



## **THE ROLE OF VIRTUAL TOOLS IN DEVELOPING MEDIA LITERACY IN PRIMARY EDUCATION**

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**Abstract.** This article examines the theoretical and practical foundations of developing students' media literacy within the primary education system. The role of virtual tools in the educational process is analyzed from a scientific perspective, with particular emphasis on their significance in fostering students' critical thinking skills and competencies in information selection and evaluation.

**Keywords:** media literacy, virtual tools, primary education, digital competence, critical thinking, information security.

**Introduction.** In today's information-driven society, the development of the education system is directly associated with the transformation of digital technologies and intellectual potential. In particular, the formation of information culture among primary school students is of strategic importance, as this stage represents a critical period in which a child's cognitive processes, worldview, and attitude toward fundamental knowledge are formed.

One of the prominent Western scholars in media literacy studies, W. James Potter, states that: "Media literacy is not merely the consumption of information, but the ability to analyze, evaluate, and engage in conscious interaction with media messages." Similarly, S. Papert, within the framework of constructionism theory, substantiated that the development of children's thinking through digital tools contributes to their future intellectual independence.

Currently, primary school students are exposed to an unlimited flow of information through the internet, mobile applications, and various digital platforms. However, not all of this information is verified or reliable. Therefore, the need to develop students' skills in information selection, critical analysis, and evaluation is increasingly becoming essential.

In the pedagogical science of Uzbekistan, this issue is also considered one of the most relevant research directions. For instance, the educator M. Toxtakhodjayeva regards the development of students' information competence within the process of educational modernization as one of the priority tasks of modern teaching. Professor N. Muslimov, Doctor of Pedagogical Sciences, emphasizes that teaching the younger



generation to effectively use information and communication technologies is “the foundation for forming an individual’s information culture.”

This, media literacy is becoming an integral component of modern education. It contributes to the development of students’ ability to consciously perceive information, critically analyze it, and use it creatively and safely. This article examines the methodological foundations and innovative technologies for developing these competencies among primary school students.

**Research methodology.** The rapid transformation of today’s information society necessitates a comprehensive reconsideration of all components of the educational process in accordance with the requirements of digital didactics. In particular, the formation of information culture among primary school students requires the purposeful clarification of lesson objectives, learning content, and communication strategies. From this perspective, the methodology of the present study is based on contemporary scientific approaches, including the competence-based approach, integrative approach, and principles of digital pedagogy.

The competence-based approach focuses on developing students’ abilities to search for, select, analyze, and effectively use information. Recent studies indicate that the development of media literacy positively influences not only students’ academic achievement but also their critical thinking skills and information security awareness [1]. Therefore, this study prioritizes interactive methods that ensure active student engagement through the use of digital tools.

A constructivist approach was also applied as a methodological foundation, according to which learners construct knowledge actively through learning activities rather than receiving it in a ready-made form. Contemporary scientific sources emphasize that the development of reflective thinking and independent decision-making skills at the primary education stage is one of the key factors in forming media literacy competence [2].

The study employed systematic-analytical, comparative, and experimental methods. The systematic-analytical method was used to clarify the theoretical foundations and structural components of media literacy. Comparative analysis was applied to examine advanced educational practices in developed countries and adapt them to the national education system [3]. During the pedagogical experiment, the developed methodological model was tested in practice, and its effectiveness was evaluated.

In addition, empirical methods such as surveys, tests, observations, and diagnostic assessment tools were used in the research process. The obtained data were processed using mathematical and statistical methods, and the dynamics of



media literacy development indicators were analyzed. The results demonstrate that lessons organized on the basis of digital didactics significantly enhance students' information-handling competencies [4].

**Literature review.** The concept of media literacy (from Latin *media* – means, *literatus* – educated) is currently regarded as a core component of pedagogical innovation. Research indicates that when students are not able to consciously analyze information, they become vulnerable to various forms of informational manipulation, which poses significant risks in the digital information environment.

In contemporary pedagogical studies, the professional activity of teachers in a digital learning environment is defined by competencies related to the selection, verification, and pedagogically appropriate interpretation of information. In this regard, Andreas Schleicher emphasizes that in modern education systems, the teacher should act not as a “transmitter of ready-made knowledge,” but as a guide who leads learners toward critical evaluation and conscious use of information [4, p. 102].

Furthermore, recent studies highlight that the development of skills for identifying false and manipulative information at the primary education stage is directly dependent on the teacher's methodological approach and pedagogical competence [5, p. 74].

In the context of developing information culture in primary education, the following types of teacher activity can be distinguished:

1. **Effective-creative type:** Flexible integration of digital tools in accordance with learning objectives.
2. **Stress-transformational type:** Mobilization of personal and professional resources under conditions of intensive information flow.
3. **Inadequate type:** Rejection of new media technologies or their incorrect application [2, p. 268].

Among Uzbek scholars, N. Muslimov defines teacher professional competence as the “integration of information culture and methodological wisdom.” This approach is particularly significant in the formation of critical attitudes toward information among younger school-aged children, where the teacher's role is crucial in shaping learners' analytical thinking and media awareness [5, p. 88].

**Analysis and results.** Pedagogical observations indicate that the main mechanism for activating media literacy skills is information-based reflection. In the context of primary education, media culture assessment criteria were defined as follows:



**Table 1. Assessment Criteria for Media Literacy of Primary School Students**

Criteria	Indicators
Cognitive	Ability to distinguish the credibility of information sources (fact vs. fake).
Technological	Ability to use educational platforms and AI-based tools.
Axiological	Compliance with information ethics and digital safety rules.
Creative	Ability to interpret and create media texts independently.

These criteria reflect a complex and staged development process of media literacy formation among primary school students. The cognitive criterion assesses learners' ability to differentiate between factual and false information, analyze sources, and draw evidence-based conclusions. This stage represents the foundational level of media literacy development.

The technological criterion evaluates students' ability to effectively use digital learning platforms, interactive applications, and artificial intelligence-based tools. This indicator reflects learners' adaptability to the digital environment and their level of technological competence.

The axiological criterion characterizes students' adherence to information ethics, digital safety principles, and responsible behavior in the online environment. This dimension highlights the social and educational aspects of media literacy development.

The creative criterion is aimed at assessing students' ability to independently interpret, transform, and produce media texts. This indicator plays a key role in developing learners' creative thinking and communicative competence.

Overall, these criteria are interrelated and form an integrated diagnostic model for the systematic development and assessment of media literacy in primary education.

**Conclusion.** In conclusion, it should be emphasized that media literacy is not merely a set of technical skills, but a comprehensive survival and effective functioning strategy of an individual in the information-driven world. It enables learners to consciously receive, critically analyze, evaluate, and safely use information in various digital environments.



The formation of this culture among primary school students requires the implementation of the following key pedagogical directions:

1. Continuous improvement of teachers' media competence in accordance with modern requirements of digital pedagogy;
2. Systematic integration of digital analysis tasks and interactive activities into the teaching and learning process;
3. Development of students' "critical immunity" toward information through the formation of skills for identifying, questioning, and resisting unreliable or manipulative content.

These directions serve as an important scientific and practical foundation for the consistent development of media literacy in primary education and for ensuring students' successful adaptation to the digital society.

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