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ANALYSIS OF EFFECTIVENESS FACTORS IN THE DEVELOPMENT OF CIVIC COMPETENCIES IN THE EDUCATIONAL PROCESS

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Annotation. *This article examines the integration of psychological and pedagogical mechanisms into the educational process to enhance students' civic potential. Factors influencing the effectiveness of a didactic model for developing active citizenship competencies are identified. Diagnostic methods for assessing civic potential in an innovative learning environment are proposed.*

Key words: *integration, education, lesson, lesson effectiveness, citizenship, competencies, factors of an effective lesson.*

INTRODUCTION

Fostering a sense of civic responsibility is a priority in school education today [1]. The younger generation, especially sensitive to changes in the social, political, and economic spheres, needs a special approach that strengthens their spiritual foundation and fills the intellectual vacuum with ideas aimed at fostering a constructive attitude toward society.

This is why analyzing the processes occurring in classroom activities related to the development of a sense of patriotism and civic competencies in students is so important. A lesson is a powerful tool for developing spirituality and educating a child, and the functional outcome of a future student's development as a citizen depends on the accuracy of the analysis of its effectiveness factors, the interaction of educational and upbringing mechanisms, and the interactive approach.

Methods. Analysis of lesson effectiveness factors consists of several stages. The stages are characterized by consistency: no element of the process can deviate from the structured system. The stages of analysis are briefly presented in Figure 1.

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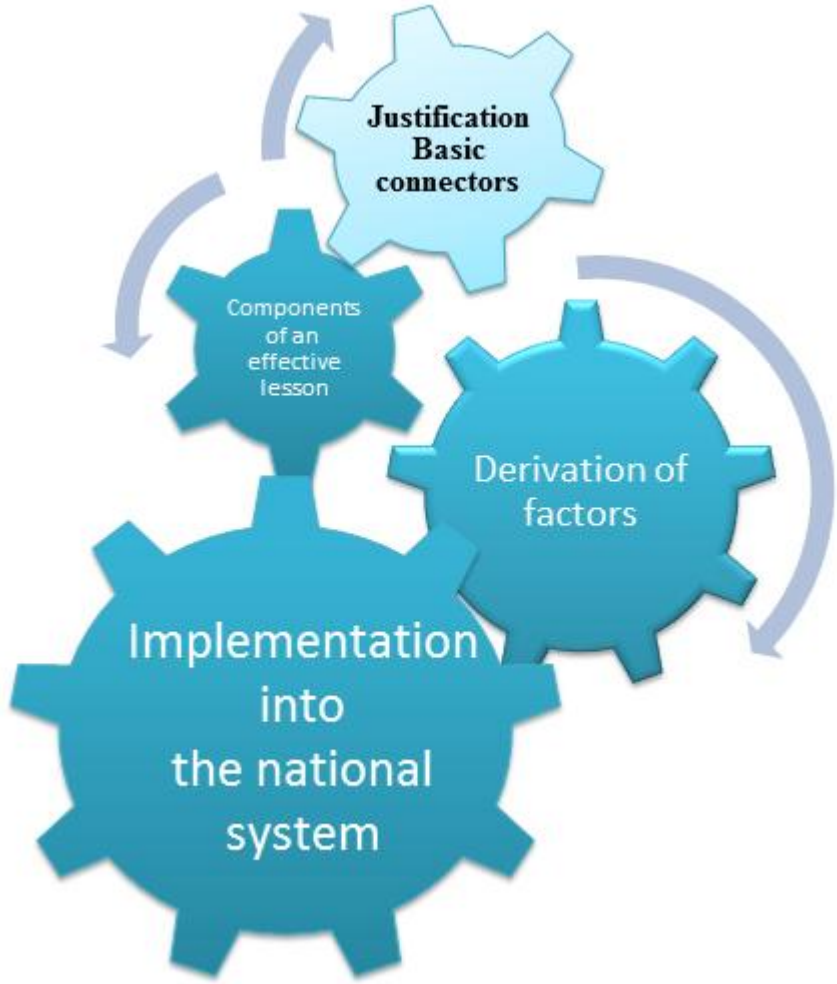

Figure 1. Defining the stages of an effective lesson

The stages include:

a) defining rationales (basic connectors);

b) defining the components of lesson effectiveness;

c) implementing the definition into the national system;

d) directly analyzing the factors.

Let's consider each stage separately and define its functional features.

The definition of the rationale for the factors of an effective lesson is a four-component structural framework, each element of which is a substantiated source of the conditions for a high-quality educational process.

This framework is based on:

a) the statements of great people (modern ones, reflected in documents and regulations, and ancestors, reflected in historical sources);

b) the study of foreign experience in advanced countries and modern educational trends;

c) a focus on the national system.

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The first component is shown in Figure 2.

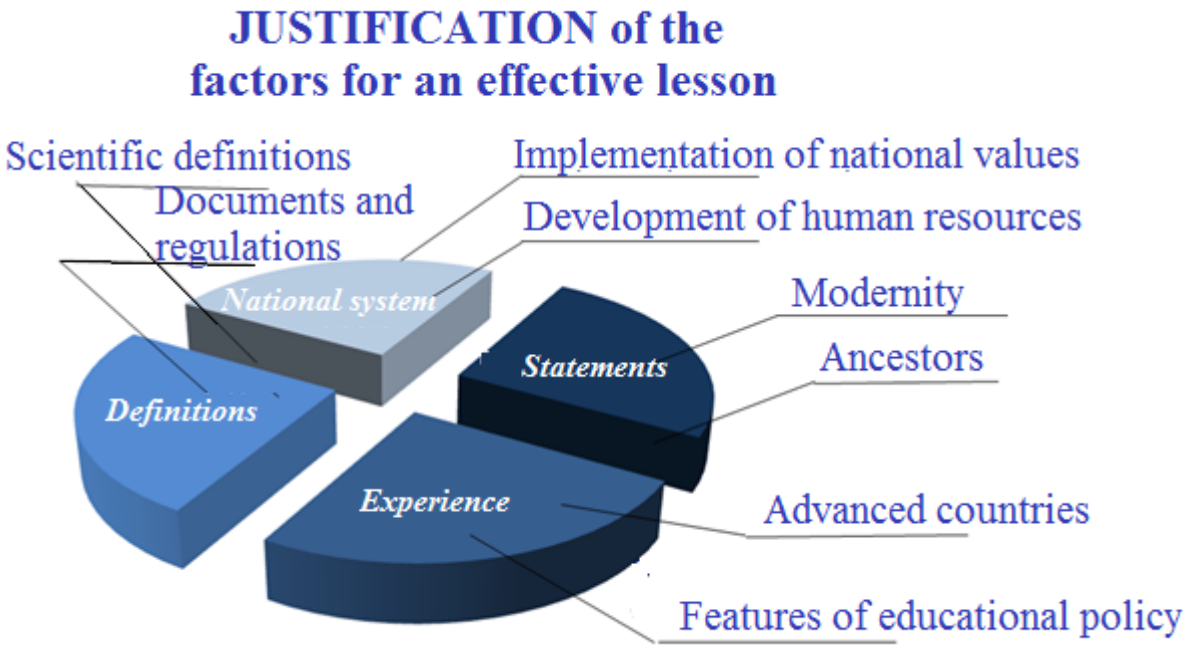

Figure 2. Structural components of the justification of factors
of an effective lesson

Let's consider each area separately.

a) Statements by great figures about effective ways to develop education, using the following examples as examples, confirm that there are priority areas for pedagogical activity: improving methodology, continuous education, and the implementation and application of knowledge.

President Shavkat Mirziyoyev's statement on education, which emphasizes changing methodological processes, sets the goal of achieving leadership positions among countries participating in international assessment systems by 2030. "If teaching methods in schools are not changed, neither the quality of education, nor the content, nor the environment will change" [2]. Factors that positively influence the effectiveness of this outcome include programs that incorporate innovative educational goals, including the 4C model.

Our ancestors' sayings about education confirm that learning and upbringing are closely linked. Thus, Abdullah Avloni notes, "For us, upbringing is a matter of life and death, a matter of salvation, happiness, or tragedy," while Alisher Navoi said that without practice, theory is worthless: "He who has studied the sciences but has not applied them to practice is like someone who dug a ditch but has not planted a field, or who has planted but has not enjoyed the harvest."

Consequently, the development of civic qualities can be integrated into the educational process. One effective factor in such activities is the improvement of the educational function through an integrative approach.

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b) The experience of advanced countries, as one of the serious justifications for the phased analysis of an effective lesson, is the study of the characteristics of educational policies in foreign countries and the generation of selective modular positions in the domestic education system. Among the countries examined in this study, those with high achievements in the international assessment system were selected: Finland, the United States, South Korea, the United Kingdom, the Russian Federation, and Germany. An analysis of educational approaches in these countries identified the following characteristic features, considered a constant feature of pedagogical activity:

- Competency-based approach
- Science-industry linkage
- Practice-oriented approach
- Flexible planning
- Mobile management
- Integrated approach
- Competent teacher

Each of the listed components is a specific factor in a high-quality, innovative lesson.

c) Existing definitions of an effective lesson contain components whose omission or omission can lead to an incomplete understanding of the educational material. Today, the question "What is an effective lesson?" can be answered by presenting the following system (Figure 3):

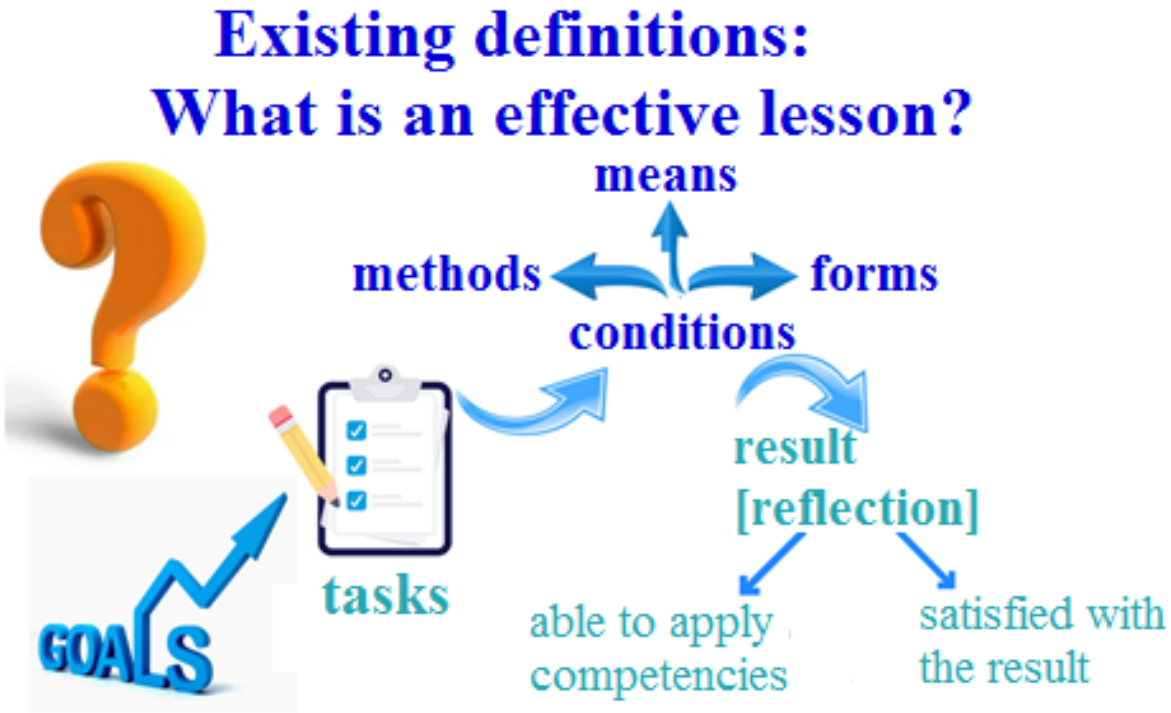

Figure 3. Standard model of an effective lesson

d) Focusing on the national system involves the flexible implementation of national values in the classroom. For the full integration of learning and education,it is necessary to

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select flexible components: numbers are imbued with national flavor, texts on local history, local natural objects, etc.

These assignments can be used as supplementary material in class, as well as for extracurricular activities. Using these assignments in class allows students to engage with moral issues on a daily basis, and allows teachers to save time searching for information aimed at developing logical thinking through studying our country's culture.

Considering the components based on the basic connectors, let's formulate the most comprehensive definition:

An effective lesson is a system of mutual educational and developmental activities between students and teachers, aimed at developing a well-rounded individual. With the components, definition, and rationale in place, we analyze the factors that are implemented in the current educational process.

By systematizing the components, definition, and rationale, we are able to analyze the factors that are implemented in the current educational process.

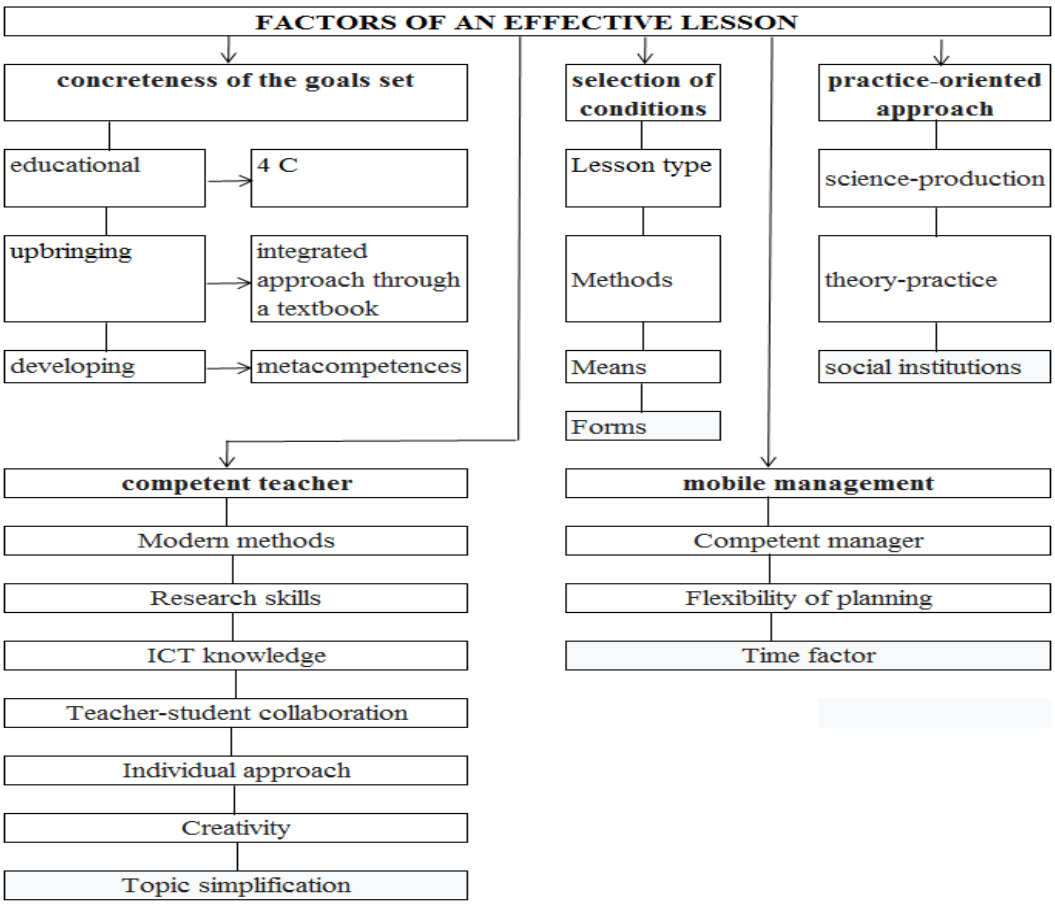

Figure 4. The system of interaction of factors of an effective lesson

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The main factors of an effective lesson include five basic areas: the definition of lesson objectives, the correct choice of lesson conditions, the development of the teacher's pedagogical competencies, the formation of the managerial competencies of the head of the general educational institution, and a practice-oriented approach (Figure 4).

Let's examine each factor in more detail.

a) Lesson Objectives. Each lesson objective set today should be aligned with the development of students' civic competencies. An educational objective alone can achieve this goal. The situation is more complex with educational and developmental objectives. Most teachers acknowledged that implementing educational objectives in lessons, especially those with a specific focus, is difficult. These difficulties are due to a lack of literature on the topic, as well as the inability to devote time to the educational aspect when studying complex topics.

This is why efforts are currently underway to develop integrated materials based on the 4C model, which allows for the incorporation of educational objectives into educational content, such as integrating mathematics with education and using well-known historical and cultural examples to complete math assignments.

Daily addressing the educational aspect of the lesson through the educational objective contributes to the enhancement of students' moral potential and also reveals the meaning of the lesson's developmental objective. Target elements, reflected in regulatory documents related to the state standard for developing students' key and metacompetencies, are separately selected for this objective. These competencies are components of the civic education system, and therefore their development will facilitate the gradual acquisition of civic material as well.

b) Selection of Conditions. Conditions include the methodological content of the lesson: its type, methods, forms, and tools used in the educational process. Naturally, integrating educational content with lesson materials requires a non-standard or innovative approach to selecting conditions.

c) The specification of goals, the selection of conditions, and a practice-oriented approach to teaching depend on the teacher's competence. Over time, various professional competencies have replaced each other. Today, the ideal model of a competent teacher includes the following competencies: the ability to integrate modern methods, an emphasis on research skills, knowledge and application of ICT, support for teacher-student collaboration, an individualized approach, creativity, and the ability to adapt complex topics to the class level.

d) A practice-oriented approach is one of the goals of the state-mandated pedagogical product. Consequently, the following areas are particularly important today: "science-production," "theory-

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practice," and "cooperation with social institutions and higher education institutions."

d) However, the development of none of these areas is imaginable without competent leadership. An analysis of the existing experience of leaders of various general education institutions shows that the effectiveness of their work depends on a multitude of factors, which, to some extent, depend on specific school conditions [3, 4,5].

a) the functional characteristics of the school (public and private, boarding schools, specialized schools, availability of specialized classes, classes with in-depth study of individual subjects, etc.);

b) the development of the school infrastructure (access to various international and domestic educational information resources, automation of the educational process, functioning of sports, cultural, medical, and other structural components, etc.);

c) the student population (number of students in schools and class sizes);

c) the school's geographic location (proximity to scientific, cultural, sports, informational, and other infrastructure facilities);

d) the professional potential of the teaching staff (educational level, qualifications, creativity, and innovation of teachers).

e) the specific focus of the activities of the director himself (if the school director came from among the deputies for spirituality and education, as a rule, the priority direction of his activities is an emphasis on the educational and creative organization of the work of the general educational institution; if he came from among the deputy directors for academic work, the main task of realizing the managerial potential becomes the introduction of innovations into the educational and methodological process).

Each of the above areas is a factor-forming link in the system of integrating training and education in the development of civic competencies, but the educational goal of the lesson, based on the modern 4K model, in our opinion, is considered the most effective way of transmitting educational information through the educational process.

Let's consider the impact of this model on the development of active citizenship competence in students. The 4C model represents a set of methods and approaches for developing four competencies that form the foundation for cultivating a well-rounded modern individual: communication, creativity, critical thinking, and collaboration. All these competencies are developed in the classroom through logical/analytical thinking. This issue is particularly reflected in science subjects, which undoubtedly pose challenges for student development.

Modern textbooks reflect this aspect implicitly and covertly, but by studying teaching methods through the latest approach, teachers can implement educational goals through analytical thinking. Such aspects can be found, for example, in open-ended questions: "There

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were 15 sunny days in January. How many cloudy days were there in January?" From a mathematical perspective, solving this problem requires one element. However, the meaning of the task is determined by its practical application. Second-grade students should already be able to independently guess that if a month is specified, it will have a certain number of days. This practical information is used in the problems.

In today's world, educational goals must be adapted to the lesson material, as this process offers a number of advantages. Specifically, the systematic use of educational content allows for the easy and effortless enhancement of students' civic potential across all lessons. There's no need for the homeroom teacher or administration to allocate separate time for off-site or extracurricular activities: educational development occurs continuously while other subjects are taught.

The application of innovative methods in education, and beyond, implies distinguishing its characteristics from traditional approaches or those that are gradually becoming obsolete and losing their relevance. A method is considered innovative when it is fully implemented by a large number of teachers in a systematic manner, leaves some unanswered questions, but still produces results. The result, in this sense, is seen as increasing children's interest in learning a topic, facilitating the process of understanding complex topics, and saving time (when dealing with large volumes of information or assessing a large number of students).

A survey of teachers revealed that many still consider methods such as cluster, cinquain, brainstorming, Christmas tree, saw, and round table to be modern. However, research shows that these methods are not innovative, as they are used routinely, do not develop analytical thinking, are very specific, and focus primarily on knowledge-based competencies. A typological analysis of the methods suggests that innovative and traditional methods are distinguished by the following characteristics (Table 1) [6].

Table 1. Potential for information perception when using different methods

Innovative methods	Non-innovative methods
Active perception 80% - speak THEMSELVES 90% - do THEMSELVES	Passive perception 10% - read 20% - hear 30% - see 50% - hear and see

Innovative methods include: project method, dilemma, CASE study, debates, SWOT analysis, working with different types of diagrams (Venn, graphs, circles, cycles, etc.), Bloom's taxonomy, prism, Delphi, Phillips 6*6, traffic light, zigzag, heuristic method.

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In addition to modern methods, the effectiveness of a lesson also depends on the technologies used in the learning process. It's important to distinguish between the concepts of "method" and "technology." The goal of technology is to create a product, while the goal of method is to create the conditions for producing that product. Digital technologies are among the most widespread and widely in demand today. Let's take a closer look at their specific features when applied in a modern lesson.

This fact demonstrates that learning activities using information technology have several aspects. The use of digital technologies in the learning process typically involves the teacher and students accessing multimedia systems: information searches, presentations, audio and video materials are just a few examples of technological tools that enrich a standard lesson. Many scientists have proven their effectiveness in studying complex topics, quickly memorizing abstracts and tables, learning a language, and so on.

However, the methodological advantages of digital technologies are not limited to the development of subject-specific skills: their potential for developing core competencies should be considered. Developing active citizenship competencies in primary school is a relevant topic, and therefore, it is necessary to seek ways to use digital technologies as a tool to facilitate students' engagement with cross-cutting themes.

These are expressed in two components: the transformation of the subject component with educational content through QR codes contained in textbooks (which students can use without the teacher's assistance); and direct technological support for the lesson—smart extensions, computer games, and multi-system materials (which the teacher can use when preparing for the lesson, and the student can use with the teacher's assistance).

A second, no less significant, option for implementing digital technologies in the process of developing active citizenship competencies is the diagnostic component.

Civic engagement, being a subject of sensory competence, is difficult to diagnose. Meanwhile, a digital approach to social-sensory phenomena has long been developed. Measuring active citizenship competence is possible. This is facilitated by the conditions—the time component and the participants in the diagnostic process. Since the duration of observation is the most accurate indicator of data, our proposed model for developing active citizenship competence identifies structural components based on the definition of the term "Citizenship." This fact allowed us to identify the most significant indicators of this phenomenon, assigning them the highest benchmark values.

Study results. Observations were conducted in five regions of the republic, covering one academic year.

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For each selected participant, a separate individual observation map of student civic engagement potential was compiled. The materials consisted of various test samples. For self-assessment, situational questions were primarily used, while for the homeroom teacher, assignments requiring precise opinions were used. A distinctive feature of psychological tests is their diversity (combination, continuation, error, selection, etc.).

Graphic testing is the primary testing method due to the child's age-specific characteristics. This type of testing also allows for a simultaneous assessment and individual deciphering. There are also oral and reasoning tests, but these are few in number due to the large number of respondents.

Civic education potential was assessed using the proposed methodology, at the beginning of the experimental work and after the use of integrated samples, to compare actual and incremental levels. Three groups of elementary school students were selected for the experiment: two served as control groups, and the third as the experimental group.

The control groups utilized two methods: traditional and non-traditional, in teaching the subject "Child Development." In the experimental group, elements of child development were active components in integrated lessons. Non-traditional methods were used to hypothesize that an innovative approach to teaching the subject "Child Development" might enhance the target effect, but would not be as effective as integrating elements of child development into other subjects.

The initial assessment yielded primary data on the potential for students' moral development. The following formula was used to determine this potential:

$$Pt = \frac{P1 + P2 + \ldots + Pn}{n} = \frac{\sum n1}{n},$$

where Pt is the average civic competence potential of the control group (with traditional teaching methods),

P1 = the specific value of the civic potential coefficient of one respondent,

n is the number of values (the number of respondents in this group).

Data were calculated similarly for the control group with a non-traditional teaching method (Pn) and the experimental group with integrated assignments (Pi).

As a mechanism for increasing civic potential, educational and methodological packages were proposed for the experimental groups, containing a cross-cutting theme in each lesson directly related to the subject "Education." Also proposed were open lesson plans for this subject, including interactive assignments, creative work, and songs. A total of 489 respondents participated in the experiment: 169 in Pt, 157 in Pn, and 163 in Pi.

The Pt group's materials represented a traditional set of tools for studying the subject "Education" and were aimed at

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developing knowledge competencies. Certainly, new-generation textbooks enable students to develop analytical thinking. Assignments often require students to apply communication skills, which positively impacts the overall potential of primary school students. However, without the introduction of non-traditional methods into the educational process, lessons become boring; the entire class is typically not involved in the dialogue, and the information gained through this method is quickly forgotten.

Unlike the Pt group, the Pn group's material was designed to engage 100% of the students. Lessons offered a variety of content, with varying formats and teaching methods. These lessons were engaging for students because they offered an individualized approach. Most of the lessons were conducted in a group format, with case studies, projects, and role-playing games.

As we can see, elements of integration were introduced into the "Education" lessons through an unconventional methodology: environmental topics were used for case studies, projects involved solving mathematical problems, and role-playing games were directly related to aesthetic subjects. The problem with such lessons is the large time gap: the "Education" program consists of a comprehensive study of moral norms and related phenomena for only one hour per week. Thus, over the course of a year, first-grade students will complete 33 lessons, and second- through fourth-grade students will complete 34 lessons.

The experimental group, Pi, was provided with materials for use not in the "Parenting" subject, but in mathematics lessons. The methodological package consisted of a textbook, teacher's manual, and workbook with assignments integrating the topics of the "Parenting" subject with the "Mathematics" subject. For each lesson, worksheets were created on the main topic, related to the "Parenting" topic studied during a specific period. Thus, first-grade students received 165 worksheets for active learning materials on the "Mathematics" subject, which included two to three assignments on local history, patriotic themes, and so on.

Implementation of the proposed methodology led to the following conclusions:

1. In addition to assessing the development of students' civic competencies, the study also had a positive impact on teachers' attitudes toward lesson planning. As is well known, during lessons, more attention is paid to educational and developmental goals. Educational goals are often overlooked, especially when studying complex subjects. The proposed material encouraged teachers to engage in this area as well.

2. Following the experiment, the growth of competencies identified at the beginning of the study using the proposed formula was analyzed. Observations showed that in the Pt group, students

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mastered the knowledge standards for the subject "Education" over the 34-week period. The Pn group distinguished itself by its ability to interactively find solutions to assigned problems, and its desire to be a morally upright person stood out compared to the previous group. The experimental Pi group demonstrated higher motivation scores in the presence of knowledge and analytical competencies.

3. Determining the civic potential (CP) of schoolchildren was based on long-term observation. The assessment of CP growth was characterized by careful analysis and an individualized approach, as civic engagement is a socially sensitive phenomenon that requires an objective assessment when selecting structural components and measurement tools. The results of respondents' personal cards for specific civic engagement components were summarized, the average value for all components was calculated, and the overall results were also calculated using the summary method: for all experiment participants, the initial average potential was 34%. (34% - Pt, 35% - Pn, 34% - Pi) (Table 2).

Table 2. General results of the primary slice ACC potential

level / groups	high		intermediate		below average		low		total quantity	average percentage
Pt	7	4%	37	22%	90	54%	35	20%	169	34%
Pn	6	4%	35	22%	80	51%	36	23%	157	35%
Pi	7	4%	42	26%	78	48%	36	22%	163	34%

The average percentage was calculated based on a criteria-based assessment grid using the formula specified. The results of the experiment were analyzed in the same manner: each group demonstrated its potential (Table 3).

Table 3. General results of the primary slice ACC potential

level / groups	high		intermediate		below average		low		total quantity	average percentage
Pt	13	7%	52	31%	85	51%	19	11%	169	61%
Pn	39	25%	44	28%	53	34%	21	13%	157	69%
Pi	75	46%	28	17%	43	26%	17	11%	163	81%

As can be seen, civic competencies increased in all groups. However, a significant difference was observed in the experimental group, suggesting an increase in motivational

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components. This suggests that this study opens up opportunities for further exploration of the positive impact of integrative learning activities aimed at enhancing students' moral potential.

The diagnostics led to the following conclusions:

1) the effectiveness of the development of metacompetencies (including active citizenship competence) depends on the quality and quantity of implemented innovative technologies;

2) active citizenship competence is measurable. If all conditions are met, the diagnostics meet statistical standards.

Active citizenship competence can be considered from several perspectives, depending on the purpose of its development. In terms of methodological and diagnostic content, its digital aspect plays a significant role. The ability of a scientist or teacher—a practitioner—to recognize the digital components of this competence opens up vast opportunities for working with it, which undoubtedly influences the enhancement of an individual's spiritual potential.

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