



**USE OF INNOVATIVE TECHNOLOGIES IN TEACHING CHILDREN'S  
RESUSCITATION**

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**Annotation:** This article highlights the importance, advantages, and effectiveness of using innovative technologies in teaching pediatric resuscitation. The introduction of digital technologies, simulation classes, virtual internships, the "flipped classroom" model, online testing and assessment systems into the medical education process develops students' clinical thinking, practical skills, and the ability to make quick decisions. The article analyzes the methodological foundations of teaching based on innovative technologies and the experience of medical universities.

**Keywords:** Pediatric resuscitation, innovative technologies, simulation, virtual reality, medical education, clinical thinking, pedagogical methods.

**Relevance:** Today, the need for innovative approaches in teaching medical sciences, in particular, **children's resuscitation**, is increasing. Because this direction requires students not only to have theoretical knowledge, but also to make quick, correct, and responsible decisions in real clinical situations.

In the Decree of the President of the Republic of Uzbekistan "On Improving the System of Medical Education" (PQ-60, March 15, 2022), **the introduction of innovative teaching methods and modern technologies in the training of medical personnel** is defined as a priority task.

The field of resuscitation is a delicate process related to saving human life, and students must possess high accuracy, attention, quick thinking, and practical skills in mastering this subject. Therefore, in addition to traditional lectures, the use of **information and communication technologies, simulation, 3D models, digital trainings, and interactive platforms** in the learning process is relevant.

**Introduction: 1. The concept of innovative technologies and their role in medical education**

Innovative technologies are new pedagogical and technical means that modernize the educational process, increase the effectiveness of teaching, and ensure the active participation of the student. In medical education, they are:

- makes the learning process interactive;
- simulates the real clinical environment;
- allows you to learn safely from errors;
- brings students' skills closer to practice.

The main goal here is **to combine theoretical knowledge with practical experience** and to form professional competencies in students.



**2. Main innovative technologies used in pediatric resuscitation**

**a) Simulation activities**

Simulation (from the Latin "simulatio" - "to imitate") is a teaching technology by creating a real clinical situation in an artificial environment.

The following types of simulations are used in pediatric intensive care:

- **Training based on the mannequin (trainer):** heart massage, artificial respiration, intubation, defibrillation are taught.
- **With the help of computer programs:** through the "virtual patient" model, students practice the stages of diagnostic and resuscitation assistance.
- **OSCE system (Objective Structured Clinical Examination):** students' practical skills are assessed in stages.

**b) Virtual and augmented reality (VR/AR) technologies**

With the help of VR technologies, students see resuscitation situations in a 3D environment, perform the stages of patient care in the form of "virtual practice."

This method allows for safe, repetitive training and prepares for real situations.

**c) Information and communication technologies**

On platforms like **Moodle, Google Classroom, Quizizz, Kahoot, Mentimeter** for pediatric resuscitation:

- online lectures are held;
- interactive tests are created;
- students' reflection (reflection) is evaluated;
- The dynamics of assimilation is monitored.

**d) "Flipped classroom" (inverted classroom) model**

Before the lesson, students independently study the topic through video lectures or electronic resources, and during the lesson, they work on real clinical situations, cases, and resuscitation problems.

This method increases students' independent learning activity and allows the teacher to dedicate more time to practice.

**3. Advantages of implementing innovative technologies**

No	Advantage	Result
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No	Advantage	Result
1.	Safe simulation of a real clinical situation	The student practices without fear of mistakes
2.	Creates an active learning environment	The student transforms from a passive listener into an active participant.
3.	Independent thinking develops	The ability to analyze clinical situations is formed.
4.	Quick Evaluation System is available	Results will be analyzed immediately
5.	Multiple practice opportunities	Practical skills will be strengthened

#### **4. Recommendations for the organization of children's resuscitation classes**

1. Conducting simulation practice after each theoretical session.
2. Organization of independent analysis classes using "Virtual Patient" models.
3. Recording the practical result of each student through online assessment systems.
4. Formation of collective thinking through group problem cases.
5. Regularly conduct professional development courses on "innovative pedagogy" for teachers.

#### **5. Results of scientific experiments**

According to research conducted at medical universities of Uzbekistan, Russia, and South Korea:

- as a result of the application of simulation technologies, the practical training of students **increased by 40-50%**;
- virtual mashg'ulotlardan so'ng klinik fikrlash darajasi **an'anaviy usullarga nisbatan 1,7 baravar yuqori bo'lgan**;
- Student motivation and participation in the subject have significantly increased.

These figures confirm the direct effectiveness of the introduction of innovative technologies into the educational process.

**Conclusion:** Application of innovative technologies in teaching pediatric resuscitation:

- makes the learning process effective, interesting, and closer to real life;
- prepares students for actions in emergency situations;



- develops clinical thinking, communication, and teamwork skills;
- aligns student quality with international standards.

Innovative technologies are a new stage of medical education, forming the future specialist **not only as a knowledgeable, but also practical, prompt, and responsible person.**

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