International Institute of Online Education
国际网络教育学院

Организация Объединенных Наций по вопросам образования, науки и культуры

Институт ЮНЕСКО по информационным технологиям в образовании

IIOE Asia-Pacific Mid-Year Meeting 2021

UNESCO ICT Competence Framework for Teachers

By UNESCO Institute for
In formation technologies in Education /
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UNESCO ICT Competence Framework for Teachers

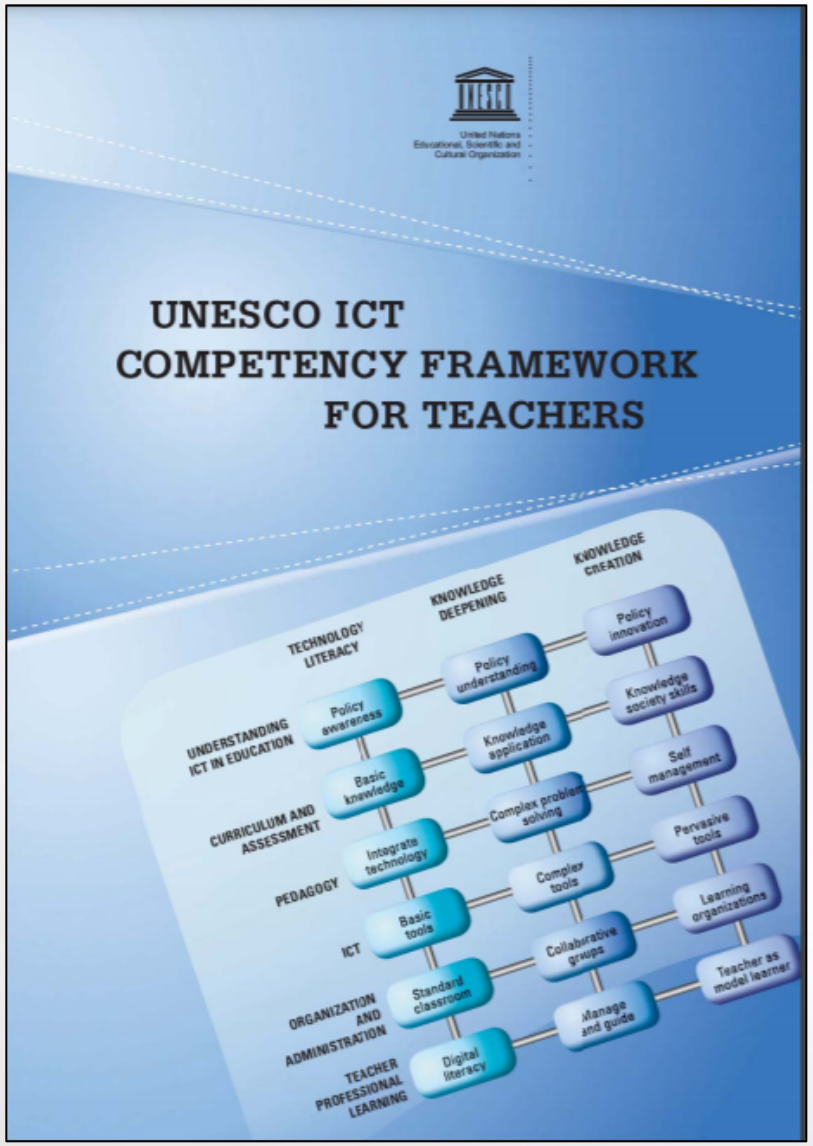
There are three editions of this Framework published in 2008, 2011 and 2018.

Each edition presents the technologies most widely used at that time and their application in a school environment.

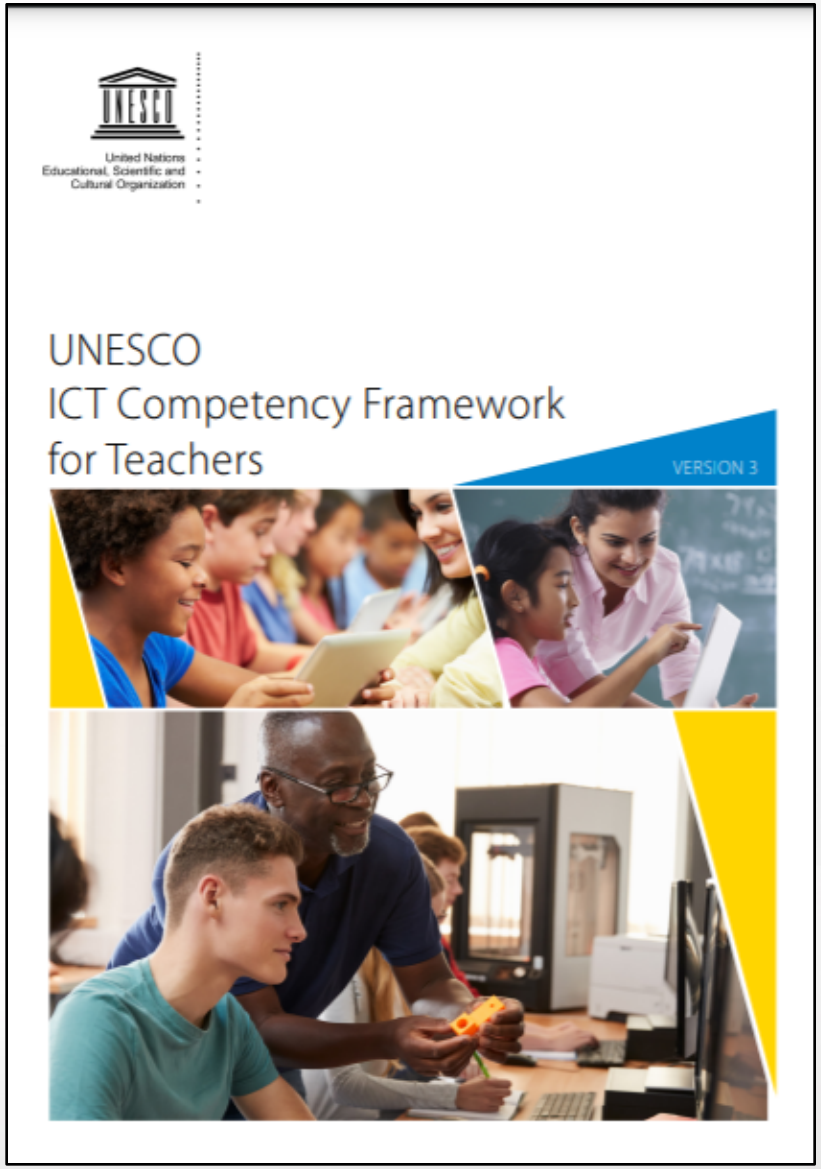
Edition 3 of ICT Competency Framework for Teachers is a tool aimed mainly at training teachers in the use of ICT in schools. It addresses teachers, education experts, providers of teacher training courses, etc.

To achieve the implementation of ICT, it is necessary to have a favourable environment. This involves government, teacher training, and professional development of teachers and school principals.

UNESCO ICT Competence Framework for Teachers



V 2.0



V 3.0

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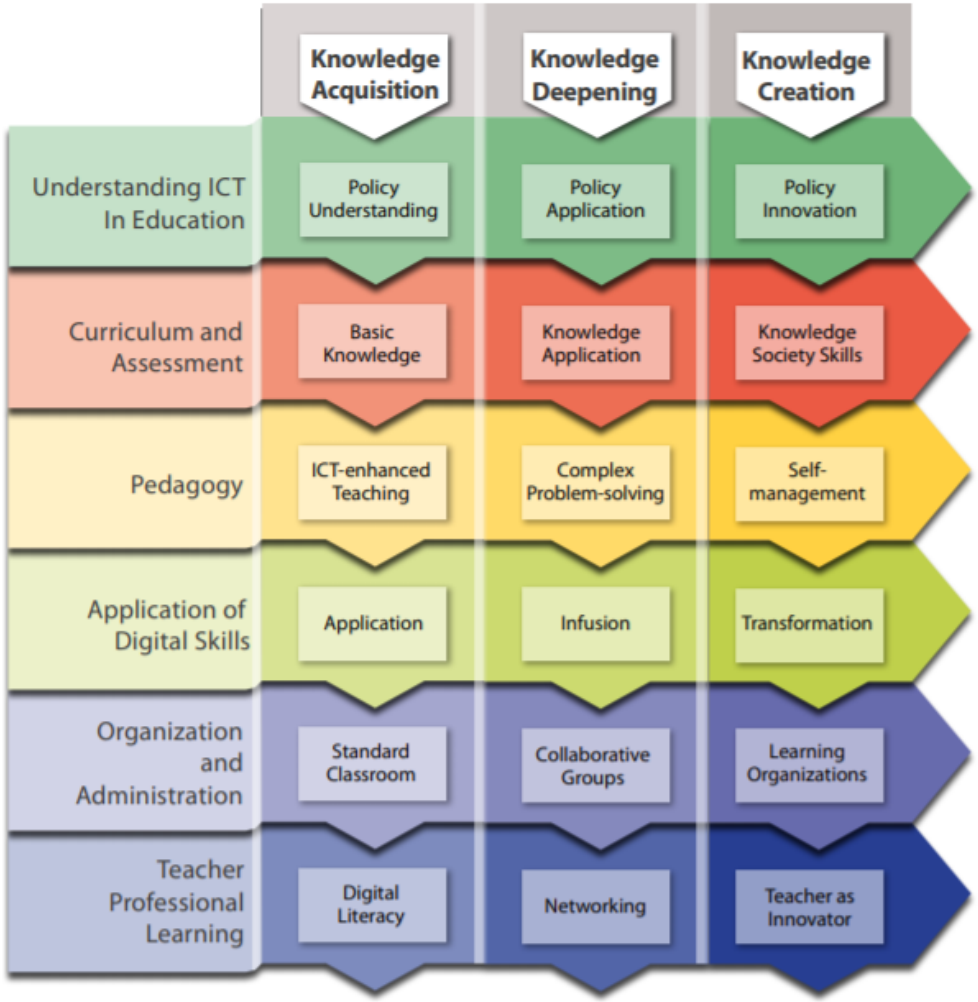
UNESCO ICT Competence Framework for Teachers V3

	TECHNOLOGY LITERACY	KNOWLEDGE DEEPENING	KNOWLEDGE CREATION
UNDERSTANDING ICT IN EDUCATION	Policy awareness	Policy understanding	Policy innovation
CURRICULUM AND ASSESSMENT	Basic knowledge	Knowledge application	Knowledge society skills
PEDAGOGY	Integrate technology	Complex problem solving	Self management
ICT	Basic tools	Complex tools	Pervasive tools
ORGANIZATION AND ADMINISTRATION	Standard classroom	Collaborative groups	Learning organizations
TEACHER PROFESSIONAL LEARNING	Digital literacy	Manage and guide	Teacher as model learner

UNESCO ICT Competence Framework for Teachers V3



Version 3

UNESCO ICT Competence Framework for Teachers V3

This Framework presents a total of 18 ICT competences structured into six dimensions:

1. **Understanding the role of ICT in education policy.** Understand the role of ICT in accordance with national education policies. Teachers need to consider and work towards the goals that should be achieved.
2. **Curriculum and assessment.** This approach involves considering the use of these digital tools, and the redefinition of specific objectives in the curriculum, as well as their related indicators and assessment proposals.
3. **Teaching.** Teachers are encouraged to use ICT to improve teaching and learning methods. Accordingly, they acquire skills and in, a final phase, implement alternative, student-focused teaching strategies based on solving problems in a collaborative way.

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3. **Application of digital skills.** This involves integrating technology into teachers' tasks linked to collaboration with other teachers and to planning. The most important applications at this level are e-mail, social media and word processing and presentation programmes.
4. **Organisation and administration.** This aspect involves the management of digital tools in the school. It involves organising classrooms and the rest of the environment. The main objective is to build virtual environments to promote learning outside the classroom.
5. **Professional learning of teachers.** To develop teachers' digital literacy and train them professionally. By becoming producers of knowledge, they use ICT to enhance classroom practices.

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Each of these aspects is divided into three levels of pedagogical use of these technologies by teachers in the classroom setting:

1. **Knowledge acquisition.** This enables teachers to help students use ICT to learn effectively. At this level, the classroom has technological resources and ICT laboratories, ensuring equal access. This is the first phase of digital literacy.

   Teachers who master the skills at this level can:

   - Check whether their teaching practices are in line with national policies.
   - Make pedagogical use of ICT in accordance with curricular standards.
   - Choose the appropriate ICT for each of the teaching and learning methodologies.
   - Define the functions of the technological tools to be used.
   - Address inclusive learning through ICT
   - Use technological tools for their own professional development.

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2. **Knowledge advancement**. The aim is to improve teachers' ability to help students. Teachers use ICT to work on curricular content. This approach allows students to acquire a broad knowledge of subjects taught, and to apply what they have learned to collaborative problem solving in the real world. It is a project-based approach to teaching and learning. Teachers with skills at this level can:
   - Implement teaching practices in accordance with education policies.
   - Integrate ICT into the teaching and learning and assessment processes.
   - Create project-based learning activities using ICT.
   - Use the various technological tools and resources for problem solving.
   - Use technology to facilitate collaborative learning.
   - Interact with professional networks for the teacher's own development.

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3. **Knowledge creation.** This enables teachers to create knowledge, to devise activities for the classroom and to develop programmes applicable outside the school in order to achieve the goals set. New knowledge is created in order to make societies thrive. Teachers will be able to:
   - Reflect on educational policies and contribute ideas for improvement.
   - Establish the conditions for optimal student-focused collaborative learning.
   - Use ICT to promote learning by creating communities for knowledge sharing.
   - Develop a technological strategy for the school.
   - Share best practices on an ongoing basis, so that ICT improves schools.

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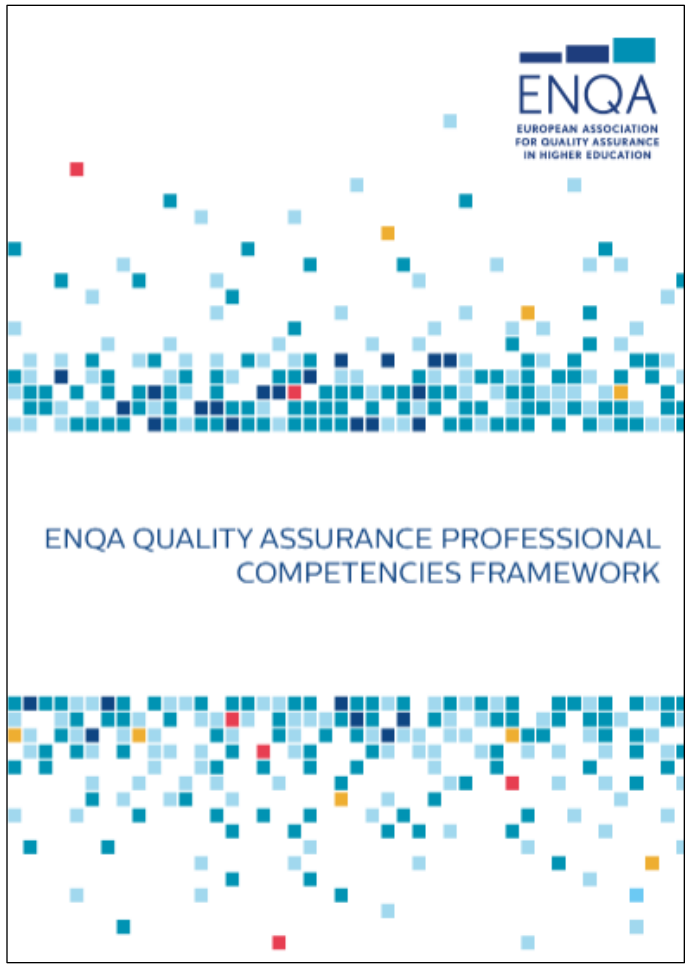
Knowledge Acquisition

	CURRICULAR GOALS FOR TEACHER TRAINING	TEACHER COMPETENCY (Teachers can ...)	OBJECTIVES (Teachers should be able to ...)	EXAMPLE ACTIVITIES
ASPECT 1 *Understanding ICT in Education Policy*	**Policy Understanding.** Teachers make connections between policy and classroom practices.	Articulate how their classroom practices correspond to and support institutional and/or national policy.	**KA.1.a.** Identify how policy implementation is shaping classroom practice.	Discuss institutional and/or national policies and common classroom practices. Identify those practices that support policy. Teachers identify and analyse their own classroom practices in terms of how their teaching practices contribute to policy implementation.
			KA.1.b. Identify the principles of using ICT in education in a safe and accessible manner.	Investigate the benefits, and also drawbacks, of using ICT in education. Identify appropriate ICT use to support and enhance their productivity, teaching methods, class administration and continuing professional development.
ASPECT 2 *Curriculum and Assessment*	**Basic Knowledge.** Teachers have a basic knowledge of the potential benefits of incorporating a range of relevant ICT resources and productivity tools into any subjects to support both teaching and learning and assessment.	Analyse curriculum standards and identify how ICT can be used pedagogically to support attainment of the standards.	**KA.2.a.** Match specific curriculum standards to particular software packages and computer applications and describe how these standards are supported by these applications.	Identify specific curriculum standards and identify software packages, digital tools and resources that support the attainment of these standards.
			KA.2.b. Search for and identify OER to support curriculum standards.	Search for OER, using both specialized and common search engines, and select open resources to teach specific curriculum standards.
			KA.2.c. Select ICT to support assessment strategies.	Identify how ICT can support different ways to assess students, such as portfolios, peer assessment, formative assessment and journal reflections. Teachers are introduced to dedicated e-assessment tools.

Examples

OECD

OECD Future of Education and Skills 2030



European Association for Quality Assurance in Higher Education ENQA Quality Assurance Professional Competencies Framework

Recommendations

- Closer link between the Competency Framework and Assessment & Quality Assurance Framework
- Differentiation between different roles at HEI:
  - 1 (Lecturers/ Support Staff)
  - 2 (Curriculum Leader/Supervisor)
  - 3 (Manager)
  - 4 (Senior Manager/Executive)
- Differentiation between different levels:
  - 1 (Beginner)
  - 2 (Competent)
  - 3 (Proficient)

More information

- OECD Future of Education and Skills 2030
- European Commission DigCompEdu
- ISTE Standards
- Southeast Teachers Competency Framework
- Higher Education with Competence. A Handbook on the Qualifications Framework for German Higher Education Degrees (Framework for Higher Education: HQF)
- Michael Eichhorn, Goethe-University Frankfurt. Development of a Digital Competence Framework for Higher Education Teachers
- The Norwegian Centre for ICT in Education (2017). Marijana Kelentrić, Karianne Helland, Ann-Thérèse Arstorp. Professional Digital Competence Framework for Teachers
- Thierry Karsenti, Bruno Poellhuber, Simon Parent and Florent Michelot (2021). What is the Digital Competency Framework?

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Thank you!

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