



The IDEAL Digital Education Competence Framework

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Lead author: Dr Stan Lester on behalf of UVAC

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IDEAL (Improving Digital Education for All Learners) is a co-funded Erasmus+ Strategic Partnership project, reference 2020-1-UK01-KA226-HE-094956. The project was initiated in the wake of the coronavirus pandemic and the consequent movement of much teaching and learning online, with the aim of researching, evaluating and disseminating international good practice in digitally-facilitated learning. IDEAL is concerned principally with higher education and equivalent-level professional and vocational learning.

The project partners are:

Cogito Development Projects – lead partner

UVAC

Include

FE Sussex

University of Thessaly

Kainotomia

Università degli Studi di Torino

Istituto dei Sordi di Torino

Nevşehir Hacı Bektaş Veli Üniversitesi.

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The IDEAL Digital Education Competence Framework

What is competence?

Competence can be defined as ‘**the ability to do something successfully or efficiently**’ (Oxford English Dictionary). This means that it is concerned with **practice**, but it is the **ability** to practise effectively rather than ongoing practice, behaviour or conduct. A good competence framework should describe practice as a coherent set of activities that are robust, durable and apply across all the contexts relevant to the framework’s intended coverage. Digital learning is a fast-moving area, but we have attempted to create a framework that will be recognisable and applicable through the 2020s and beyond.

Who is the framework for?

This framework is intended to apply to the activities of educators, trainers and learning designers in higher education and higher vocational education and training (HE/HVET) who are using digital technology, whether remotely or otherwise. It covers a broad range of contexts, so it could be applied for instance to an online, blended or hybrid approach to a literature or science degree, training technicians using augmented and virtual reality, supporting healthcare workers via mobile learning, or providing the scaffolding for a policing programme or a surveying placement where the focus of learning is from work activity.

The framework is not directly designed for policymakers or those concerned with digital strategies within institutions or organisations. It is however relevant to ensuring that policies and strategies support effective teaching and learning. As an example a digital strategy that assumes the main mode of learning will be through programmed learning packages or online lectures is likely to place significant barriers in the way of developing effective digital pedagogies.

The aims of the framework

The framework is designed to support the objectives identified in the Erasmus+ project IDEAL (Improving Digital Education for All Learners). In particular, it is designed to embed two fundamental principles that are central to the project. These are:

- Appropriate **digital pedagogy**, in particular a ‘learning first’ approach where digital tools are secondary to pedagogic principles. It is important that learning design starts from the objectives to be achieved and from learners’ needs, contexts and capabilities. This means being aware of what can be done with new technologies rather than trying to recreate traditional teaching methods digitally, while also not being driven by the technologies themselves.
- The integration of **accessibility and inclusion**. Digital accessibility has been defined by Mancilla and Frey (2020) as “the design of electronic materials that are usable by all people, regardless of disabilities or environmental constraints”. Accessibility is typically used to refer to measures that overcome barriers to access, and inclusion to the principle of enabling all learners to engage meaningfully with the learning context and achieve their full potential. Inclusion can

relate to disabilities, different ways of perceiving and working, gender and gender identity, economic social ethnic and cultural context, age, access to resources and connectivity, digital literacy and self-efficacy, the environment from which digital resources are being accessed, and more.

Using the framework

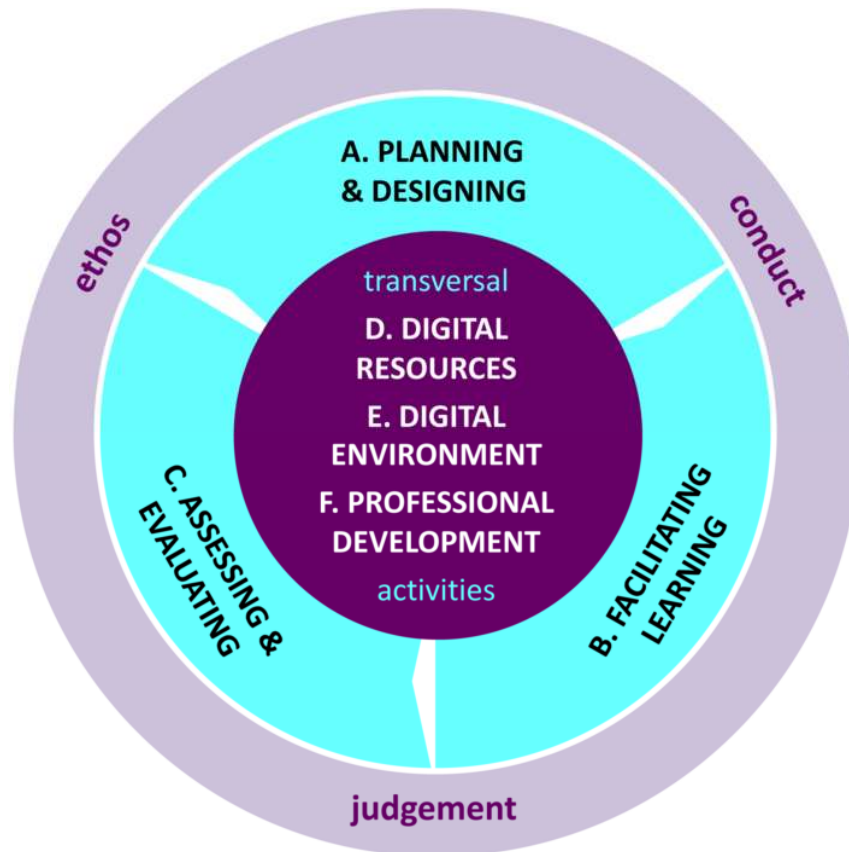
The framework can be used as it is as a reference guide or self-assessment tool, adapting it to the specific context of the user. In addition a wide range of tools are available through IDEAL that support implementing different aspects of the framework.

Sources and acknowledgements

The content of the framework has been informed by existing digital education frameworks, in particular the European Framework for the Digital Competence of Educators (DigCompEdu), the UK Education and Training Foundation (ETF) Digital Teaching Professional Framework (the DTPF), and the JISC digital capabilities for tutors. It also draws on IDEAL partners' research into digital pedagogy, the implementation of digital learning solutions, and accessibility and inclusion in digital learning, and on the expertise of the individual project partners.

The structure of the framework and the principles behind it have been informed by the Erasmus+ project ComProCom (Communicating Professional Competence).

The structure of the framework



The framework is depicted as three rings or concentric circles. The outer ring is titled 'ethos, conduct and judgement', covering principles that apply across the framework.

The middle ring is a cycle of three aspects of teaching and learning:

- a. Planning and designing
- b. Facilitating learning
- c. Assessing and evaluating.

The inner circle contains 'transversal' activities that underpin and support the teaching and learning activities:

- d. Using digital resources
- e. Managing the digital environment
- f. Professional development.

The framework

The key activities in the framework are listed below. The following pages provide detailed content for each.

Ethos, conduct and judgement

A. Planning and designing

- set out what is to be achieved by a programme, intervention or session
- plan activities involved in a programme, intervention or session
- integrate digital and non-digital activities
- maximise accessibility
- build in review, assessment and evaluation.

B. Facilitating learning

- manage learning processes
- facilitate digitally-mediated learning
- make interventions and provide feedback to support learning
- support the development of learning communities
- maximise the participation of all learners.

C. Reviewing, assessing and evaluating

- review learner progress
- adapt review and assessment methods to remove unnecessary barriers
- make assessments against required learning objectives or milestones
- evaluate digitally-supported teaching and learning.

D. Using digital resources

- evaluate hardware and software for educational applications
- search for and evaluate digital resources and tools
- adapt and create digital resources
- collect together, organise and share digital resources.

E. Managing the digital environment

- identify and resolve problems with the use of technology
- make adjustments to support individual learners
- identify and minimise risks to well-being
- identify and minimise cybersecurity risks
- manage digital identity and presence
- promote and support access to digital learning and resources.

F. Professional development

- use digital media and resources for own and others' professional development
- improve and extend digital proficiency
- improve practice in digital teaching and facilitation.

ETHOS, CONDUCT AND JUDGEMENT

This section outlines key principles that underpin the framework and are applicable to practitioners in digital learning.

- Start with the effectiveness and experience of learning as the objective of all activities, using the potential provided by digital media and resources to enhance them.
- Encourage, listen to and make use of learners' and other stakeholders' feedback in order to improve digital learning.
- Maximise access, inclusion and equality in digital learning, both at an overall level and in response to individual learners' needs.
- Take opportunities to improve your own knowledge and proficiency in digital learning and teaching.
- Use informed and critical judgement in the selection, design and use of materials, resources, devices and methods to support digital learning.
- Follow the principles of digital privacy, confidentiality, safeguarding and copyright.
- Support own and learners' well-being and security in the digital environment.
- Avoid engaging in online behaviour that is illegal, offensive or unprofessional, or that puts learners or practitioners at risk.

A. PLANNING AND DESIGNING

This section concerns planning and designing effective digital and mixed learning experiences at the level of programmes, sessions or interventions. It applies to varied learning situations, including for instance programmed courses, supporting learners at work, and supporting individual study. It includes considering the needs and contexts of potential learners and building in relevant levels of accessibility.

A1. Set out what is to be achieved by a programme, intervention or session.

This is likely to involve:

- defining the objectives and wider aims to be covered, where relevant relating them to any formal programme requirements
- identifying the context/s in which the programme, intervention or session will operate
- identifying where possible characteristics, learning and access needs of actual or potential learners, and assessing the implications for design.
- identifying the resources available for the programme, intervention or session and any implications for what can be achieved.

A2. Plan the activities involved in a programme, intervention or session.

This is likely to involve:

- taking account of the context/s of the programme, intervention or session and the characteristics, contexts, needs and abilities of intended learners
- using feedback from learners and where relevant other stakeholders to improve the design of activities
- defining the learning objectives to be covered by each activity or stage
- setting out what learners, and where relevant teachers, trainers or facilitators, need to do at each stage
- identifying where flexibility is needed to respond to different needs, contexts and rates of progress
- designing in appropriate levels of structure, scaffolding and where appropriate intervention to support learning at each stage
- ensuring that the balance between learner-directed, software-directed and facilitator-directed activity is appropriate to learners' needs and abilities
- creating a balance between different types of activity and resource that: supports the achievement of learning objectives; maintains motivation and flow; supports the needs, abilities and preferences of learners; and responds to different learning contexts.

A3. Integrate digital and non-digital activities.

This is likely to involve:

- identifying where digital methods and resources create new learning opportunities, add value or increase effectiveness
- incorporating digital approaches that will support and complement activities outside of the digital environment (such as face-to-face learning, workplace learning and independent study or investigation)
- providing digital and non-digital access to the same content or support.

A4. Maximise accessibility.

This is likely to involve:

- ensuring that digital content and media maximise access and usability for learners with disabilities, different ways of perceiving, different ways of expressing themselves, different learning preferences and different levels of subject and technical competence
- ensuring that digital content is as far as possible accessible across diverse communities, for instance avoiding making assumptions about the social and cultural backgrounds of learners
- ensuring that digital content and media are as far as possible accessible using different hardware and software platforms
- ensuring that digital content and media are compatible with assistive technologies
- taking into account contextual barriers such as device ownership, the environment from which material is being accessed and the availability and speed of connections.

A5. Build in review, assessment and evaluation.

This is likely to involve:

- building in or enabling review and assessment activities as part of the learning design, where appropriate making use of relevant technology
- designing review and assessment so that they add value in terms of learning
- ensuring that assessment methods and strategies are accessible and do not require skills that are not part of what is being assessed
- building in opportunities for data collection, learner (and where applicable employer or placement provider) feedback and evaluation.

B. FACILITATING LEARNING

This section concerns the delivery and facilitation of learning experiences using digital means, whether the learning is primarily from digital or real-world resources and interaction, or from a mix of both (e.g. 'blended' or 'flipped' learning or digitally-mediated facilitation of learning from practice or independent study).

B1. Manage learning processes.

This is likely to involve:

- monitoring and ensuring that the balance between learner-directed, software-directed and facilitator-directed activity is appropriate to the context of the learning and to learners' needs and abilities
- using appropriate levels of structure, input and intervention ('scaffolding') to support learning
- maintaining and adjusting the balance between different types of activity and resource to: support the achievement of learning objectives; maintain motivation and flow; support reflection and consolidation; accommodate the needs abilities and preferences of learners; and respond to different learning contexts.

B2. Facilitate digitally-mediated learning.

This is likely to involve:

- using digital channels and platforms that are accessible and appropriate to learners' contexts
- providing content in forms and formats that are relevant, accessible and motivating to learners
- combining different types of activity, including synchronous and asynchronous activity, to maximise engagement and learning
- encouraging learners to seek out additional resources, make effective use of them, and where relevant attribute them correctly
- providing learners with space to develop solutions and manage their own learning
- encouraging communication through relevant channels while preventing information or work overload.

B3. Make interventions and provide feedback to support learning.

This is likely to involve:

- anticipating the need for intervention and support
- intervening effectively where necessary to support learning and maintain motivation and flow
- providing constructive feedback at appropriate, agreed points
- ensuring that learners are able to ask questions and request support easily
- responding promptly to questions and requests for support.

B4. Support the development of learning communities.

Learning communities may exist within or across for instance course cohorts, work organisations or professional groups. This is likely to involve:

- facilitating communication and peer support between learners using platforms and channels that are accessible and appropriate to learners' contexts

- agreeing rules of engagement and if necessary the principles and processes for ensuring that they are followed
- encouraging learners to explore different synchronous and asynchronous means of communication
- encouraging learners to collaborate, share resources and information, and provide feedback and support to each other
- encouraging learners to form digital communities and support networks with regular interaction.

B5. Maximise the participation of all learners.

This is likely to involve:

- taking account of the context/s of the programme, intervention or session and the characteristics and abilities of learners
- taking account of, and where relevant supporting the development of, learners' levels of digital literacy and competence
- using technology to monitor the participation, level of understanding and progress of learners
- responding flexibly and effectively to different needs, contexts and rates of progress
- making adjustments, providing assistive technologies and providing individual interventions to support needs that have not been met through the design of the learning experience or resources
- seeking support from colleagues and specialists to identify and implement relevant solutions.

C. REVIEWING, ASSESSING AND EVALUATING

This section concerns assessing and reviewing the progress of individual learners, as well as evaluating the effectiveness of interventions, delivery methods and where relevant overall programmes.

C1. Review learner progress.

This is likely to involve:

- using digital tools and media for progress checks, formative assessment and providing feedback
- using digital tools to assist learners to assess their own progress, achievements and options
- enabling learners (and where appropriate others such as employers or placement providers) to contribute to progress reviews and to provide feedback
- using digital tools to record progress and feedback while meeting requirements for privacy, data protection and confidentiality
- using digital tools and media to improve the efficiency of reviews and create a focus on learning.

C2. Adapt review and assessment methods to remove unnecessary barriers.

This is likely to involve:

- ensure that learners are aware of (and where relevant can negotiate) when and how review and assessment will take place
- identifying any additional demands and barriers (likely to be) placed on learners by digital review and assessment methods
- making changes or putting measures in place to reduce barriers and improve access
- making specific adaptations for individual learners who are disadvantaged by the method of assessment or review.

C3. Make assessments against required learning objectives or milestones.

This is likely to involve:

- identifying relevant digital tools and media that can be used to support valid assessments against the relevant learning objectives or criteria
- making assessment decisions based on information provided via digital tools and media
- ensuring that digital tools are used in a way that maintains the accessibility, fairness, validity (appropriateness) and robustness of assessment.

C4. Evaluate digitally-supported teaching and learning.

This is likely to involve:

- seeking feedback from learners and where relevant other stakeholders on their experiences
- using digital tools to capture learner and usage data automatically
- using digital tools and media to gain feedback and evaluations from learners and others involved in the programme
- analysing and interpreting data and feedback to identify areas where improvements can be made and successes demonstrated.

D. USING DIGITAL RESOURCES

This section concerns assembling and evaluating the resources – hardware, software and content – for digital learning. It can be applied at the level of programmes or groups of programmes, resource provision, or specific sessions or interventions. Principles such as searching for and critically evaluating information, using different formats and following copyright/licensing/attribution requirements and conventions are also relevant to supporting learners to use digital media.

D1. Evaluate hardware and software for educational applications.

This is likely to involve:

- developing an understanding of the capabilities of the hardware/device or software package
- assessing the availability of technical support and back-up in the relevant context
- assessing its strengths and weaknesses for supporting the relevant learning application
- assessing its suitability for learners in different contexts and with different abilities and accessibility needs
- assessing how well the choice of device and software can support the desired design and delivery approach of programmes, sessions or interventions
- deciding whether and how to use the device or software package.

D2. Search for and evaluate digital resources and tools.

This is likely to involve:

- developing and refining effective strategies to search for and critically evaluate resources and information
- assessing relevance to the learning programme, suitability for the level and focus of learning, and accessibility to different learners and in diverse contexts
- checking that any copyright, licensing, patent, legal and technical restrictions do not limit the intended use.

D3. Adapt and create digital resources.

This is likely to involve:

- working within any copyright, licensing, patent, legal and technical restrictions
- ensuring that resources are suitable for use with chosen devices and platforms
- ensuring that resources are relevant to the learning programme, suitable for the level and focus of learning, and accessible to different learners and in varied contexts
- using accessible formats, incorporating alternative forms of presentation (e.g. auditory as well as visual and vice-versa, text instead of images) where relevant and possible
- applying rights, permissions, attributions and referencing as relevant.

D4. Collect together, organise and share digital resources.

This is likely to involve:

- using relevant and accessible formats, storage media, file structures, indexing and organising systems to store and organise resources
- making resources easily accessible to intended users
- ensuring equality of access to resources
- working with others inside and outside of the organisation to ensure resources are available for all relevant aspects of the programme
- maintaining required levels of security, confidentiality, safeguarding and data protection.

E. MANAGING THE DIGITAL ENVIRONMENT

This section concerns working effectively with digital media and equipment in order to support effective learning and manage associated risks.

E1. Identify and resolve problems with the use of technology.

This is likely to involve:

- identifying and responding to problems that learners encounter when using hardware/devices, software, platforms and applications
- encouraging learners to make use of resources to resolve problems themselves where this is within their capabilities
- using digital resources and calling on specialist expertise to solve problems.

E2. Make adjustments to support individual learners.

This is likely to involve:

- adjusting or modifying learning methods, content or technology to support individual learners
- calling on specialist support and expertise where necessary
- working with learners to develop, review and update individual learning plans
- seeking feedback to improve the accessibility and inclusivity of the digital environment.

E3. Identify and minimise risks to well-being.

This is likely to involve:

- identifying physical, psychological and social factors that may cause harm
- identifying risks arising from a lack of accessibility in different contexts
- agreeing with learners what constitutes acceptable and unacceptable behaviour (both their own and from others) and risk levels in the digital environment
- monitoring personal and learner behaviour in the digital environment
- taking effective action where actual harm is being caused or there is a substantial risk of harm.

E4. Identify and minimise cybersecurity risks.

This is likely to involve:

- identifying security risks in the digital environment
- putting in place and monitoring measures to protect the digital environment and maintain the security of personal data
- communicating actions that learners can take to maintain security
- taking action in response to actual and potential security breaches.

E5. Manage digital identity and presence.

This is likely to involve:

- creating, and supporting learners to create, digital identities that are secure and appropriate to the contexts where they are being used
- supporting learners to create a digital presence that is consistent and appropriate to context
- supporting learners to manage digital presence and reputation across multiple platforms.

E6. Promote and support access to digital learning and resources.

This is likely to involve:

- identifying and overcoming barriers to learners accessing digital learning and resources
- monitoring access and participation, investigating and taking remedial action when there are problems
- supporting learners and potential learners to overcome barriers to digital access.

F. PROFESSIONAL DEVELOPMENT

This section concerns personal professional development and contributing to the development of colleagues.

F1. Use digital media and resources for own and others' professional development.

This is likely to involve:

- using digital resources to update, extend or research subject or professional knowledge
- setting parameters for, conducting and refining searches
- evaluating information obtained from diverse sources for its reliability and usefulness (information literacy)
- using digital means to form professional communities and communicate with and learn from others.

F2. Improve and extend digital proficiency.

This is likely to involve:

- keeping up with changes to digital platforms, applications and hardware, both for teaching and learning and where relevant in relation to relevant subject or industry applications
- identifying and making use of opportunities to extend digital knowledge and proficiency, for instance to overcome gaps in knowledge, explore new software and hardware, test the suitability of devices, or explore new applications of existing resources
- extending knowledge in areas related to the use of digital resources, for instance data protection, copyright and licensing, patents, cybersecurity and digital harm
- extending knowledge of principles and measures for improving accessibility and inclusion.

F3. Improve practice in digital teaching and facilitation.

This is likely to involve:

- keeping up with developments in digital teaching and learning as appropriate to subject or professional field
- sharing practice and learning from other educators and technical, pedagogical or information specialists
- trialling and introducing new methods of teaching and supporting learning
- responding to new opportunities and developments in a way that improves digital learning, access and opportunities for learners.