

## DEVELOPMENT OF METHODOLOGICAL COMPETENCE OF TEACHERS FOR SDG 4 ‘QUALITY EDUCATION’

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### ABSTRACT

Issues of the modern teacher's methodology competence development, practicability of modern pedagogical technologies use in the educational process and active learning teaching methods are reviewed in this article.

**Keywords:** Education for the sake of the stable development, modern teacher's competence, teaching technologies, active learning.

### INTRODUCTION, LITERATURE REVIEW AND DISCUSSION

It is known that “sustainable development” (SD) is defined as the development, “which satisfies present times necessities, not endangering future generations' opportunities” [1]. As a concept, sustainable development advances improvement and equality in economy rights, social prosperity and environmental protection. Sustainable development is the complex concept of the world's evolution, if SD is reached, the world life will become better for everybody indeed.

Key for the country’s stable development is education. The main purpose of the education for the sustainable development is to integrate ideas and principles of the SD, which are used for personality formation with the comprehensive view of the world and critical, social, economical intelligence, active civil position, including all education degrees. To ensure SD attainment progress, new agenda for development was accepted by 193 UN member countries in September 2015: “*Transforming our world: the 2030 agenda for sustainable development*” or Agenda 2030[2]. It is aimed on 17 goals for sustainable development (SDG) [3,4].

Among all the SDG we will mark Goal No.4 – “Quality education” – ensure of the inclusive and equity quality education and promote lifelong learning opportunities for all. *Target of the Goal No.4 is to develop a person with the new worldview and attitude, new life philosophy, supporting social objective to reach sustainability.* Education for the sake of the sustainable development is education for changes for the better.

Consider the role of education for the future. Education should shape the knowledge, skills and values that children, young people and adults need to become informed, responsible and active citizens, find decent work, and promote sustainable economic growth and build peaceful societies. “Education is the most powerful weapon you can use to change the world” (*Nelson Mandela*) [5].

- Education is the centre of efforts to develop and promote sustainable solutions for development needs of people and the entire planet.
- Education allows people to *understand the nature and severity of problems* in the field of SD; it also provides an opportunity to form the *critical, non-standard and creative approach* necessary to search for new, more effective solutions to common and local

problems; it allows people to understand the nature of the powerful factors that contribute to an unstable life; and it (education) can help to *develop self-confidence, organizational skills and optimism* that will enable people to *act individually and collectively* for the benefit of the sustainable future.

Quality education is not only a Goal of SD, but also a guarantee for achieving all the other SDGs.

In 2011, the State Committee of the Republic of Uzbekistan for Nature Protection, the Ministry of Higher and Secondary Special Education and the Ministry of Public Education adopted a joint resolution No. 20/2/305 on the “Concept of Education for the Sustainable Development of the Republic of Uzbekistan” [6]. National Plan of Uzbekistan for ESD has been developed to integrate ESD into study plans and programs. These documents form the official basis for the widespread introduction of approaches and principles of Sustainable Development and ESD in the education system.

Nowadays, the ESD Concept is implemented in systems of formal (based on state educational standards) and non-formal (based on out-of-school, optional and extra syllabus activities) training, on the basis of action plans prepared according to ESD of the Ministry of Public Education and the Ministry of Higher and Secondary Special Education in the framework of the National training programs of the Republic of Uzbekistan through the integration of ESD into syllabus and courses, as an independent educational discipline and as integrated part into other traditional disciplines.

Quality training of highly qualified personnel for all fields of activity is the foundation of sustainable development of a country. Intensification of the educational process and its effectiveness improvement mostly depends on the level of readiness of the faculty members of the HDE, on ability to use effective pedagogical technologies during the lessons.

Every person, studying to be the professional, faces its three facets – a content, personal facet and procedure (technology, methodology). In the process of professional training, issues related to the determination of knowledge necessary for the specialist according to the duties of his specialty, how he will use this knowledge, what personality qualities should he have, in order to get the maximum results from his knowledge and abilities, are solved. Possibly, if there is a *unity and interconnection of the three aspects of professional training*, we can talk about high level.

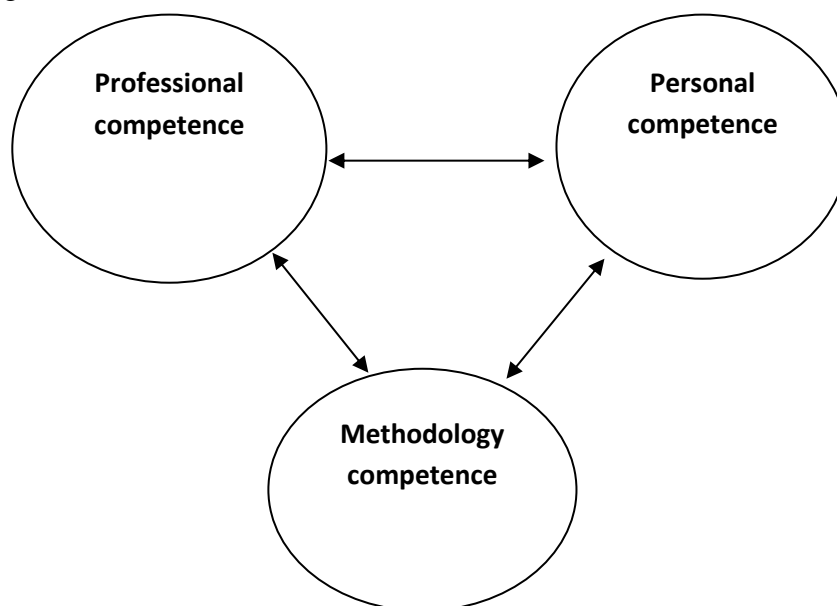
The methodological competence of the teacher. In modern education, the functions of the teacher are changing rapidly. In the conditions of unlimited access to any peace of information, the teacher must, first of all, *teach how to use* them. In this purpose it is necessary for him to know modern teaching methodology. In this regard, new requirements are being raised to the teachers’ training system. Today it is not enough to orient ATP courses on the training of teachers as subject teachers: the content of the subject and the methodology of its teaching. The emphasis should be placed on that part of the pedagogical culture, which includes the *possession of modern theories of cognitive psychology, practical psychology, subject-specific strategies and teaching technologies*.

“In the current conditions of strict environmental imperative ... *the teacher is becoming one of the central figures of the modern civil society. The future of the country and nation will depend on it more than on the politician, businessman or entrepreneur*” (Moiseev NN) [7]. In the modern education system, the inalienable quality of a teacher should be his professional

competence, that is, “knowledge and authority in one or another field of his activity” (V. I. Dahl's dictionary). In the psychological dictionary, professional pedagogical competence is defined as “the teacher’s possession of the necessary amount of knowledge and skills that determine the formation of his pedagogical activity, pedagogical communication and the personality of the teacher, as a bearer of certain values, ideals and pedagogical consciousness”.

TEACHER'S PROFESSIONALISM IS CONSIDERED TODAY AS A CONDITION OF ACHIEVEMENT OF MODERN EDUCATION QUALITY.

The competence of the modern teacher can be represented in the form of a “competencies’ triangle” (Fig. 1):



**Fig. 1. The modern teacher “Competencies’ triangle”**

In the study process of educational institutions, it is important to use modern pedagogical technologies, effective strategies, teaching methods and techniques used in the world pedagogical practice, as required by the National Training Program [8].

It was noted in the Decree of President of the Republic of Uzbekistan, Sh. Mirziyoyev, “On measures to fundamentally improve the system of training of demanded qualified personnel and development of scientific potential at the National University of Uzbekistan named after Mirzo Ulugbek in 2019-2023” that the level of pedagogical technologies, including, practically reasonable and international standard – based technologies introduction into education process is low, insufficiency of professional skills of some pedagogue personnel and inefficiency of the extension courses. Decree provides implementation of system measures to improve the professional level and pedagogical skills of professors and teachers steadily. Thus, some targeted programs have been approved, including Component No.2 “Improvement of planning organization, ensuring of the profound and quality educational process in accordance with international practice of introduction of the latest pedagogical technologies and teaching methods”.

Consider what technology and innovative technology are.

**Technology** - from the Greek. Techne - art, skill, + Logos-teaching. “Technology is the science of technique. Technique is art, knowledge, skills, methods of work and their application to

business” (*Explanatory Dictionary of V. Dahl*). The technology includes methods, techniques, operating mode, sequence of operations and procedures, it is closely related to the applied means, equipment, tools, used materials.

There are over 300 definitions of PT. Pedagogical technology is determined as:

- a set of techniques (*Explanatory Dictionary*),
- a meaningful technique for educational process implementation (V.P. Bepalko) [9],
- a description of the process of achieving the planned learning outcomes (I.P. Volkov),
- a *systematic method of creating, applying and defining the whole process of teaching and mastering knowledge, taking into account technical and human resources and their interaction* (UNESCO).

The approach modernizes traditional learning based on the prevailing reproductive activity of students, but built as a “technological”, conveyor process with clearly fixed, detailed described expected results, is called by UNESCO experts as technological (“UNESCO and the Information Society for All”, May 1996).

**Innovative technologies** – sets of methods and means to support the stages of innovations implementation.

**Types of innovative technologies** – inclusion; training (training and increasing of small enterprises); consulting; transfer; audit; engineering.

**Key signs of PT:** diagnostic description of the goal; reproducibility of the pedagogical process; reproducibility of pedagogical results.

It is known that the main function of a teacher is to manage the cognitive activities of students, and management is impossible without planning. Despite the fact that the lesson plan is an individual creative document of the teacher, for effective implementation of this function, we can recommend the following sequence of designing a certain lesson based on the requirements and rules of pedagogical technology:

- the formulation of the expected results of the teaching or tasks of students in the cognitive, psychomotor and affective spheres. They can be expressed 1) in the form of identifiable educational goals with the help of a verb corresponding to the action (behavior) that the student will be able to demonstrate after achieving the set goals, or 2) through the main categories of educational goals in the cognitive field according to B. Bloom’s taxonomy (knowledge, understanding, application, analysis, synthesis, evaluation);
- formulation for each expected result of a set of training and control tasks (questions, tasks, test tasks) for training, exercises in an amount that ensures the consolidation of educational material. These tasks can be of different levels: to reproduce educational information, assignments of reproductive and productive levels of learning;
  - the formulation of the educational goals of the teacher on this lesson;
  - selection of key learning issues;
  - development of the content of the lesson in accordance with the syllabus, the goals of the teacher, the tasks for students and the content of control tasks in order to ensure guaranteed achievement of the expected results;
- considering the course of the lesson on the basis of the description of the teacher’s activities (main points) and the activities of students interconnected with it. In this case, the most effective methods for this lesson are selected, including interactive, as well as didactic methods, necessary equipment, etc.

During the lesson, the teacher is recommended to adopt the following rules of pedagogical technology:

- 1) **The rule of equivalent practice** – Create the conditions for training and direct the educational activities of students during the training so that these actions would exactly correspond to the expected actions during the final control.

- 2) **Rule of similar practice** – Provide students with the opportunity to practice behaviour that is similar but not identical to the final behaviour.
- 3) **The rule of “knowledge of the results”** – Tell students the result of each action immediately; this principle underlies the current assessment (the principle of feedback in learning).
- 4) **The rule of positive supporting reactions of the teacher** – Support the student’s positively desirable actions: do not blame the wrong actions, but comment in a constructive, encouraging way, for example, “try to express it again” or “you need to work on the content of the question again”.

## CONCLUSIONS

- For the development of students' intelligence, along with the **actualization of knowledge**, it is especially important to **update the methods of activity**, methods of acquiring knowledge and methods of its application. It is more effective jointly with the **pedagogical technologies** application in the educational process **using active learning methods** and pedagogical technology rules.
- Pedagogical technology is a **reproducible way of educational process organization with a precise focus on the diagnostically assigned goal**, that is, pedagogical technology is considered as a **technology of the educational process**.
- **The technological approach helps:**
  - to make learning objectives transparent and understandable to students;
  - to make learning goals specific and measurable;
  - the teacher to focus on the most important aspects.
- The professionalism of the teacher and the level of his pedagogical technique are decisive factors in matters related to the diagnostics and reproducibility of the educational process and its results.

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