



United Nations
Educational, Scientific and
Cultural Organization

ICT Competency Standards for Teachers

Governments, experts and practitioners in the education sector increasingly recognize that information and communication technology (ICT) can play an important role in supporting educational improvement and reform. A high-quality education in turn serves to advance the goals of social and economic development.

To be successful in today's information-rich and knowledge-based societies, students and teachers must utilize technology effectively. Bringing ICT into the classroom serves to:

- Help students develop the skills necessary to live and work successfully in the 21st century;
- Support teachers to improve students' classroom learning experiences with interactive and dynamic ICT based resources; and
- Provide a more motivating and richer education experience for students.

The Internet, interactive materials and simulations, and open educational digital content, are some of the resources that empower teachers to provide previously unimaginable opportunities to help students to learn more effectively and to be more engaged with their learning. Within a sound education setting, teachers can enable students to use technology to become better information seekers, analyzers, problem solvers and effective communicators.

One of the challenges in bringing ICT into education however has been that in many cases teachers lack the ICT skills necessary to integrate technology into the classroom, and the professional development to understand how to make best use of ICT for the benefits of students. Similarly, curriculum and training providers lack a clear set of internationally recognized guidelines on what constitutes appropriate ICT professional development for educators.

Standards on Incorporating ICT into the Classroom

Recognizing the need to provide standards to help the education sector leverage ICT, UNESCO teamed up with Cisco, Intel and Microsoft, as well as the International Society for Technology in Education (ISTE) and the Virginia Polytechnic Institute and State University (Virginia Tech), to set up the 'ICT Competency Standards for Teachers' (CST) project.

The goal of the CST project is to provide guidance on how to improve teachers' practice through ICT and by giving a new dimension to their skills, regardless of where the classroom is located – resulting in better education and highly skilled students.

More specifically, the CST project objectives are to:

- Constitute a common set of guidelines that professional development providers can use to identify, develop or evaluate curriculum or teacher training programs in the use of ICT in teaching and learning;
- Provide a basic set of qualifications that allows teachers to integrate ICT into their teaching and learning, to advance student learning, and to improve other professional duties;
- Extend teachers' professional development to advance their skills in pedagogy, collaboration, leadership and innovative school development using ICT;
- Harmonize different views and vocabulary regarding the uses of ICT in teacher education.



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Launch of the Competency Standards for Teachers

The first phase of the CST project was completed in late 2007 and the Competency Standards for Teachers launched in London on 8 January 2008 at the Moving Young Minds conference, an international seminar hosted by the UK government for education ministers and policy makers to discuss the use of technology in enhancing education.

At the conference, UNESCO and its collaborators introduced the ICT Competency Standards for Teachers, a set of three booklets including:

- 1** A Policy Framework explaining the rationale, structure and approach of the CST project;
- 2** A Competency Standards Modules' Structure which crosses the components of educational reform with various policy approaches to generate a matrix of skill sets for teachers;
- 3** Implementation Guidelines providing a detailed syllabus of the specific skills to be acquired by teachers within each skill set/module.

Cisco, Intel and Microsoft contributed valuable perspective and background on the skills required for the effective use of ICT in education, combined with UNESCO's expertise in education. Cisco's Networking Academy instructor training, the Intel® Teach Program Curriculum and Microsoft's Unlimited Potential, Digital Literacy and Partners in Learning curricula, represent some of today's teacher training options, which are consistent with the emerging standards.

The syllabus is the key reference for training providers, listing guidelines on what teachers should know to apply ICT to education in their own creative ways and examples of how to train them to achieve this. The guidelines cover policy, curriculum and assessment, pedagogy, the use of technology in the classroom, school organization and administration, and teacher professional development.

While the Competency Standards for Teachers specify the competencies needed to bring ICT into education, it remains up to approved governmental, non-governmental, and private providers to deliver the curriculum and training programmes for these competencies. Providers interested in participating in the CST framework are allowed a considerable flexibility in their implementation. To ensure their trainings meet with CST guidelines, they must submit an application describing and justifying their course offerings for approval by the ICT-CST Endorsement Board.

Professional development providers are not expected to comprehensively address all of the competencies listed. Rather, they can design offerings for approval that address only certain phases of professional development, certain components of the educational system, or certain approaches to educational reform.

The documents, constituting the standards, as well as more information on how to participate in the CST framework, will be made available to training providers and policy makers on UNESCO's website dedicated to this project: www.unesco.org/en/competency-standards-teachers

Future Vision

A second phase of the ICT-CST project will involve the establishment of a UNESCO mechanism of quality assurance and compliance of training programs with the UNESCO standards. The complete guidelines for submission and evaluation will also be published on UNESCO's website.

In addition, UNESCO plans to develop a mapping of existing teacher training standards and training programs to the ICT-CST matrix of skill sets in an attempt to streamline the global efforts in this general area. This work will seek to contribute to the development of appropriate training programs for ICT skills of teachers with a global recognition.