite social media platforms.
- **An adult learner** takes a careful, critical look at whether they really need to replace their device, considering their actual educational needs and the environmental impact of such tools, before making a decision.
- **A teacher** assesses the value of using a digital tool by identifying its benefits and limitations, based on their own pedagogical intentions and objectives.
- **A school staff member** evaluates the digital tools used in interventions, particularly language simulation or phonological awareness exercises, to determine whether they contain targeted advertisements that could collect data for behavioural profiling purposes.
- **A citizen** implements strategies to modify their digital habits (e.g. turning off notifications) after realizing that they could be disruptive during quality time spent with family.

12. Adopting a creative and innovative approach to the use of digital technology



The dimension *Adopting a creative and innovative approach to the use of digital technology* embodies two related concepts. On the one hand, creativity is characterized by ideation—that is, it involves generating ideas through a creative process (e.g. artistic, personal, professional) aimed at conceiving solutions in an imaginative, original and ingenious way. On the other hand, innovation occurs when a creative process is directed toward concrete actions that lead to the improvement or creation of objects, projects or processes. Creativity is often a crucial step in the innovation process, which explains why these two concepts are deeply intertwined. Moreover, in this process, digital technology can be used as a tool or serve as the solution itself. It can stimulate the imagination while facilitating the practical implementation of creative and innovative ideas, encouraging individuals to step outside their comfort zone to better face the challenges of the future.

Elements	
Understand	Describe how digital technology can be used to support creative processes or innovation initiatives.
Apply	Use appropriate digital tools during a creative or iterative process, or in an innovation initiative.
Analyze	Analyze the potential of digital technology to develop and express one's creativity and, potentially, to inspire others.
Create	Create or improve objects, projects and processes by leveraging digital technology with a view to innovation.

Sample themes	
Digital creativity	- Imagination, originality and ingenuity - Creative confidence - Creative and iterative process - Idea marathons (ideathons) and coding marathons (hackathons) - Ideation and prototyping (e.g. 3D modelling) - AI-assisted creativity and prototyping - Creative labs and makerspaces

Sample themes	
Innovation	▪ New ideas and solutions ▪ Creative design ▪ Creative application of technology ▪ Emerging technologies ▪ Humanoid robots (e.g. tasks, uses, innovative features) ▪ Internet of Things (IoT) ▪ AI applied to the IoT and robots ▪ AI and human thinking as drivers of innovation

Concrete examples

- **A preschooler, or an elementary or secondary school student** creates a digital work of art, drawing on their creativity in an artistic process.
- **An adult learner** recognizes the potential of digital tools to support their creative process as part of a school project.
- **A teacher** interacts with generative AI to demonstrate pedagogical innovation by designing and implementing an original learning activity.
- **A school staff member** creatively repurposes a digital app intended for teaching and learning to turn it into a dynamic attendance-tracking tool.
- **A citizen** creates unique everyday objects tailored to their needs and environment by harnessing the potential of design tools (e.g. 3D printers).

Four core themes

The 12 dimensions, all of which are essential to the development of comprehensive digital competency, can be grouped into four core themes. These groups are intended to facilitate understanding and practical application of the dimensions by establishing clear links between those that interact in a natural, meaningful way. The core themes stem from a need for cohesion, an analysis of international frameworks and consultation meetings.

In practical terms, these core themes provide a useful structure for better identifying relevant educational contexts, realistic activities and integrative projects. They support pedagogical planning by offering an integrated rather than a fragmented view of the 12 dimensions. For example, a core theme that brings together related dimensions can be used to organize learning activities that explicitly establish the relationships between and complementary nature of these dimensions. This is also consistent with the interdependence between the dimensions, and therefore between the core themes.

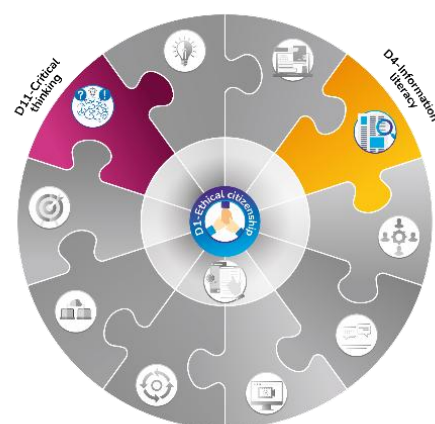
Several common themes, which draw on the various dimensions of each core theme, are proposed. Examples of activities are provided in order to illustrate how certain themes can be addressed in a way that integrates the different dimensions of a given core theme.

Core theme 1: Critical and ethical approach to digital technology

At the heart of digital competency development lies the foundation of informed citizenship. **Exercising ethical citizenship in the digital age (D1)** emphasizes taking responsibility for using digital tools in a respectful, lawful and safe manner. This is based on the ability to **develop and mobilize information literacy (D4)**, which, among other things, enables individuals to search for, evaluate and organize digital information in a rigorous manner. At the same time, **developing critical thinking (D11)** ensures that individuals examine the uses of digital technology in order to assess its implications and impacts. The interconnection of these dimensions ensures that a person can not only access information, but also analyze it, contextualize it, and use it appropriately to meet their needs.

A number of themes common to the various dimensions of this core theme touch on key digital issues: digital identity, privacy, digital citizenship and social responsibility, the reliability and manipulation of information, as well as digital advertising and data ethics. Exploring these issues offers a practical way to approach this core theme, for example by organizing a classroom debate on screen time. Such activities call for rigorous research (**D4**), stimulate reflection on ethical implications (**D1**) and foster the development of critical reasoning (**D11**).

To address an issue such as digital advertising and data ethics in greater detail, students could plan a critical analysis of a targeted digital advertisement (**D11**) to evaluate the information it conveys and the



persuasion strategies used **(D4)**, in addition to reflecting on the collection of personal data in the context of advertising interactions, and the concept of informed consent **(D1)**.

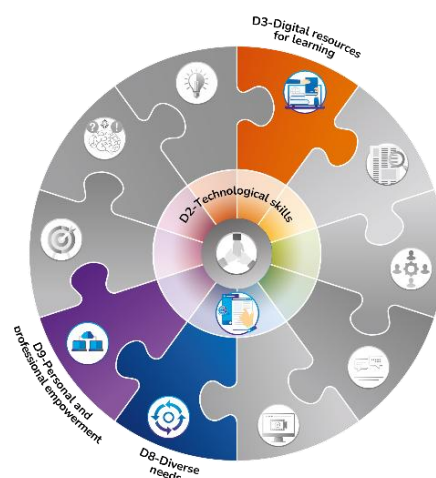
Possible common themes

- Digital identity and privacy
- Digital citizenship and responsible use of technology
- Reliability and manipulation of online information
- Digital advertising and data ethics

Core theme 2: Lifelong learning

This core theme reflects the evolving nature of digital competency: learning, developing skills, and progressing throughout one's life.

Developing technological skills (D2) provides the functional mastery of digital tools necessary to activate the other dimensions, while requiring continuous refinement of those skills. This mastery then fuels the ability to **harness the potential of digital resources for learning (D3)**, whether to enrich instruction or to adopt learning strategies in various school settings. At the same time, **using digital technology to address diverse needs (D8)** ensures that these uses are accessible to everyone, regardless of their needs, abilities, challenges and preferences. Finally, **mobilizing digital technology for personal and professional empowerment (D9)** sustains these gains over time: digital technology becomes a vehicle for learning, employability, adaptability and continuous personal growth. When viewed together, these four dimensions describe a beneficial cycle in which technical skills support learning, meet the diverse needs of everyone, and ensure lifelong personal and professional development.



Among the themes common to the various dimensions of this core theme is the functional and inclusive mastery of digital tools. This theme could be explored through a hands-on workshop on inclusive digital tools (e.g. text-to-speech, voice dictation, automatic captioning). Such an activity would aim to develop technical proficiency with these tools **(D2)**, meet the diverse needs of learners **(D8)**, and facilitate access to information and learning **(D3)**.

Creating a personal digital portfolio is an activity that draws on technological skills to support learning, professional development and career readiness. This type of project allows students to become familiar with various digital tools **(D2)**, to document and display their learning achievements in different educational settings **(D3)**, to address their specific needs through an inclusive approach **(D8)**, and to support a path of personal and professional development aimed at employability and the recognition of competencies **(D9)**.

Possible common themes

- Functional and inclusive mastery of digital tools
- Personalized learning and adaptive digital strategies
- Keeping up to date in the digital age
- Technological skills to support learning and training

Core theme 3: Interactions involving digital technology

Digital competency requires collaboration and communication to work in tandem. **Collaborating using digital technology (D5)** involves, among other things, planning, dividing tasks and co-creating in a connected environment; this process generally requires **communicating using digital technology (D6)** in a clear, secure manner that is tailored to the intended audience. In addition, communication is most meaningful when it is directed toward mutual goals, whether these involve sharing, negotiating or producing something together.



Today, these interactions can take place *through* digital technology, that is, between two or more humans using a digital communication channel. They can also take place *with* digital technology: tools such as chatbots can function as conversation partners, following logical rules like algorithms. Thus, this core theme prepares individuals to communicate effectively, whether they are interacting with other people or co-creating with a machine.

The dimensions in this core theme converge around common themes, such as establishing a virtual community of practice. For example, an online group could be created to organize a collective activity (e.g. an awareness day), which would allow individuals to explore different communication channels depending on the objectives, including sharing information on social media, coordinating via chat and hosting videoconference meetings **(D6)**, while collaborating remotely in a structured and effective manner to achieve a common goal **(D5)**.

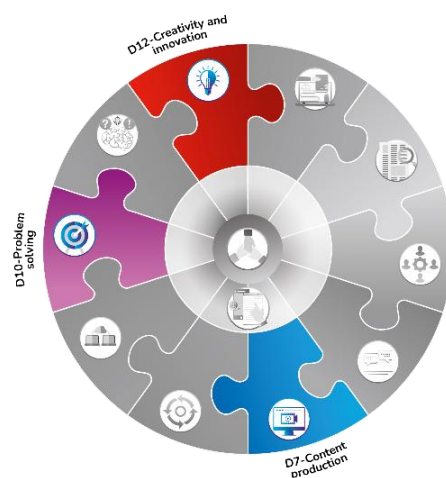
Another activity could revolve around collaboration, where individuals are encouraged to interact with a chatbot. Participants would be asked to formulate clear, specific queries **(D6)**, and then use the generated responses as a basis for co-creating collaborative digital content, such as a poster **(D5)**.

Possible common themes

- Collaborative work and online communities of practice
- Context-appropriate guidelines and norms for digital sharing and communication
- Safe and respectful interactions in digital environments
- Human-machine collaboration (e.g. chatbots, generative AI)

Core theme 4: Digital expression with a view to innovation

This fourth core theme places digital competency within the realm of action and transformation. **Producing content using digital technology (D7)** is the foundational activity: developing texts, images, data, prototypes or apps that address a real need. Action in a digital context can also involve developing a solution to **solve a problem (D10)**, whether academic, professional or related to daily life, by employing strategies of analysis, iteration or optimization using digital tools. Finally, **adopting a creative and innovative approach (D12)** adds value: exploring original ideas, repurposing existing tools, and imagining new services or usage scenarios.



In short, this core theme encourages every citizen to actively participate in the digital facets of society—not merely as a consumer, but as a creator capable of shaping their digital environment.

These dimensions can take shape through concrete projects addressing real-world issues. For example, creating short videos or podcasts to raise awareness within the school community about a social or environmental issue involves the production of various kinds of digital content **(D7)**. It also encourages learners to take a creative approach using digital technology to tackle complex problems, particularly when crafting a message or adapting the delivery format **(D10)**, all while devising innovative approaches to capture audience attention and foster engagement **(D12)**.

Similarly, a hackathon can encourage learners to tackle a real-world challenge from their own community, such as waste management or sustainable mobility. Students would be asked to design a concrete digital solution, such as an app or a 3D-printable object **(D7)**, then analyze and optimize different courses of action **(D10)**, while drawing on their creativity to propose original and tailored approaches **(D12)**.

Possible common themes

- Creation of multimodal digital content (e.g. text, audio, video, graphics)
- Solving real-world problems by developing tangible digital solutions
- Creative and innovative repurposing of digital tools
- Rapid prototyping and experimentation with digital ideas

Planning pedagogical activities

Digital competency, which has applications across the curriculum, must be aligned with a predetermined pedagogical aim. That said, in certain contexts, it may be useful or necessary to integrate learning objectives related to the Framework's dimensions into a variety of meaningful pedagogical activities. The goal is to foster the development of the four proposed levels: *understand, apply, analyze* and *create*.

To this end, eight steps for planning pedagogical activities that incorporate digital competency are proposed to support those working in education. These steps provide broad directions to facilitate the design of teaching and learning activities that include one or more dimensions of the Framework, or even a core theme. In addition, a template for planning activities that incorporate these guidelines is provided.

Visual representation of planning steps



Sample template for integrating digital competency into pedagogical activities

TITLE:						
STEPS		DESCRIPTION				
	1 Analyze learners' needs and determine the pedagogical aim of the activity					
	2 Identify the dimension(s) to target and/or a core theme	D1. Ethical citizenship D2. Technological skills D3. Digital resources for learning D4. Information literacy D5. Collaboration D6. Communication D7. Content production D8. Diverse needs D9. Empowerment D10. Problem solving D11. Critical thinking D12. Creativity and innovation ☐ Core theme 1 : Critical and ethical approach to digital technology (D1-D4-D11) ☐ Core theme 2 : Lifelong learning (D2-D3-D8-D9) ☐ Core theme 3 : Interactions involving digital technology (D5-D6) ☐ Core theme 4 : Digital expression with a view to innovation (D7-D10-D12)				
	3 Specify the elements being targeted and their level of development	Element : _____ Element : _____ Element : _____	Understand ☐ ☐ ☐	Apply ☐ ☐ ☐	Analyze ☐ ☐ ☐	Create ☐ ☐ ☐
	4 Identify the theme(s) of the activity					
	5 Identify the resources and materials to be used					
	6 Plan the activity (duration, teams, etc.)					
	7 Determine how the activity will be evaluated					
	8 Give feedback to learners					

Source: Ministère de l'Éducation, *Template for integrating digital competency into pedagogical activities*, <https://ecoleouverte.ca/en/resources/51439>.

Conclusion

Digital competency in the 21st century

The development of digital competency is an ongoing process that is part of a lifelong learning approach. Whether acquiring new skills, exercising critical judgment or navigating digital innovations, every individual is called upon to use digital tools to learn and grow in their personal and professional lives. The Framework recognizes the need for an empowering approach in which each individual takes charge of their own development.

By providing a common definition and a cohesive structure for digital competency through its 12 dimensions, the Framework puts forward its inter-level scope and its relevance across the entire Québec education system and for all citizens. Its cross-curricular and adaptable nature make it an essential tool for advancing practices in a society where digital technology is ubiquitous. From preschool education to higher education, including adult general education and vocational training, it promotes a shared understanding of the challenges posed by digital technology in learning, teaching, and personal and professional development. Moreover, Competency 12 Mobilize digital technologies of the *Reference Framework for Professional Competencies for Teachers*⁴ is based entirely on the *Digital Competency Framework*.

In essence, the full value of the Framework is based on how it is understood and adopted in educational settings. Each school, team or group is called upon to consider the Framework within their particular context in order to align its content, approaches and resources with their own reality, whether that be a science classroom, a vocational training centre, a university course or a workplace. This implementation also requires reflection on the tools and authentic situations that allow for digital competency development to be observed over time and treated as a priority. By placing the Framework at the heart of teaching practices, the education community will be able to transform learning environments and support the success of all students. This Framework also prepares the citizens of today and tomorrow to thrive in a constantly evolving society.

⁴ Québec, Ministère de l'Éducation, *Reference Framework for Professional Competencies for Teachers* (Québec: Ministère de l'Éducation, 2021), https://cdn-contenu.quebec.ca/cdn-contenu/adm/min/education/publications-adm/devenir-enseignant/reference_framework_professional_competencies_teacher.pdf.

Glossary

Unless otherwise noted, the definitions are based on entries in the *Vitrine linguistique* of the Office québécois de la langue française (OQLF) and have been translated here.⁵

Agency

Agency refers to the ability to control one's own decisions and actions based on one's own intentions. In the context of AI, agency can be approached from two different perspectives: human agency and AI agency.⁶

AI hallucination

AI hallucination, or confabulation, refers to output generated by an AI system that turns out to be false or misleading, yet is presented as fact. These erroneous results can be particularly problematic because they may appear very realistic: the AI systems that generate them are often programmed to be persuasive and convincing. As a result, these errors can be difficult to spot.⁷

AI system

An automated computer system that mimics the functioning of human intelligence and, with the aim of achieving one or more objectives, is designed to generate content, predictions, recommendations or decisions that can influence a physical or virtual environment.

Anthropomorphism

Anthropomorphism involves attributing human characteristics to non-human objects. Some AI systems may appear to possess human characteristics on a psychological level, such as autonomy, a sense of humour or empathy; on a physical level, by resembling a human; or on a verbal level, by interacting using casual and friendly language. Anthropomorphism is not without risk. It can contribute to unrealistic expectations of the systems and confusion regarding the reliability of the results.⁸

Artificial intelligence (AI)

Field of study focused on replicating the cognitive abilities of human intelligence with the aim of creating systems or machines that can perform functions normally associated with human intelligence or even surpass them.

⁵ Québec, Office québécois de la langue française (OQLF), *Vitrine linguistique*, vitrinelinguistique.oqlf.gouv.qc.ca/.

⁶ Obvia, *Glossaire de l'Obvia* (Québec: Obvia, 2025), 4, obvia.ca/ressources/glossaire/. [Translation].

⁷ Obvia, 19. [Translation].

⁸ Obvia, 8. [Translation].

Bimodal (or hyflex)

Refers to a teaching model that allows learners to attend each class session either in person or remotely, synchronously or asynchronously.

Chatbot

A chatbot, or conversational agent, is an AI system with which users can engage in dialogue thanks to its ability to use natural language.⁹

Competency

Ability to effectively mobilize a range of internal or external resources in authentic learning situations or in a professional context.

Critical thinking

Practice of rational evaluation based on reflection, questioning and self-correction. Requires a set of skills and a willingness to engage in a reasoning process. Also involves the mobilization of different resources depending on the context in order to determine reasonable conclusions or courses of action, based on a set of criteria.¹⁰

Cyber resilience

The ability of an information system to withstand cyberattacks and unplanned outages, and then return to a satisfactory operational and secure state.

Cyberbullying

Moral or sexual harassment committed through an electronic communication network.

Digital citizenship

Digital citizenship is the ability to navigate digital environments in a way that is safe and responsible, and to engage in these spaces actively and respectfully.¹¹

Digital creativity

Activities related to the creation, production and distribution of content and experiences using technology and digital tools.

⁹ Obvia, 3. [Translation].

¹⁰ Based on Québec, Ministère l'Éducation et de l'Enseignement supérieur (MEES), *Digital Competency Framework* (MEES, 2019), 28, <https://numerique.banq.qc.ca/patrimoine/details/52327/4010462>.

¹¹ Media Smarts, *What Is Digital Citizenship?*, accessed April 17, 2026, <https://mediasmarts.ca/digital-media-literacy/general-information/digital-media-literacy-fundamentals/what-digital-citizenship>.

Digital economy

All economic activities based on the use of digital technology and information and communication technologies.

Digital educational resource

Teaching, learning or research materials in electronic or virtual format.

Digital inequities

Disparities among individuals, social groups and societies in terms of access to, use of, proficiency in and representation of digital technology. These disparities are linked to situations of intersectional and specific injustice and, in turn, contribute to them.¹²

Digital skills

The ability to effortlessly use digital devices and technological tools in everyday life.

Digital technology

All information production, storage, processing, dissemination and exchange techniques and technologies, as well as information applications, including artificial intelligence systems. Refers without distinction to information and communications technologies, digital technology, digital infrastructures and the data these produce and collect.¹³

Digital tools (or information technologies)

All technological tools and resources used for transmitting, storing, creating, sharing or exchanging information, and which can be used for teaching, learning or research purposes.¹⁴

Echo chamber

A network that forms spontaneously around a shared vision, within which individuals are primarily exposed to opinions that align with their own, which tends to crystallize their ideas and beliefs.

Filter bubble

The collection of personalized information presented to a user by search engines and social media platforms based on data collected about them, thereby exposing them only to information in which they have already shown an interest.

¹² Simon Collin, “La place de la conception des technologies éducatives dans les inégalités socio-numériques d’usage,” *Recherches en éducation* 55 (2024): 48, <https://doi.org/10.4000/ree.12420>. [Translation].

¹³ MEES, *Digital Competency Framework* (2019), 28.

¹⁴ Based on OQLF, “Technologies de l’information et de la communication pour l’éducation,” *Grand dictionnaire terminologique*, in *Vitrine linguistique* (2020), vitrinelinguistique.oqlf.gouv.qc.ca/fiche-gdt/fiche/8349470/technologies-de-l-information-et-de-la-communication-pour-l-education. [Translation].

Generative artificial intelligence (GenAI)

A computer system that uses probabilistic artificial intelligence models to automatically generate various types of content (text, images, voice, music, video, presentations, etc.) in response to a user's prompt.¹⁵

Human agency

Individuals using an AI system must retain their own agency. AI should never take over a person's decision-making.¹⁶

Hybrid teaching (or hybrid learning)

A teaching model that allows the teacher to alternate, in varying proportions, between in-person and online teaching.

Information literacy (or information competencies)

Collection of knowledge and skills, both interpersonal and practical, that enable individuals to identify information needs, search effectively, analyze the information found and use it ethically.¹⁷

Innovation

The creation and introduction of new or significantly improved goods, services and processes into a market and various user environments. This may involve the implementation of new or significantly improved methods—such as a production or distribution method, a marketing method, or an organizational method. Innovation can take many forms, including process, product, social or organizational innovation.¹⁸

Instructional design

The systematic process of analyzing learning needs, designing learning objectives and creating, implementing and evaluating materials to ensure efficient and effective learning.

Learner

Anyone of any age involved in a process of acquiring knowledge and competencies. In general, anyone who is learning.¹⁹

¹⁵ Québec, Ministère de l'Éducation, *Pedagogical, Ethical and Legal Use of Generative Artificial Intelligence – Guide for Teachers – 2024-2025* (MEQ, 2025), 1, <https://numerique.banq.qc.ca/patrimoine/details/52327/5362614?docref=LjRJSrPnBEkRToAk3TjIM1A&docsearchtext=ISBN%20978-2-550-99030-7>.

¹⁶ Obvia, 4. [Translation].

¹⁷ Adapted from Alexandre Serres, "Questions autour de la culture informationnelle," *Canadian Journal of Information and Library Science*, 31, no. 1 (2007): 69-85.

¹⁸ Québec, Ministère de l'Économie, de l'Innovation et de l'Énergie, *Programme NovaScience: Cadre normatif 2025-2028* (MEIE, 2025), 19, https://cdn-contenu.quebec.ca/cdn-contenu/adm/min/economie/publications-adm/cadres-normatifs-programmes/CN_NovaScience_2025-2028_MEIE.pdf. [Translation].

¹⁹ MEES, *Digital Competency Framework* (2019), 30.

Learning analytics

The measurement, collection, analysis and reporting of data about learners and their contexts in order to understand and optimize learning and the environments in which it occurs.²⁰

Learning Management System (LMS)

A digital environment that brings together all the applications and software used to support teaching, training or learning activities.

Online civility

A set of responsible, respectful and ethical behaviours and practices that a person adopts when using digital technology and the Internet.

Problem solving

The process of determining the optimal sequence of operations or actions needed to achieve a desired outcome.

Self-directed learning

Engaging in a learning process on one's own, without a teacher.

²⁰ Based on Public Works and Government Services Canada, "Learning analytics," TERMIUM Plus, <https://www.btb.termiumpius.gc.ca> (Accessed April 17, 2026).

