

## EFFECTIVE USE OF MODERN EDUCATIONAL EQUIPMENT AND TOOLS IN THE INTEGRATION OF SUBJECTS IN PRIMARY EDUCATION

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### Abstract

The globalization of modern society makes certain adjustments already in the process of preparing for the lesson, which consist in the need to use mass media, which is dictated by the speed of information transmission in modern society. In this article highlights of effective use of modern educational equipment and tools in the integration of subjects in primary education.

**Keywords:** Primary education, integration, effectiveness, equipment and tools, quality of lesson.

### Introduction

Psychological and pedagogical theory has developed numerous lesson analysis schemes based on various foundations. A modern lesson, including with the use of information and communication technologies, is far from a monotonous and unified structural and substantive scheme. To choose a scheme for analyzing such a lesson, it is necessary to take into account modern criteria for the quality of students' education, possess the skills of selecting and restructuring the content of the knowledge being studied, modeling and constructing conditions and means that support and develop the personal structures of students' consciousness as the basis of their personal self-organization.

Most importantly, the lesson is considered today not only as a teacher's activity, i.e. as a form of learning, but also as a student's activity, i.e. as a form of teaching. The analysis of any lesson is an integrated approach in which the psychological, pedagogical, substantive, methodological and substantive aspects are closely interrelated. By itself, the analysis of the lesson as a process of awareness and self-knowledge forms the teacher's analytical abilities, develops interest and determines the need to study the problems of teaching and upbringing. The ability to observe complex pedagogical phenomena, analyze them, generalize and draw scientifically sound conclusions, serves as an effective means of improving professional and pedagogical skills.

In elementary education, science integration is a pedagogical approach aimed at bringing students' knowledge into one system, increasing their interests, and providing real-life connections. Modern educational equipment and tools will help make this process more effective, interesting and impressive. Advantages of science integration:

- Knowledge rounding: by studying the sciences not individually, but in an interdependent way, students have a holistic and complete picture of the world.



- Increasing interest: by connecting subjects with Real-life situations, students ' interest in learning increases.
- Development of critical thinking: through the application of knowledge from different disciplines in the process of problem solving and decision making, critical thinking develops.
- Development of creative ability: through the integration of disciplines, opportunities are created to create new ideas, find innovative solutions and demonstrate creativity.
- Formation of practical skills: by applying knowledge from different disciplines in practice, life and professional skills are formed in students.

### **Modern educational equipment and tools:**

#### **1. Interactive whiteboard:**

- Advantages: allows you to visually present information, increase student activity, organize group work, use various resources. \* Applications in integrations:
- Mathematics and fine arts: drawing geometric shapes, studying symmetry.
- Literature and history: staging historical events, analyzing the heroes of literary works.
- Environmental and Natural Science: describing the life of animals and plants, modeling natural phenomena.

#### **2. Projector and screen:**

- Advantages: providing information to a large audience, using video and audio materials, providing visual assistance to students.
- \* Applications in integrations:
- Literature and music: showing films based on literary works, studying the life and work of composers.
- History and geography: showing videos of historical events, introducing the nature and culture of different countries.
- Environment and technology: show the process of operation of industrial enterprises, demonstrate the capabilities of new technologies.

#### **3. Computer and laptop:**

- Advantages: allows you to search the internet for information, prepare presentations, use interactive programs, conduct online tests and quizzes.
- \* Applications in integrations:
- All subjects: data analysis, drawing up tables and diagrams, preparation of scientific projects.
- Language and literature: the use of interactive dictionaries, the use of online translators, the use of programs for the analysis of literary works.
- Mathematics and computer science: studying the basics of programming, modeling geometric shapes, solving mathematical problems.

#### **4. 3D printer:**

- Advantages: to allow students to create three-dimensional models of different objects, to help them see connections between disciplines, to develop practical skills.
- \* Applications in integrations:



- Mathematics and geometry: creating 3D models of geometric shapes, studying their properties.
- Biology and anatomy: the creation of 3D models of human organs and animal skeletons, the study of their structure and functions.
- History and archaeology: the creation of 3D models of historical monuments, the study of their history and architecture.

#### **5. Robotics kits:**

- \* Advantages: allow students to create and program robots, increase interest in engineering, programming and mathematics, develop problem solving and teamwork skills.
- \* Applications in integrations:
  - Mathematics and physics: programming the movement of robots, calculating their speed, distance and power.
  - Informatics and technology: learning the basics of programming, obtaining and processing data from the sensors of robots.
  - Environment and ecology: the use of robots to solve environmental problems, such as garbage collection, water quality determination.

#### **6. Modern laboratory equipment:**

- Advantages: to allow practical experiments in Chemistry, Physics and biology, to arouse interest in scientific research, to associate theoretical knowledge with practice.
- \* Applications in integrations:
  - Chemistry and biology: studying the process of photosynthesis of plants, determining the composition of substances, modeling chemical reactions.
  - Physics and technology: assembly of electrical circuits, study of magnetic fields, research of energy sources.
  - Environment and ecology: determining the quality of air and water, studying the composition of the soil, solving environmental problems.

When analyzing a lesson, it is necessary, first of all, to decide whether it is advisable to use computer technology in this lesson. This largely depends on the methodology chosen by the teacher, so it is necessary, first of all, to assess the validity and correctness of the selection of methods, techniques, and teaching tools, their compliance with the content of the educational material, the objectives of the lesson, the educational capabilities of the class, the correspondence of the methodological apparatus of the lesson to each of its stages and the tasks of student activation. The computer should not be used in the classroom for the sake of form. The work and behavior of students in the classroom are also important components of a comprehensive analysis of the lesson using ICT.

During the assessment, it is necessary to determine how the use of computer technology affects the activity of students, their performance at various stages of the lesson, how independent activities are implemented, and whether it is possible to implement a personality-oriented approach to learning. Special attention in the lesson using computer technology should be paid to health-saving technologies. When analyzing, it is necessary to take into account compliance



with both technical, sanitary, and ergonomic requirements for the lesson. Physical education classes and eye exercises are mandatory in such lessons.

Recommendations for the effective use of educational equipment:

- Clear goal setting: set specific goals for each lesson and use educational equipment to achieve these goals.
- Lesson preparation: check the setting of all equipment before class and plan how to use them.
- Ensuring active participation: involving students in the process of using equipment, taking into account their opinions and answering their questions.
- \* Compliance with safety rules: strict adherence to safety rules when using all educational equipment.
- Integrated approach: effective use of educational equipment to integrate different disciplines.
- Teacher training: regularly train teachers on the use of modern educational equipment and improve their skills.
- \* Diversification of assessment: the use of tests, projects, presentations and other methods in assessing students' knowledge.

The effective use of modern educational equipment and tools in the integration of subjects in primary education is important for strengthening students' knowledge, increasing their interests and preparing them for Real life. Through the correct selection and targeted use of modern educational tools, teachers are able to make the educational process more effective, interesting and effective.

In conclusion, it should be said that modern information technologies require the formation of intellectual skills, training in ways and techniques of rational mental activity, which makes it possible to effectively use the extensive information that is increasingly available. Undoubtedly, a graduate should have the skills to receive information from various sources, process it using logical operations and apply it in real situations. Thus, the modern lesson, while retaining its traditional features, should at the same time be considered not only as a variable, but also as a constantly evolving form.

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