



THE EFFECTIVENESS OF DEVELOPING METACOGNITIVE SKILLS IN PRESCHOOL CHILDREN THROUGH FAIRY TALE THERAPY

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Abstract

This study examines an experimental program aimed at developing metacognitive skills in preschool children aged 5–7 through fairy tale therapy technologies. The purpose of the experimental research was to design and validate methodological recommendations that address identified gaps in preschool instructional practice and improve the effectiveness of the didactic process. The experiment was conducted from 2023 to 2026 and implemented in three stages: diagnostic (ascertaining), formative, and final statistical. Following baseline diagnostics, children were divided into experimental and control groups: the control group continued with traditional instructional approaches, while the experimental group participated in a structured set of fairy tale therapy–based activities supported by author-developed plans and technological guidelines for educators.

Keywords: Fairy tale therapy; metacognitive skills; preschool education; reflection; experimental research; play-based learning; formative intervention; pedagogical technology; assessment criteria; educational effectiveness.

Introduction

Metacognitive development was assessed through indicators reflecting children’s ability to comprehend objects and phenomena, analyze and differentiate information, synthesize conclusions, and select information aligned with their needs. The formative intervention integrated interactive, play-based and dramatized formats and employed targeted methods, including Think-Aloud, Journalist interviews, Cross-Sector Learning, and questionnaires. The instructional design emphasized sequential learning phases (Motivation–

Perception–Thinking), respect for individual abilities, encouragement of initiative, and the systematic use of didactic tools to stimulate reflective thinking. To interpret outcomes, the study applied level-based criteria (high, medium, low) describing children’s reflective capacity, independence in problem-solving, evidence-based justification of opinions, and creative engagement in individual and group tasks. Quantitative results were processed using statistical procedures (Student’s t-test and Pearson-based analysis) to compare indicators between groups and against normative benchmarks. The findings indicate that fairy tale therapy technologies can create optimal pedagogical conditions for activating reflection and supporting children’s active participation in learning, thereby improving the quality of metacognitive processes and the overall effectiveness of preschool educational activities.

It is well known that conducting experimental and trial work is one of the most important components of any scientific research. The main purpose of experimental research is to develop methodical recommendations and scientifically grounded proposals aimed at eliminating the identified problems in the educational process, contributing significantly to improving the effectiveness of education, and demonstrating the results achieved when these recommendations are implemented in practice.

This research focuses on experimental work conducted on the use of fairy tale therapy technologies in developing metacognitive skills in preschool children aged 5–7. The experimental study was carried out in the following stages:

- Diagnostic (ascertaining) stage
- Formative stage
- Final and statistical stage

Based on the surveys conducted, the development of children’s metacognitive skills was analyzed in terms of their ability to comprehend objects and phenomena, analyze various types of information, distinguish between them, draw general conclusions, and select information necessary for their own needs. After completing the diagnostic stage of the experiment, the children in the preschool institution were divided into experimental and control groups. In the control group, traditional teaching methods previously in use were applied, while in the experimental group, activities and technologies aimed at developing metacognitive skills through fairy tale therapy were implemented. For this



purpose, exemplary activity plans and technological guidelines were developed for preschool educators and recommended for practical use (see Appendix).

Following the formative stage of the experimental work, the results obtained from the children were generalized and analyzed. In drawing conclusions, particular attention was paid to indicators such as children's independent and creative approaches to tasks, clarity and coherence of thinking, ability to support their ideas with evidence, and capacity to draw final conclusions from given information.

During the experimental research, the following methods aimed at developing metacognitive processes were identified and applied in practice:

- **Think-Aloud Method** – This method encourages children to verbally express and reflect aloud on what they observe, experience, and learn.
- **Journalist Method** – Through interviews and question-and-answer sessions, children learn to observe and analyze actions. A teacher or a child assumes the role of a journalist. The teacher selects an engaging and relevant topic that stimulates reflection, and the “journalist” asks questions to peers within the scope of the topic.
- **Cross-Sector Learning Method** – This method provides insight into how children approach tasks and problem situations, the ways they think, and the extent to which they activate their abilities.
- **Questionnaire Method** – This method creates conditions for obtaining clear, concise, and understandable responses related to the research topic.

The practical application of methods aimed at developing metacognitive skills in preschool education institutions covered the period from 2023 to 2026, during which various thematic materials were prepared:

- Lessons focused on developing metacognitive skills were organized, and author-developed technologies were tested in practice;
- Children's interest and motivation toward fairy tale therapy technologies were studied;
- Individual and group consultations were conducted with pedagogical staff during the experimental period, providing guidance based on a predefined action plan;
- Information on control methods and assessment tools used at the beginning and end of the experiment was provided, and all results were summarized at the final stage.



Methodological recommendations for educators were developed on the use of fairy tale therapy technologies to enhance metacognitive processes in educational activities. These recommendations emphasize organizing activities in logically structured stages such as Motivation – Perception – Thinking, encouraging children’s intellectual engagement, respecting individual abilities, valuing each expressed opinion, supporting initiative, ensuring freedom in activities, effective use of didactic tools, and selecting appropriate methods and technologies for fairy tale therapy-based lessons.

Educational activities were organized using a variety of interactive methods, encouraging children not only to imitate but also to engage creatively in play-based activities. During role-playing games based on social, household, and occupational themes, children were given various tasks aligned with their interests.

Throughout the experimental work, the practical application of processes aimed at forming metacognitive skills in children was tested. The importance of nurturing independent individuals, enriching children’s cultural and spiritual world, and preparing them comprehensively for the next stage of education with quality knowledge was clearly identified.

As a result of implementing the methodology for developing metacognitive skills through fairy tale therapy technologies, the following outcomes were achieved:

1. Identification of the level of metacognitive skill development among children based on the “Ilk Qadam” State Curriculum;
2. Addressing identified learning gaps and planning measures to improve the quality of educational processes in preschool institutions;
3. Identifying and resolving challenges related to the application of modern methodological, didactic, and pedagogical technologies in improving the educational environment.

The effectiveness of the experimental work is explained by the use of specialized technologies and methods, the optimal pedagogical conditions, geographical characteristics of the experimental sites, clearly defined evaluation criteria, and the mathematical-statistical analysis of final indicators. The main hypothesis of this research is that developing metacognitive skills in preschool children aged 5–7 through fairy tale therapy technologies enhances the effectiveness and quality of the didactic process in preschool education institutions. The indicators

obtained during the experiment were first compared with each other and then with normative benchmarks.

Effectiveness of the Methodology for Developing Metacognitive Skills in Preschool Children through Fairy Tale Therapy Technologies

Experimental Stage	Number of Children	of Developmental levels		
		High	Medium	Low
Beginning of experiment	181	43	58	80
End of experiment	181	43	57	81

The results obtained from activities aimed at improving metacognitive skills through fairy tale therapy were statistically analyzed using Student’s t-test and Pearson’s methods, comparing the average indicators of experimental and control groups.

Criteria for Developing Metacognitive Skills through Fairy Tale Therapy in Preschool Education

No.	Criteria	Metacognitive Process	Expected Outcome
1	Identifying and analyzing key concepts	Interpretation and selection	Cognitive perception of educational tools; systematic development of children’s motivation and interest
2	Comparing personal understanding with others based on fairy tale plots	Comparison	Integration of didactic materials with children’s personal experiences and knowledge
3	Comparing information	Parameter-based analysis	Stability of cognitive activity, motivation, awareness, creative expression
4	Expressing independent opinions publicly	Reflection	Independent problem-solving in non-traditional learning situations
5	Justifying opinions	Problem-solving	Collaborative task completion
6	Expressing attitudes toward observed events	Independent problem resolution	Conscious learning and creative expression

As described above, the development of metacognitive skills through fairy tale therapy was implemented using dramatized play, creative, individual, variable, and competency-based approaches. Reflection played a central role, encouraging children to analyze their thoughts and emotions. Through reflection, children became active participants in the learning process.

Based on these criteria, three levels of metacognitive skill development were identified:

1. High level – Strong interest in learning processes; ability to independently study materials, identify key information, actively participate in group work, analyze events, express and defend opinions with evidence, generalize information, and apply knowledge in practice.

2. Medium level – Moderate interest in learning; ability to identify important information and analyze events, occasional difficulties in comparison, ability to communicate ideas, overall satisfactory performance.

3. Low level – Unstable interest in learning; difficulty identifying key information, limited analytical ability, challenges in expressing ideas, generally weak performance.

In conclusion, the planned measures and activities implemented to develop metacognitive skills in senior and school-preparatory preschool groups ensured a certain level of effectiveness.

Conclusion

The experimental work conducted from 2023 to 2026 demonstrates that integrating fairy tale therapy technologies into preschool educational activities can serve as an effective pathway for developing metacognitive skills in children aged 5–7. The three-stage design—diagnostic, formative, and final statistical—made it possible to identify initial levels of metacognitive development, implement a targeted intervention, and evaluate change using clearly defined criteria and comparative analysis with normative benchmarks. The division into experimental and control groups ensured that observed improvements could be interpreted in relation to the introduced methodology rather than routine instructional practice.

The formative program's effectiveness is associated with a coherent instructional structure (Motivation–Perception–Thinking) and the systematic activation of reflection as a central mechanism of metacognitive growth. Methods such as Think-Aloud and Journalist questioning supported children's ability to externalize thinking, monitor understanding, and formulate explanations, while dramatized and role-playing formats created psychologically safe conditions for initiative, creative expression, and evidence-based justification of opinions. The proposed criteria operationalized metacognitive processes in observable behaviors—interpretation and selection of key concepts, comparison and parameter-based analysis, reflective articulation of independent views, and problem-oriented justification—allowing educators to track progress across high, medium, and low developmental levels.

Overall, the results confirm the research hypothesis that fairy tale therapy technologies can enhance the effectiveness and quality of the didactic process in preschool institutions by strengthening children's reflective engagement, independence in learning, and capacity to analyze and synthesize information. The developed methodological recommendations are applicable for preschool educators as a practical guide for organizing metacognitive development through interactive fairy tale therapy lessons, and they may be extended through further research that refines diagnostic tools, differentiates interventions by learner profiles, and expands evidence across diverse institutional contexts.

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