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METHODS OF IMPROVING EDUCATIONAL EFFECTIVENESS THROUGH DIDACTIC GAME-BASED LEARNING IN GRADES 5-7

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ABSTRACT: This article provides a comprehensive theoretical and methodological analysis of improving educational effectiveness through didactic game-based learning in grades 5-7. In contemporary school education, the issue of increasing students' cognitive activity, motivation, independent thinking, communication skills, and readiness to apply knowledge in practice has become one of the most relevant pedagogical problems. This relevance is especially evident in the middle-school stage, because students of grades 5-7 enter a period of active psychological, social, and intellectual transformation. At this age, learners need not only clear explanations and systematic knowledge, but also emotionally engaging, interactive, and activity-oriented forms of instruction. Didactic games, when designed according to educational objectives, curriculum content, age characteristics, and assessment criteria, serve as an effective pedagogical technology for transforming passive learning into active participation. The article examines the pedagogical nature of didactic games, their connection with learner-centered education, and their role in strengthening educational outcomes. Special attention is given to the use of didactic games for developing cognitive activity, logical thinking, subject interest, collaboration, self-control, and reflection among 5th-7th grade students. The study emphasizes that didactic game-based learning should not be understood as entertainment separated from the lesson, but as a purposeful instructional method directed toward mastering, consolidating, and applying knowledge. The analysis shows that the effectiveness of this approach depends on the teacher's methodological competence, the accuracy of game rules, the connection between the game task and the lesson objective, the involvement of all learners, and the organization of final reflection. The article concludes that systematic use of didactic games can significantly improve the quality of lessons, support students with different levels of academic achievement, and create favorable conditions for the development of an active, creative, and socially competent learner.

KEYWORDS: didactic game, game-based learning, educational effectiveness, grades 5-7, cognitive activity, learner motivation, interactive pedagogy, middle-school education, independent thinking, teaching methodology

INTRODUCTION

In the twenty-first century, school education is no longer limited to the transfer of ready-made knowledge from teacher to student. Modern educational systems increasingly require methods that develop students' ability to think independently, analyze information, communicate effectively, solve problems, and apply knowledge in changing life situations. This tendency has made learner-centered and activity-based approaches especially important in general secondary education. In this context, didactic game-based learning is considered one of the most effective ways of increasing educational effectiveness, because it combines cognitive, emotional, communicative, and practical components of learning in one pedagogical process.

The relevance of didactic games is particularly clear in grades 5-7. Students at this stage move from primary school learning habits to more complex subject-based education. They encounter new academic requirements, more abstract concepts, increased homework, and a wider range of teachers

and subjects. At the same time, they experience important psychological changes: the need for communication with peers increases, self-expression becomes stronger, attention may become unstable, and learning motivation often depends on how meaningful and emotionally engaging the lesson appears to them. Therefore, traditional explanation and reproduction-based methods are not always sufficient to maintain stable interest and high academic activity among middle-school students.

Didactic game-based learning responds to these challenges by creating a structured learning situation in which students acquire knowledge through purposeful activity. Unlike ordinary play, a didactic game has a clear educational aim, specific rules, planned content, and an expected learning outcome. It can be used at different stages of a lesson: to introduce a new topic, activate prior knowledge, consolidate concepts, organize repetition, check understanding, or encourage reflection. When properly organized, it helps students participate actively, overcome fear of making mistakes, cooperate with classmates, and experience the lesson as a meaningful process rather than as a mechanical requirement.

The purpose of this article is to analyze the methods of improving educational effectiveness through didactic game-based learning in grades 5-7 and to substantiate the pedagogical conditions that ensure its successful application. The article is based on the theoretical analysis of pedagogical, psychological, and methodological literature, as well as on the generalization of practical teaching experience related to active learning technologies. The central idea of the study is that didactic games can become a powerful factor in improving educational effectiveness only when they are systematically integrated into the lesson structure and connected with clearly defined learning outcomes.

MAIN PART

The concept of didactic game-based learning is closely related to the broader development of active and interactive pedagogical technologies. In traditional teacher-centered instruction, the main emphasis is often placed on explanation, memorization, and reproduction of information. Although these elements remain necessary, they do not fully ensure the formation of deep understanding, independent thinking, and practical application skills. Didactic games enrich the educational process because they require students to act, make decisions, compare alternatives, discuss ideas, correct mistakes, and reach a result within a certain set of rules. This makes the learning process more dynamic and personally meaningful for students.

A didactic game differs from free play by its purposeful educational orientation. Its structure usually includes a learning objective, a game task, rules, roles or actions, competition or cooperation, feedback, and final evaluation. The educational objective determines what knowledge, skill, or competence should be developed. The game task translates this objective into an activity that is interesting for students. Rules organize students' behavior and prevent chaos. Feedback helps learners understand the correctness of their actions. Final evaluation connects the game result with the academic content of the lesson. If any of these elements is missing, the game may lose its educational value and become only a form of entertainment.

In grades 5-7, didactic games are especially useful because they correspond to the developmental characteristics of students. At this age, learners are interested in communication, comparison, movement, competition, role performance, and group activity. They also need tasks that allow them to demonstrate their knowledge in front of peers and receive recognition. Didactic games satisfy these psychological needs while directing them toward educational goals. For example, games such as "Find the Error," "Question Ring," "Concept Chain," "Role-Based Situation," "Intellectual Relay," and "Who Finds It Faster?" can be adapted to different subjects

and different levels of student preparedness. These games activate attention, memory, logical reasoning, and speech activity.

One of the most important effects of didactic game-based learning is the development of cognitive activity. Cognitive activity refers to the student's readiness to ask questions, search for answers, analyze information, solve tasks, and participate consciously in the learning process. In a game situation, the student does not remain a passive listener. He or she must observe, compare, decide, answer, justify, and correct. The need to win, complete a task, help a group, or defend an answer creates internal motivation. As a result, even students who are usually silent or less confident may become more active, because the game environment reduces psychological tension and makes participation more natural.

Didactic games also contribute to the development of independent thinking. Many game tasks require learners to choose a strategy, identify a mistake, classify information, formulate a question, or explain a concept in their own words. Such activities move students beyond mechanical memorization. For instance, in a "Find the Error" game, students analyze a text, formula, diagram, or statement and identify inaccuracies. This develops critical thinking and the ability to justify conclusions. In a "Concept Chain" game, each student continues the previous idea, which strengthens logical connections between concepts. In role-based games, students solve educational problems through dialogue and situational analysis. All these forms encourage meaningful learning.

Another major advantage of didactic games is their influence on learning motivation. Motivation is one of the decisive factors of educational effectiveness, particularly in middle-school education. If students perceive a lesson as monotonous and disconnected from their interests, their participation decreases. Didactic games create emotional involvement and a sense of achievement. The presence of rules, goals, time limits, group support, and visible results encourages students to concentrate. However, motivation should not be reduced only to competition. Cooperative games are equally important because they develop mutual assistance, responsibility, and respect for classmates. Therefore, a balanced combination of competitive and cooperative game forms is recommended in grades 5-7.

The effectiveness of didactic games depends largely on the teacher's methodological preparation. A teacher must select a game not because it seems interesting, but because it corresponds to the topic, the learning objective, the students' age, and the planned result. Before the lesson, the teacher should define what will be taught or reinforced through the game, how much time will be allocated, how students will be divided into groups, what rules will be explained, and how the results will be assessed. During the game, the teacher acts as an organizer, facilitator, observer, and evaluator. After the game, the teacher must summarize the educational meaning of the activity and connect it with the main content of the lesson.

It is also important to ensure that all students are involved in the game. In some lessons, only the most active students may dominate the process, while others remain observers. This reduces the pedagogical value of the method. To avoid this, the teacher should distribute roles, prepare differentiated tasks, encourage group responsibility, and use assessment criteria that value not only the correct answer but also participation, reasoning, cooperation, and creativity. Differentiation is particularly necessary in grades 5-7 because students may differ significantly in academic achievement, self-confidence, language skills, and speed of thinking. Didactic games can support weaker learners if tasks are structured from simple to complex and if the group environment is psychologically safe.

Assessment in didactic game-based learning should be clear and educationally meaningful. It is not enough to announce the winner of the game. The teacher should evaluate how students

applied knowledge, how they explained their answers, how they cooperated, and what difficulties appeared during the activity. Formative assessment is very suitable for this purpose. It allows the teacher to observe students' thinking process and provide immediate feedback. Rubrics, observation sheets, peer assessment, and self-reflection questions can be used after the game. For example, students may answer questions such as: What did I learn? Which task was difficult? How did our group solve the problem? What should I improve next time? Such reflection strengthens conscious learning.

The use of didactic games also creates opportunities for integrating digital tools into education. Digital quizzes, interactive boards, online matching tasks, virtual cards, and educational platforms can make game-based learning more flexible and attractive. However, digitalization should not replace pedagogical purpose. Technology is effective only when it supports the learning objective and increases student participation. In schools with limited digital resources, simple paper-based cards, diagrams, question envelopes, role cards, and blackboard games can be equally effective. Therefore, the main factor is not the complexity of the tool, but the methodological quality of the game design.

From a methodological perspective, didactic games may be used in several directions. First, they can be used to activate prior knowledge at the beginning of the lesson. Short games with questions or associations help students recall previously learned material. Second, they can support the explanation of new material by creating a problem situation or role-based context. Third, they can consolidate knowledge through practice, repetition, and application. Fourth, they can be used for assessment and reflection. This flexibility makes didactic games suitable for different subjects and lesson stages. Nevertheless, they should be applied systematically rather than randomly. Random use may produce temporary interest, while systematic use contributes to stable educational effectiveness.

Didactic game-based learning can also be connected with competency-based education. In modern pedagogy, educational effectiveness is not measured only by the amount of information remembered by students, but by their ability to use knowledge in communication, problem-solving, creative work, and social interaction. Didactic games naturally support this direction because they require students to transform theoretical information into action. For example, when students explain a rule to a group, defend an answer, classify examples, or construct a short dialogue based on a learning problem, they demonstrate not only knowledge but also communicative, cognitive, and social competencies. This is especially important for grades 5-7, where the foundation of further academic independence is formed.

The subject content of didactic games may vary depending on the discipline. In language lessons, games can develop vocabulary, grammar, reading comprehension, and speech fluency. In mathematics, they can strengthen calculation, logical sequence, problem analysis, and the ability to choose an appropriate solution method. In natural science, they can be used for classifying objects, explaining processes, modeling cause-and-effect relationships, and interpreting diagrams. In history or social science, role-based games can help students understand social processes, historical events, and moral choices. Thus, the same pedagogical technology can be adapted to different subjects while preserving its main function: increasing active learning through structured participation.

However, the use of didactic games also requires pedagogical caution. If the teacher pays attention only to external excitement, the lesson may lose academic depth. If the rules are too complex, students may focus on the procedure rather than on the content. If competition becomes excessive, weaker students may feel discouraged. Therefore, the teacher must maintain a balance between emotional engagement and educational seriousness. The best didactic games are those in

which the student cannot succeed without understanding the topic. In other words, the game result should depend on knowledge, reasoning, cooperation, and correct application of the studied material.

A separate methodological issue is the duration of didactic games. In grades 5-7, short and well-planned games are often more effective than long activities that occupy the entire lesson without sufficient analysis. A five-minute game can successfully activate previous knowledge, while a ten- or fifteen-minute game can consolidate a new topic. Larger role-based or project-like games may be used when the topic requires deeper discussion. In all cases, the teacher should reserve time for explanation before the game and reflection after it. Without reflection, students may remember the emotional side of the game but fail to understand its academic meaning.

The practical value of didactic game-based learning is also connected with classroom management. Properly organized games help create a positive psychological environment, reduce monotony, and strengthen teacher-student interaction. Students begin to perceive the teacher not only as a controller but also as a guide who organizes meaningful learning situations. This improves the emotional climate of the classroom and can positively influence discipline. When learners are engaged in a clear and interesting task, the probability of passive behavior and distraction decreases. Thus, didactic games may serve not only educational but also organizational and motivational functions in the lesson.

The pedagogical conditions for successful didactic game-based learning include the clarity of objectives, connection with curriculum content, age appropriateness, inclusiveness, time management, discipline, feedback, and reflection. The game must be understandable to students and should not overload the lesson with unnecessary complexity. Rules should be explained briefly and clearly. The task should be challenging enough to stimulate thinking, but not so difficult that students lose confidence. The teacher should maintain a balance between freedom and order. The emotional atmosphere should be positive, but academic discipline must remain. When these conditions are met, didactic games become a powerful instrument for improving lesson quality.

The analysis demonstrates that didactic game-based learning has a multidimensional effect on educational effectiveness. It increases cognitive activity, strengthens motivation, improves communication, supports collaboration, develops logical and creative thinking, and helps students apply knowledge in practical situations. It also allows teachers to observe students' individual characteristics more clearly. In a game situation, students reveal not only what they know but also how they think, communicate, react to difficulty, and cooperate with others. This provides valuable diagnostic information for the teacher and helps organize further instruction more effectively.

CONCLUSION

Didactic game-based learning is an effective pedagogical approach for improving educational effectiveness in grades 5-7. The analysis shows that didactic games correspond to the psychological and cognitive characteristics of middle-school students and create favorable conditions for active participation, independent thinking, cooperation, and meaningful knowledge acquisition. Unlike purely reproductive methods, didactic games involve learners in purposeful activity and transform the lesson into a process of discovery, communication, and practical application. The effectiveness of this approach depends on the teacher's ability to design games according to educational objectives, organize clear rules, involve all students, provide feedback, and conduct final reflection. Didactic games should therefore be considered not as occasional entertainment, but as a scientifically grounded instructional technology that supports the development of cognitive activity and improves the quality of education. For the dissertation topic related to the analysis of educational effectiveness based on didactic games in grades 5-7, this approach provides a strong

theoretical and methodological foundation. Further research may focus on experimental verification of didactic game models in specific subjects, the development of assessment criteria, and the comparison of traditional and game-based lesson outcomes in real school conditions.

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