1.2 What is TET competence?

This course is all about improving your technology-enhanced teaching to ultimately have a positive impact on your students' learning. But, if you have seen the results of the new PISA report just published on students' digital skills, you might ask yourself what is the point? The big headline from the report, which has attracted a lot of media attention, is that students who use computers very frequently at school do a lot worse in most learning outcomes, even after accounting for social background and student demographics. So, does this mean that we should just stop using technology for teaching and learning in schools? The simple is answer is no, because if we look a bit further into the results there is also a positive message. Students who use computers moderately at school tend to have better learning outcomes than students who do so rarely. The results therefore suggest that ICT is linked to better student performance only in certain contexts and only when used in moderation. Further research is needed to find out exactly what these contexts are and what this moderate use consists of. We already know for example that ICT has pedagogical added value when it supports individualized learning, formative assessment, and collaborative and project-based learning. However, as the OECD report concludes, schools haven't yet become good enough at these kind of pedagogies that make the most of technology; adding 21st-Century technologies to 20th-Century teaching practices will not improve the effectiveness of teaching. Therefore in this course, we want to encourage you to critically reflect on what extent you and your peers use technology to support 21st century teaching practices, and to deeply think about the appropriateness of using ICT for any specific learning activity or outcome.

Technology –enhanced teaching is a constantly evolving area, making it difficult to define. For the purposes of this course, we will understand **Technology-Enhanced Teaching competence** to refer to **proficiency in using ICT in teaching**, the ability to **apply pedagogic and didactic judgment**, and having **awareness of** the **implications for learning**.

But what frameworks already exist out there that might help us better understand Technology-enhanced teaching? Well, there are various digital competence frameworks at national and international level, including the **European DIGCOMP framework** for developing and understanding digital competence in Europe. However, this framework, like many others, explores the development of digital competence of all citizens. What interests us most, is the type of digital competence needed specifically by teachers. There are currently fewer such frameworks, but some examples do exist. For instance, at international level there are the teacher standards published by the International Society for Technology in Education in 2007, which are currently being updated as much has changed since then. These standards are arranged under 5 headings: Facilitate and inspire student learning and creativity; design and develop digital age learning experiences and assessments; model digital age work and learning; promote and model digital citizenship and responsibility; engage in professional growth and leadership.

A more recently developed framework is UNESCO's ICT Competency Framework for teachers. UNESCO's Framework emphasizes that it is not enough for teachers to have ICT competencies and be able to teach them to their students. ==Teachers need to be able to help students become collaborative, problem-solving, creative learners through using ICT so that they will be effective citizens and members of the workforce.== The Framework is arranged in three successive stages of a teacher's development. The first is Technology Literacy, enabling students to use ICT in order to learn more efficiently; The second is Knowledge Deepening, enabling students to acquire in-depth knowledge of their school subjects and apply it to complex, real-world problems; The third is Knowledge Creation, enabling students, citizens and the workforce they become, to create the new knowledge required for more fulfilling and prosperous societies.

At national level, Spain is good example of a country which has recently developed their own national framework for teachers' digital competences. The Spanish framework has been deliberately inspired by the European DIGCOMP framework, developed by the European Commission's Institute, IPTS. The **Spanish framework** developed by INTEF, was recently published in 2014 to provide a **common reference for teachers' digital competence** with specific descriptors for training, evaluation and accreditation. The framework's main aims are to help teachers **develop and evaluate the digital competence of students**; to **foster the use of digital resources in teaching**; and to **integrate a digital culture in schools**. The **five areas** defining teachers' digital competence are taken from the DGICOMP framework and include, **information, communication, content creation, safety,** and **problem-solving**. The Spanish team who worked on this adapted the descriptors in the DIGCOMP framework so that they are specifically relevant to teachers and are organized at three levels: **starting level, intermediate level** and **advanced level**. The Spanish team at INTEF are now working on the next phase of this work, which is to design the accompanying assessment tools. These tools will include a **self-assessment tool for teachers**, to diagnose individual training needs; a **professional portfolio** where teachers can log their teaching practice in relation to the competence areas; an **evaluation tool for schools**, and finally **tests leading to accreditation** for teachers of different profiles and at different levels.

In the resources section of this module you will find links and further information about each of the frameworks I have mentioned, as well as a range of other frameworks targeting teachers' digital competence, so that you can explore these in more detail.

Frameworks can help us to define and better understand concepts, but to complement this understanding it is really useful to actually see what we mean by technology-enhanced teaching in practice. For this reason, the next videos are all concrete examples of teachers across Europe using diverse ICT tools and strategies for a variety of subjects, skill development and age groups. We hope you find them inspiring and that they help you reflect on your pedagogical use of technology.