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QUALIFICATION REQUIREMENTS FOR THE ICT COMPETENCES OF A TEACHER IN EDUCATIONAL INSTITUTIONS OF THE REPUBLIC OF TAJIKISTAN

Unofficial translation from Tajik to English



APPENDIX
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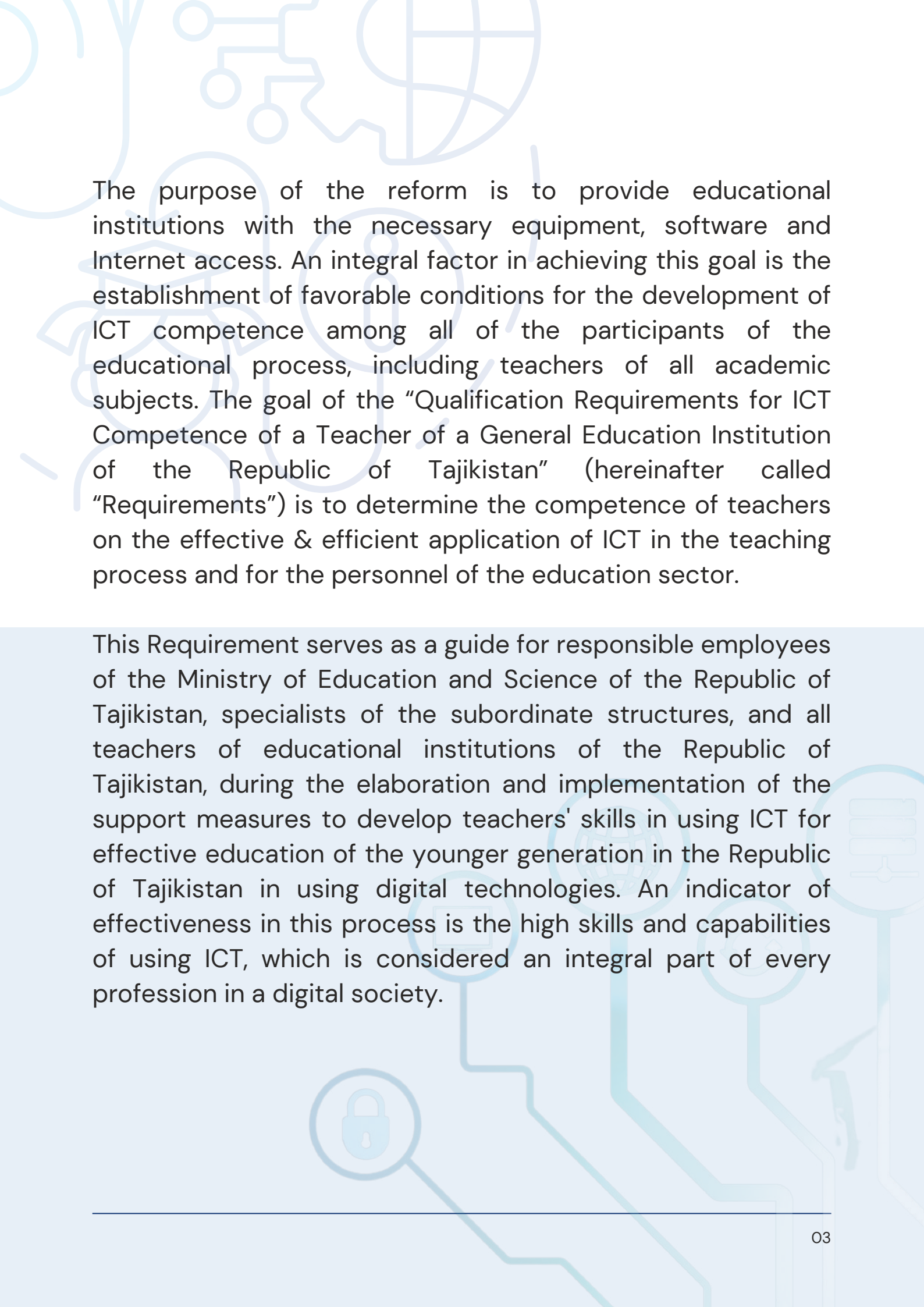
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Introduction

An impetuous development of digital technologies requires society, especially its young people, to constantly adapt to a fast-changing world. The COVID-19 pandemic has once again proved the role of technology in our lives. Consequently, with the reasonable use of digital technologies, several challenges for people have become easier to be addressed, thus, in the event of some emergencies or unexpected and unfavorable situations, we have an opportunity not to suspend our activities, to continue working online at home, both regarding education and official work. However, such a rapid transition to educational technologies has further widened the gap in access to education and weakened its quality for those who do not have access to digital technologies or who were deprived of the opportunity to use them effectively.

In recent years, Tajikistan has implemented several reforms to make progress in the field of Information and Communication Technologies (ICT) and had strengthened its safe and purposeful utilization. In this direction, key documents such as the National Strategy for the Development of Education for the period up to 2030, the National Road Map for the Digitalization of the Education System (2023), the National Program for the Introduction of Information and Communication Technologies in Educational Institutions of the Republic of Tajikistan for the period 2023–2027 have been introduced, which had thus integrated ICT in the education sphere to improve the learning process and outcomes, as well as the had improved management and the education process itself.



The purpose of the reform is to provide educational institutions with the necessary equipment, software and Internet access. An integral factor in achieving this goal is the establishment of favorable conditions for the development of ICT competence among all of the participants of the educational process, including teachers of all academic subjects. The goal of the “Qualification Requirements for ICT Competence of a Teacher of a General Education Institution of the Republic of Tajikistan” (hereinafter called “Requirements”) is to determine the competence of teachers on the effective & efficient application of ICT in the teaching process and for the personnel of the education sector.

This Requirement serves as a guide for responsible employees of the Ministry of Education and Science of the Republic of Tajikistan, specialists of the subordinate structures, and all teachers of educational institutions of the Republic of Tajikistan, during the elaboration and implementation of the support measures to develop teachers' skills in using ICT for effective education of the younger generation in the Republic of Tajikistan in using digital technologies. An indicator of effectiveness in this process is the high skills and capabilities of using ICT, which is considered an integral part of every profession in a digital society.

Basic Notions

Information and communication technologies (ICT) or digital technologies (DT) - are means of collecting, processing, transmitting, storing and presenting information in a digital format.

ICT competence - is a special requirement for a teacher (or his/her ability to perform the tasks), which s/he must have to fulfill his/her professional duties and prove this by using ICT in his/her educational activities. The Competencies are the professional requirements for a teacher that oblige him/her to use digital technologies in educational activities. Or in other words, it is such a competence that, in accordance with the requirements for knowledge, skills, attitude and professional experience with which a teacher, when performing the duties in accordance with his position, with the help of ICT, should be able to demonstrate in the course of the work.

List of Competencies

All professional duties of a teacher can be divided into the following aspects:

- Implementing official state policy.
- Planning, organizing, and evaluating the learning process of the students to improve it regularly.
- Performing administrative tasks for the school, for example, keeping records in a class journal, integrating the activities with other colleagues, maintaining students' attendance records, communicating with the parents, etc.
- Regularly improving his/her skills.

To increase the effectiveness of the educational process, teachers can widely utilize and apply ICT to perform any of their tasks. The same document defines the ICT competencies of teachers, regardless of the subject they teach, so that teachers can perform the above tasks using modern accessible digital technologies.

The Requirements for teachers in each aspect consist of three levels, which are reflected in the improvement of the teacher's competence from one level to another, along with the upgrading of the qualifications and experience in the utilization and application of the ICT from the Beginner Level to the advanced one. A higher level of competence also encompasses the requirements for the previous levels as well. The levels are closely related and are interdependent. They were designed with the purpose of being an aid for the teachers themselves and the staff of the subordinate structures of the Ministry of Education and Science, including the specialists in teacher training. The competence of teachers and the required further steps to elaborate and upgrade their ICT skills will be determined by compliance with the above Requirements accordingly.

The qualification requirements of the ICT competence of teachers represent the foundation for an assessment and certification, for professional development, as well as during the conduction of various competitions/contests to determine the professional level of teachers, taking into account the current status of the information and digital technologies in educational institutions.

Aspects of ICT Competence

Aspect 1. ICT in Education Policy

This aspect is related to the indicator "Knowledge of Normative Legal Acts Regulating Activities in the Field of Education and their Observance", the Procedure for Certification of teachers and researchers of educational institutions of the Republic of Tajikistan (Resolution of the Government of the Republic of Tajikistan dated June 7, 2017 No. 281). The aspect consists of the requirements that are imposed on the teacher when purposefully applying ICT from the point of view of educational policy. The competencies related to this aspect include the utilization and application of ICT in education, in the development and implementation of this policy in the professional activity of a teacher.

A teacher plays a key role in the implementation of educational policy. Therefore, this aspect requires teachers to comprehend the principles and priorities of the educational policy on the introduction of ICT, its promotion at the school and local community levels, inclusion in teaching practice, as well as for constructive participation in discussions on the introduction of ICT at the local, district, and national levels.

Aspect 2: Education and Learning. Organization of the Educational Process

The requirements of this aspect correspond to the indicator “Performance of Duties (full and high-quality)”, the Procedure for certification of pedagogical and scientific personnel of educational institutions of the Republic of Tajikistan, and relevant educational programs using ICT in the planning (elaboration) process and stimulation of educational activities to achieve the goals of educational standards.

As part of the reform of the competency-based approach to education, all educational standards and educational programs should be reviewed and updated with consideration of the content of this Requirement. Therefore, this aspect requires a teacher to actively apply ICT and digital tools to move from the process of knowledge transfer to the process of developing students' key and technical competencies, as well as to developing students' self-learning skills.

Aspect 2: Education and Learning.

Organization of the Educational Process

The qualification requirements set the objective for teachers to change the lesson planning process and move from the format of simply explaining certain contents to choosing effective methods of organizing students' individual and group work so that they can develop their knowledge, skills, and relationships.

The assessment of student's academic performance should be separated from the subjective assessment and carried out in order to improve the educational process. Self-learning skills are a key requirement in today's rapidly changing world and form the basis of a competent approach. Students' skills and capabilities such as planning of independent work, selecting reliable resources (including from the Internet), preparing reports (presentations) of various formats, independent and group work, etc., should be developed with the help of a teacher through motivating the students, skillfully managing the educational process, providing clear efficient advice, and setting the tasks with the use of ICT. Taking into account these requirements, the purpose of this aspect is considered to be the development of the teachers' skills in using ICT to organize an effective and comprehensive educational process.



Aspect 3. Technologies and Digital Databases

This aspect forms the technological basis of the competencies presented in other aspects and covers the important competencies of each teacher. It includes knowledge, capabilities, skills and experience in the utilization of equipment, tools and services of the educational process, which are also necessary for the professional development of the teacher. These competencies make it possible to rationally choose technologies and digital databases while ensuring safety and compatibility with the goals of the educational process, available school conditions, and needs of the students.

Aspect 4. Administration and Management

This aspect includes the abilities to use the required hardware (technical equipment and security), software and information (data) of an educational institution, organize a real and virtual classroom environment, manage automatic information systems, and managing the teaching and learning process which is followed in the institution. It consists of the requirements that are imposed on the teacher to establish a reliable, compatible and secure digital educational environment. Such an environment encompasses the educational processes both inside and outside the school, and contributes to the development of the educational institution itself.

The teacher is obliged to be aware of and to comply with the applicable requirements for ensuring the safe utilization of the hardware and the software. S/he is responsible for the strict observance of information security rules by the students, and also contributes to the building of a healthy, reliable, friendly and secure digital environment that supports educational activities in the educational institution and beyond.



Aspect 5. Continuous Professional Development

This aspect corresponds to the indicator “Self-Improvement and Application of Computer and Information Technologies in Professional Activity” of the Certification Procedure for teachers and researchers of educational institutions of the Republic of Tajikistan. It includes the competencies teachers need for their continuous professional development while utilizing ICT through online and blended courses, participating in webinars, using accessible educational databases, as well as for on-going collaborations with peers and other colleagues to apply the best practices both inside and outside the country.

Levels of Competences

Taking into consideration the accessibility of ICT in educational institutions in urban and rural areas of the country, three main levels of the requirements for the development of teachers' competence in the use of ICT have been identified. The main purpose of describing the levels in each aspect is to provide teachers with recommendations on self-assessment and further elaboration of the competencies in the use of ICT. The description of the competence levels can be used by subordinate structures of the Ministry of Education and Science (i.e., institutes for advanced training and methodological assistance to teachers) as a guide for the development of teacher training programs in the field of ICT use, considering their needs and current professional level. For example, teachers who are just starting to use ICT have access to basic modules on the use of ICT in teaching practice, and teachers who already have gained some basic skills and experience in using ICT can select an advanced module. The ICTs per se contribute to the further development of competencies in the field of ICT utilization, and to form third-level competencies, teachers need to actively create conditions at the level of an educational institution and of a district (region, country) for the introduction of new solutions, constructive participation in various events (conferences) and the promotion of ICT.

This requirement can be used for teacher certification and evaluation only if the school has the necessary technological equipment and teachers have access to the above-mentioned professional development conditions.

Level 1
Beginner

INFORMATION ABOUT ICT AND
OPPORTUNITIES
BASIC KNOWLEDGE ON HOW THE
USE OF ICT CAN IMPROVE THE
TEACHING AND LEARNING PROCESS.

Level 2
Integrator

INFORMATIVE, SAFE AND EFFECTIVE
IMPLEMENTATION OF ICT IN THEIR
PROFESSIONAL ACTIVITIES.

Level 3
Innovator

INDEPENDENT DEVELOPMENT OF ICT
SKILLS
CREATING DIGITAL DATABASES AND
COMMUNITIES
PROMOTING ICT AT THE SCHOOL
LEVEL

Level 1. Teacher - Beginner in ICT Usage

At this level, teachers are aware of the possible benefits of digital technologies for improving teaching practice and professional development, as well as have a basic understanding of how ICT can improve the education and learning process. Teachers are able to access the key ICT hardware and software and use them for electronic document management, including preparation of plan notes, electronic journals and diaries, in creation of presentations, as well as for communication with students, parents, and colleagues in an online format. During the lessons, they use basic digital skills such as social media or internet search. Teachers have basic knowledge about the reform of the education system and its priorities for the introduction of ICT, as well as they are aware of their role in the implementation process. They may occasionally use existing ICT resources, such as access to educational databases on the Internet, and various educational management systems developed primarily for internal use. The teachers have basic skills in the use and technical support of existing digital equipment.

Level 2. Teacher - Integrator

At this level, a teacher is required to use digital technology in order to help students with different abilities to fulfill their potential. Teachers methodologically and purposefully introduce digital capabilities into the learning process, taking into account the needs and interests of the students. Teachers are required not only to select and use digital databases and technologies, but also to link them with teaching methods and forms. Teachers should have the skills to use digital materials from various sources and, if necessary, to be able to adapt them in accordance with the context, the purpose of the lesson and the needs of the students. At this level, teachers should have the skills to establish a comprehensive pedagogical and practical environment with ICT to involve all of the students into an effective learning process. Teachers are able to use digital technology to assess student performance and use stored data to improve the results.

Level 3 - Teacher-Innovator

At this level, teachers actively use a wide range of digital technologies in their professional activities, regularly analyze and improve their experience. They use ICT to develop their own and students' self-learning skills, as well as to form key interdisciplinary competencies of the students. They are also able to assess the effectiveness of using certain digital approaches in educational activities.

Innovative teachers actively contribute to the exchange of knowledge and experience with their peers and other colleagues in the field of using digital technologies, and also do not hesitate to support their colleagues to introduce ICT into the educational process. They are actively involved in the promotion of ICT in educational activities, organizing local and international online events like forums on the use of ICT to improve student learning and professional development of teachers.

ASPECT 1: INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) IMPLEMENTATION POLICY IN EDUCATION

Competence: Actively participating in the development and implementation of the state policy on introduction of ICT in education.

Competence Indicators

Key Directions	Level 1	Level 2	Level 3
The principles and priorities of the state policy on the introduction of ICT in education	1.1.1. Explains the current priorities of the state policy on the introduction of ICT in the field of education.	1.2.1 Explains the teaching methods that take into account the political priorities of ICT implementation in work plans (calendar and curriculum).	1.3.1. Based on his/her pedagogical experience, makes recommendations for improving the state policy documents in the direction of using ICT in education.
The learning process in the application of ICT in education	1.1.2. Knows the resources and Internet sources that allow teachers to familiarize themselves with the documents related to the introduction of ICT in the field of education in accordance with state policy.	1.2.2 Discusses in detail the obstacles faced by an educational institution in the implementation of the state policy on the use of ICT in education, and proposes measures to eliminate such barriers.	1.3.2. Actively participates in the discussion, development and implementation of the educational institution's plan for the implementation of the priorities of the state policy on the introduction of ICT.
The role of an educational institution in the introduction of ICT in education	1.1.3. Explains how the activities of an educational institution should be compatible with state policy and helps in its implementation.		

ASPECT 2: ORGANIZATION OF THE EDUCATIONAL PROCESS (and learning)

Competence: Uses ICT in the educational process to achieve the requirements of standards and curricula

Competence Indicators

Key Directions	Level 1	Level 2	Level 3
Planning the educational process	2.1.1. Explains how the use of ICT in the process of teaching a particular subject increases the effectiveness of the educational process.	2.2.1. In accordance with the purpose of the lesson and the needs of the students, integrates the use of ICT into the lesson plans.	2.3.1 In order to develop students' self-learning skills, plans an educational process using ICT.
Promoting an inclusive educational environment based on a competent approach	2.1.2. To promote educational activities, finds available digital resources (videos, assignments, tests, etc.) and develops publicly available digital educational materials (templates, assignments in electronic format, presentations, etc.).	2.2.2. Selects digital resources from reliable sources and adapts them to the purpose of the lesson, the needs of the students to organize the educational process based on a competent approach 2.2.3. Conducts various forms of assessment using ICT (digital quizzes, games, tests, etc.).	2.3.2 Uses project activities to develop students' logical thinking, teamwork and collaboration skills to solve real-world problems.
Assessment of student performance and use of assessment results	2.1.3. Selects the right ICT tools to support students in the process of studying the subject. 2.1.4. Answers students' questions and advises them via the Internet (e-mail, chat, teleconferences, etc.).	2.2.4. Collects and stores information about student performance in digital format and uses it to personalize learning/ 2.2.5. Analyzes academic performance together with the students, their parents (or representatives and stakeholders) using digital means of communication.	2.3.3 Develops and uses alternative forms of assessment (electronic portfolio, graphic organizer, reflective tools) to develop self-assessment and self-learning skills.

ASPECT 3: STORAGE AND DIGITAL TECHNOLOGIES

Competence: Uses available hardware, software and educational resources, taking into account safety, reliability, compliance with educational goals, pedagogical approach and needs of the students

Competence Indicators

Key Directions	Level 1	Level 2	Level 3
From a legal point of view, the secure/safe and targeted use of available digital databases and services	3.1.1. Uses computer, audio-visual and technical means (multimedia projector, whiteboard, printer, scanner and other digital devices/gadgets) to search, display and develop digital educational resources.	3.2.1. Adheres to the requirements of network etiquette and copyright when working in cyberspace and strictly complies with information security requirements.	3.3.1. Based on and developing the information security procedure of an educational institution, contributes to the development of a culture of using the Internet.
Installation and use of legally accessible hardware and software and content.	3.1.2. Uses the main functions of the operating system, browser and, general management software during the preparation and conduct of the lesson, meanwhile being able to eliminate basic technical issues.	3.2.2. Uses the necessary assistive technologies for students with disabilities (vision, hearing, etc.) to ensure their equal participation and education in general education institutions with other students.	3.3.2. Supports colleagues in the search for new modern digital technologies, educational resources and the development of safe and effective ways to use them in educational institutions.
Organization of a safe/secure and inclusive educational environment	3.1.3. Eliminates technical errors and fixes the software problems used in the educational process. 3.1.4. Explains the fundamental principles of cyber-security, media and information literacy, as well as digital citizenship.	3.2.3. Uses online and offline digital communication tools (including e-mail, Big Blue Button teleconferences, social networks, etc.) to conduct educational events and communicate with colleagues.	3.3.3. Develops interactive digital materials and makes them freely available to colleagues. 3.3.4. Contributes to the replenishment of digital databases and the creation of a learning environment among colleagues for the exchange of knowledge, experience and resources.

ASPECT 4: ADMINISTRATION AND MANAGEMENT

Competence: uses ICT in administration, skillfully manages the digital resources of an educational institution and creates a secure digital learning environment.

Competence Indicators

Key Directions	Level 1	Level 2	Level 3
The use of ICT in the administrative activities of an educational institution	4.1.1. Uses digital tools to manage learning processes and provides access to digital educational content.	4.2.1. Uses creative approaches to ensure inclusive access of all students to educational resources (especially in the absence of equipment and materials) to achieve educational goals.	4.3.1. Participates in the development and implementation of the educational institution's action plan to ensure the development of a safe, inclusive and effective digital education environment.
Organization and management of the digital educational environment	4.1.2. Prepares training assignments using available digital educational platforms and technologies for organizing classes, as well as prepares and stores a backup lesson plan to prevent disruption of learning activities in case of failure of existing ICT facilities (e.g., power outage, equipment failure, etc.).	4.2.2. Performs primary basic maintenance of digital equipment, including installation and updating (if necessary) of licensed software used in the educational process.	4.3.2. Contributes to the development and implementation of a digital promotion plan for an educational institution, based on the contribution of the local community.
Creating a secure digital educational environment	4.1.3. Compliance with the rules for the safe use of equipment and digital software available at the educational institution.		4.3.3. Promotes the development and development of the educational institution's system of requirements for information security, compliance with network etiquette, and intellectual property rights when working with digital materials.

ASPECT 5: PROFESSIONAL DEVELOPMENT

Competence: Uses ICT in professional development

Competence Indicators

Key Directions	Level 1	Level 2	Level 3
Using different education systems to enhance digital literacy and professional development	5.1.1. Aware of local, national, and international online resources that offer tools, online courses, and other professional training and development opportunities.	5.2.1. Regularly uses available Internet resources for training and professional development.	5.3.1. Monitors trends in the development of ICT in its disciplinary field. Selects, verifies, and applies new methodologies in their work. Shares materials with colleagues at school, as well as at the local and national level.
Participate in online networks for learning and sharing knowledge and experience.	5.1.2 Select the necessary digital tools and databases and use them for professional development.	5.2.2. Presents his/her teaching experience through participation in the work of network methodological associations and specialized meetings (conferences). Shares materials with colleagues.	5.3.2. Assist colleagues in navigating and studying new methodological materials, and building and developing methodological network communities.
Contribution to the development of pedagogical communities at the national and international level	5.1.3 Participates in mixed meetings and seminars (online and offline) held by local associations or other professional institutions (organizations) for professional development..		