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Play activity as a means of developing cognitive activity in preschool children

Abstract. The study aimed to determine the comparative effectiveness of different types of play activity in developing cognitive activity among preschool children. The study was conducted as a quasi-experimental empirical investigation using pedagogical observation, a formative experiment and comparative analysis. The sample comprised 90 children aged 5-6 years, divided into three groups according to the type of play activity and taught under a single methodological protocol. The findings showed that cognitive activity has an integrated structure, with interest predominating (57.8%) and with insufficient expression of independence (18.9%) and initiative (23.3%) at the initial stage. In the didactic games group, an increase was recorded in concentration (to 56.7%) and independence (to 43.3%), indicating a stronger ability among children to maintain focus on a task and complete an action without external support. In role-play games, an increase was observed in questioning activity (to 53.3%) and initiative (to 50.0%), accompanied by a shift towards the independent development of play-based interaction. In the physical games group, the changes were limited and mainly concerned general involvement, without a significant effect on the structural components of cognitive activity. The comparative analysis showed a higher proportion of children with a high level of cognitive activity in the didactic games group (46.7%) and the role-play group (43.3%) than in the physical games group (30.0%). The practical significance of the study lies in the possibility of using the findings to select play-based forms of activity in preschool education institutions: didactic games for developing concentration and independence, role-play games for strengthening initiative and questioning activity, and physical and free-play activities for maintaining children's general involvement

Keywords: interest; initiative; concentration; independence; interaction; dynamics; organisation

INTRODUCTION

The relevance of the study is determined by the need in preschool education for pedagogical tools that stimulate children's active cognition, rather than merely the assimilation of ready-made information. In preschool age, children develop an interest in new things, the ability to ask questions, concentrate on a task and search for solutions independently. The development of cognitive activity, therefore, requires specially organised activities that

correspond to children's age-related capabilities. Play activity is one of the most natural means of such development, as it combines cognitive content with a form of action accessible to preschool children. Through play, children show initiative, interact with peers, make decisions and test different ways of completing tasks. The research problem lies in the fact that, in preschool education practice, play is often used in a generalised way, without a clear

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distinction between its types and pedagogical outcomes. In this context, it is important to determine how didactic, role-play, and physical/free-play activities influence individual components of preschool children's cognitive activity.

Studies of the cognitive activity of older preschool children have established its multicomponent structure, in which interest, initiative and independence play a key role. In the study by T. Ponomarenko & O. Kuzina (2023), the cognitive activity of older preschool children was described as a multicomponent formation, with interest, initiative and independence identified as its central elements. The study showed that these components developed unevenly: a child's interest in a task was not always accompanied by readiness to act independently. In a later study, T. Ponomarenko & O. Kuzina (2025) shifted the focus to the pedagogical conditions for developing cognitive activity. The authors demonstrated that the stability of positive changes depended on the educator's preparedness for purposeful support, through which situational interest developed into more stable cognitive engagement. This line of reasoning was further developed in studies focusing on specific means of activating cognition. In the context of mobile play technologies, N. Bakhmat *et al.* (2025) identified a statistically significant relationship between digital play and children's cognitive development. The most notable changes concerned attention and the speed of information processing; however, the effect on initiative and independence was less pronounced, indicating that different play formats have an uneven impact. A similar conclusion was reached in a study of interactive methods for preparing preschool children for school. H. Vatamaniuk *et al.* (2024) found that combining play with other active forms of work increased the level of material assimilation and supported the development of basic cognitive functions. At the same time, the outcome depended on the degree to which the activity was structured, which again underlined the importance of pedagogical organisation. A separate aspect of this issue was examined through pedagogical support for children living in difficult life circumstances. O. Nehrii *et al.* (2025) showed that play activity performed a stabilising function and helped restore cognitive activity. However, the effectiveness of this influence was determined not by the mere presence of play, but by the coherence of pedagogical actions and the integrity of the supportive environment.

The importance of guiding play was specified in studies devoted to the organisation of play activity. N. Marievych *et al.* (2022) concluded that unguided play did not ensure the stable development of cognitive indicators, whereas pedagogically guided play activity produced a more pronounced result. This made it possible to interpret play as a developmental resource only when its content and methodology were properly organised. The issue of preparing educators for such organisations was further developed in the context of gamification in professional education. T. Koval *et al.* (2024) found that the use of game mechanics in the training of future educators strengthened their ability to organise children's learning activities. The results

indicated a connection between educators' professional skills and the quality of stimulation of preschool children's cognitive activity. The potential of play was expanded in studies in which it was combined with other developmental practices. O. Budnyk *et al.* (2025) demonstrated that the integration of play technologies with art-therapeutic tools enhanced children's cognitive development and emotional involvement. This finding showed that play may be more effective when combined with practices that support emotional state and creative self-expression.

In the digital educational environment, the issue of child development has been examined through the development of soft skills and interaction with the surrounding environment. L. Lokhvytska *et al.* (2025) found that e-learning stimulated the communicative activity and adaptability of six-year-old children. At the same time, its influence on deeper cognitive processes was indirect, indicating the need to combine digital formats with direct play-based interaction. Evidence of the effectiveness of digital play pedagogy was also obtained in a quasi-experimental study of preschool cognitive development. V.J. Clemente-Suárez *et al.* (2024) examined the impact of digital device use on children's cognitive development and showed that the digital environment may affect specific cognitive abilities in different ways. It was also emphasised that the effect depended not only on the use of devices themselves, but also on the nature of digital interaction.

The analysis of these studies showed that the academic literature contains a substantial body of evidence on the role of play activity in children's development. At the same time, the comparative effectiveness of different types of play, as well as their influence on individual components of cognitive activity under the conditions of a standardised pedagogical experiment, remained insufficiently explored. There was not enough evidence to compare didactic, role-play and free-play activities within a single research framework. The study aimed to determine the influence of different types of play activity on the development of cognitive activity in preschool children and to establish their comparative effectiveness.

MATERIALS AND METHODS

The study of preschool children's cognitive activity was conducted as a quasi-experimental empirical investigation of its structure and dynamics under different types of play activity. The methodological model combined theoretical analysis, pedagogical observation, a formative experiment and comparative analysis of the results. The empirical base consisted of preschool education institutions in the cities of Uman, Vinnytsia and Kyiv, selected to cover urban educational environments of different scales and to enable cross-institutional testing of a single methodological protocol (Preschool Educational Institution..., n.d.; Municipal Institution "Preschool...", n.d.; Preschool Education Institution (Nursery..., n.d.). The study involved 90 children aged 5-6 years. The preliminary distribution of children by levels of cognitive activity was carried out using standardised

pedagogical observation sheets, which recorded interest, initiative, questioning activity, concentration and independence on a three-level scale: high, medium and low. In each institution, three subgroups of 10 children were formed. Each subgroup worked with a different type of play activity: didactic games, role-play games, or physical/free-play activities. In total, each type of play activity included

30 children from the three cities. This distribution made it possible to compare the results under the same initial conditions, without moving children between institutions and without overloading the existing age groups. The experiment was implemented according to a single methodological protocol, which ensured the comparability of the results regardless of location (Table 1).

Table 1. Matrix of the single methodological protocol of the study

Protocol component	What was standardised	How it was implemented in all preschool education institutions
Organisation of sessions	Frequency, duration and time of delivery	Three times a week, 25-30 minutes, in the first half of the day
Session structure	Sequence of pedagogical actions	Introductory motivation, explanation of rules, main game and brief concluding discussion
Type of play activity	Assignment of forms of play to groups	Didactic, role-play and physical/free-play activities were not combined within a single experimental condition
Play scenarios	Content and rules of the games	Identical scenarios with uniform instructions for educators were used
Didactic materials	Tools, cards, objects and play sets	Identical or functionally equivalent materials were used
Assessment criteria	Indicators of cognitive activity	Interest, initiative, questioning activity, concentration and independence were assessed
Assessment scale	Levels of indicator manifestation	Three levels were used: high, medium and low
Data recording	Method of collecting results	Standardised pedagogical observation sheets were completed
Educator preparation	Shared understanding of the procedure	Joint instruction was provided before the experiment began
Implementation control	Compliance with the protocol	Selective checks of observation sheets and periodic video recording of sessions were carried out with parental consent

Source: created by the authors

The study was coordinated centrally. Educators who were already working with the relevant age groups and had at least three years of teaching experience took part in the experiment on a voluntary basis. They received instructional and methodological materials in electronic format by email and through a shared cloud repository. The package included a description of the types of games, session scenarios, time parameters, assessment criteria and observation sheets. The didactic sessions included the games “Find the odd one out” (Vseosvita, 2021), “What has changed?” (Vseosvita, 2024a) and “Continue the sequence” (Vseosvita, 2024b). These involved work with cards, object images and tasks requiring comparison, classification, memorisation of changes, identification of patterns and selection of the next element according to a given logic.

Before the formative stage, remote instruction was provided by videoconference. During this session, the procedure for conducting the activities and the rules for recording the results were agreed upon. The experiment was conducted in parallel in all institutions over 8 weeks according to the same schedule: 3 sessions per week, each lasting 25-30 minutes, in the first half of the day. The type of play activity was assigned to a specific group and remained unchanged throughout the formative stage. To ensure equal conditions, identical or functionally similar didactic materials were used, the instructions for the games were reproduced without alteration, and the session structure

was unified, consisting of introductory, main and concluding parts. The results were recorded by educators directly during the sessions using standardised observation sheets. The integral level of cognitive activity was determined according to the ratio of five components: interest, initiative, questioning activity, concentration and independence. The leading dynamics were identified through those indicators in which the largest increase in the proportion of children with a high level was recorded after the formative stage. To increase reliability, one session in each subgroup was randomly selected once a week for video recording, subject to parental consent, and some observation sheets were selected by random sampling for double assessment by another educator or researcher. The completed forms were sent to the research coordinator electronically through a secure cloud repository and duplicated by email. The data obtained from different cities were combined into a single database for subsequent comparative analysis between the groups. The methodological limitations of the study were determined by the sample size ($n=90$), its age homogeneity, reliance on pedagogical observation as the main tool for data recording, and the eight-week duration of the formative stage, which did not include assessment of the long-term effects of play activity.

The ethical organisation of the study complied with national and international regulatory and ethical requirements, including the Order of Ministry of Education and

Science of Ukraine No. 552 (2023), the Law of Ukraine No. 2402-III (2001), the United Nations (1989), the Law of Ukraine No. 2297-VI "On Personal Data Protection" (2010), the British Educational Research Association (2024) and the UNICEF (2021). Compliance with these requirements was ensured by obtaining informed consent from the children's parents or legal representatives, voluntary participation, the right to withdraw at any stage, data confidentiality, the prevention of psychological discomfort, and the delivery of activities in the children's usual educational environment. Video recording was carried out only with separate written parental consent, and all results were processed in aggregated form without identifying the children.

RESULTS

Structural organisation

of preschool children's cognitive activity in play activity

Preschool children's cognitive activity appears as an integral formation that combines interest in the activity, initiative, the ability to ask questions, concentration and independence (da Silva, 2025). These components do not function in isolation; rather, they are interrelated and change depending on the nature of the activity and the conditions in which it is organised. In a play environment, this interaction acquires a particularly dynamic character, since play creates situations of choice, variation in actions and direct child involvement in the process of cognition. At the same time, the expression of individual components is not uniform, which requires clarification of their ratio and initial level of development in children from different groups. This makes it possible to specify the structural characteristics of cognitive activity through its actual manifestations in activity.

Preschool children's cognitive activity is therefore understood as an integrated formation encompassing interest, initiative, questioning activity, concentration and independence. This interpretation defines it not as children's general involvement in an activity, but as a system of observable manifestations through which preschool children's readiness to learn, act, clarify and find solutions independently is expressed. Interest became the initial condition for such activity, as it ensured the child's emotional acceptance of the task and involvement in the play situation. The desire to take part in the game, respond to new content and maintain contact with the educator and peers created the basis for further cognitive action. At the same time, interest was not a sufficient indicator of developed activity, since it could remain a situational response to attractive material. The further development of cognitive activity was associated with initiative, which indicated a shift from emotional involvement to the child's own action. Whereas interest ensured readiness to enter the activity, initiative revealed the preschool child's ability to influence its content: to suggest ways of completing the task, change the course of the game, take on a role or independently choose a way of acting. Through this component, the child's participation ceased to be merely a response to an

adult's instruction. An initiative-taking position, in turn, strengthened questioning activity. Questions arose when the child not only accepted the rules of the game, but also tried to understand them more deeply, clarify a rule, identify a cause or find another way of acting. Questioning activity, therefore, reflected not the number of verbal responses, but the child's orientation towards cognitive clarification of the situation.

For these manifestations not to remain fragmentary, concentration became essential. It ensured the duration and stability of cognitive activity, made it possible to keep attention on the task, avoid interrupting the action because of incidental stimuli and bring it to completion. As a result, initial interest, initiative and questions developed into consistent activity. Independence was the most generalised manifestation of cognitive activity. It combined motivational, cognitive and behavioural components, as it involved the ability to act without constant adult assistance, choose a method of completion, monitor the result and correct mistakes. Independence showed that cognitive activity had moved beyond externally supported participation and had acquired the nature of the child's own activity (Chen & Ding, 2024). The separate definition of the components of cognitive activity made it possible to clarify their content. However, a full understanding of this phenomenon required an explanation of how these components were related to one another in play activity. It was the interaction between interest, initiative, questioning activity, concentration and independence that determined the actual nature of a preschool child's cognitive behaviour.

In the context of play activity, the components of cognitive activity form a functional system in which each element has its own purpose. Interest ensures the child's involvement in the play situation, initiative determines the child's active position, questioning activity directs cognitive exploration, concentration sustains the duration of the activity, and independence indicates the degree to which the activity has been internally accepted. The connection between interest and initiative is conditional. Interest creates a prerequisite for active participation, but it does not always develop into the child's own initiative. If the game remains overly regulated, the child may remain interested but act mainly within the limits of the instruction. In situations involving choice, an open-ended task or role development, interest is more likely to develop into the independent proposal of actions. Questioning activity is most clearly linked to initiative. Questions arise when the child not only perceives the conditions of the game, but also seeks to clarify, change or expand them. In this sense, questions do not perform an auxiliary function, but a cognitive and organisational one: through them, the child builds an independent understanding of the situation and influences the subsequent course of the activity. Concentration supports the implementation of the other components. Without sufficient concentration, interest quickly loses stability, initiative becomes fragmentary, and questions do not develop

into completed action. The most stable manifestations of concentration arise when the play task has a clear purpose, corresponds to the child's capabilities, and, at the same time, contains an element of exploration. Independence depends on the coherence of the preceding components. It is not formed simply by giving the child freedom of action, since it requires motivational involvement, a clear task, sufficient attention and the possibility of choice. In play, independence becomes evident when the child can make decisions within the rules and see the result of their own action. Cognitive activity in play had a systemic organisation, as its development was determined by the coherence of several conditions: the emotional appeal of the play situation, sufficient cognitive complexity, the possibility of choice and the completion of the action. It was the combination of these factors that made it possible to distinguish

the child's situational external involvement from stable cognitive activity, expressed in conscious engagement in play, sustained interest, independent choice of actions and the desire to achieve a result (Maria & Sumantri, 2025). Baseline indicators were recorded using a single-level scale (high, medium and low) based on standardised observation sheets, which ensured the comparability of results across institutions in Uman, Vinnytsia and Kyiv. In each institution, observation was carried out in three subgroups of 10 children, assigned to different types of play activity. The primary data, therefore, reflected not only the general state of the sample but also the comparability of the subgroups before the formative stage began. The initial assessment made it possible to determine the baseline state of preschool children's cognitive activity before the introduction of different types of play activity (Table 2).

Table 2. Initial distribution of children by levels of cognitive activity

Level of cognitive activity	Number of children	Share of the total sample, %
High	18	20.0
Medium	49	54.4
Low	23	25.6
Total	90	100.0

Note: the share of children was calculated as a percentage of the total number of participants (n = 90) for each level of cognitive activity

Source: compiled by the authors

The predominance of the medium level indicated the presence of basic cognitive involvement, although its manifestations were not yet sufficiently stable. For a considerable proportion of the children, activity remained dependent on external adult support, confirming the need for targeted pedagogical influence through play activity. Comparison of baseline

indicators by urban location made it possible to assess whether institutional or regional factors affected the children's initial level of cognitive activity. Since all three types of play activity were represented in each city, this analysis performed a control function and confirmed the validity of subsequent comparison, specifically by type of play (Table 3).

Table 3. Initial distribution of children by levels of cognitive activity across urban locations

City	High level, n (%)	Medium level, n (%)	Low level, n (%)	Total
Uman	6 (20.0)	16 (53.3)	8 (26.7)	30
Vinnytsia	7 (23.3)	15 (50.0)	8 (26.7)	30
Kyiv	5 (16.7)	18 (60.0)	7 (23.3)	30
Total	18 (20.0)	49 (54.4)	23 (25.6)	90

Note: percentages were calculated as the proportion of children at a given level out of the total number of participants in the corresponding urban location. In each city, the sample included three subgroups of 10 children according to the type of play activity

Source: summarised by the authors

The closeness of the values across the three urban locations indicated the absence of marked differences between the children at the initial stage according to institutional affiliation. This comparability of indicators confirmed the consistency of the sample and provided a basis for further analysis of the influence of different types of play activity, as each type was represented in every city. The component-based cross-section offered a more precise explanation of the general distribution of levels. The strongest element of cognitive activity was interest in the activity: more than half of the children demonstrated a high level of interest – 52 children (57.8%). This meant that most preschool children willingly entered the play situation, responded positively to new tasks and maintained emotional

involvement. However, this indicator did not directly translate into initiative: only 21 children (23.3%) independently suggested ways of acting or changed the course of the game, whereas in 28 children (31.1%) this component remained at a low level.

Questioning activity occupied an intermediate position between emotional involvement and independent action. A high level was recorded in 24 children (26.7%), a medium level in 39 children (43.3%) and a low level in 27 children (30.0%). This indicated that questions mainly arose in response to difficulties or the need to clarify rules, but had not yet become a stable form of cognitive exploration. Concentration proved to be more stable: 31 children (34.4%) maintained attention at a high level, 40 children

(44.4%) at a medium level, while 19 children (21.1%) quickly lost concentration. Independence remained the most problematic component. Only 17 children (18.9%) demonstrated a high level, whereas a low level was recorded in 37 children (41.1%). This showed that initial interest in the game did not always develop into the ability to act without adult support, choose a method of completion and control the result of one's own action. The ratio of components clarified the internal structure of cognitive activity at the initial stage. Interest predominated as the leading component, ensuring involvement in the activity; however, it did not develop to the same extent into initiative and independence. Questioning activity and concentration occupied an intermediate position, supporting the cognitive process but not ensuring its completeness. Independence remained the most vulnerable element, limiting the integrity of cognitive activity. At the ascertaining stage, a heterogeneous structure of cognitive activity was recorded, in which the predominance of interest was combined with insufficient expression of independence and initiative. The obtained indicators provided a basis for further analysis of the influence of different types of play activity on the individual components of this formation.

Didactic games as a factor in the development of the cognitive components of cognitive activity

Didactic games are an effective means of influencing the cognitive components of cognitive activity because they combine play motivation with clearly organised activity content (Vahlo *et al.*, 2022). Their specificity lies in the fact that cognitive tasks are presented through a structured system of rules and actions, which directs the child's activity and reduces randomness in task completion. Under such conditions, interest in the game is supplemented by the need to perform mental operations, ensuring deeper involvement in the cognitive process. This makes it possible to regard didactic games as a form of activity in which attention, thinking and concentration are not only manifested, but also acquire a more stable and purposeful character. A didactic game is a form of organising cognitive activity in which educational content is presented through rules, a play-based condition and an expected result. Its distinctive feature is that the child becomes involved in the task not through direct instructional teaching, but through the need to act within a clear play situation. As a result, cognitive action acquires practical meaning for the preschool child. In the structure of a didactic game, the cognitive aim does not exist separately from the play motive. It is expressed through specific operations that the child performs during play: comparing objects, identifying shared and distinctive features, classifying objects, establishing a sequence or determining a causal link. For this reason, such games provide not only emotional involvement, but also organised mental activity.

For example, in the game "Find the odd one out" (Vseosvita, 2021), the child was presented with a series of cards containing four images, three of which shared a common

feature, while one did not belong to the group. The child had not only to name the odd item, but also to explain the basis for the choice: colour, shape, function, material or belonging to a particular category. This game activated the operations of comparison, classification and generalisation. In the game "What has changed?" (Vseosvita, 2024a), children first examined a set of objects or images, after which one element was removed, replaced or moved to a different position. The task was to recall the previous arrangement and identify the change, which developed visual memory, attention to detail and the ability to retain an image in mind. In the game "Continue the sequence" (Vseosvita, 2024b), children had to identify the pattern in the alternation of objects and independently select the next element, which supported the development of logical thinking, analysis and prediction. These games show that the didactic form creates a guided cognitive situation for the child. In this situation, the result depends not on random activity but on the correct performance of a mental operation. For this reason, participation in the game gradually moves from a simple response to the material towards a conscious choice of a method of action. The structured nature of a didactic game is of fundamental importance for the development of cognitive activity. A clear sequence of "condition – action – result" helps the child understand the aim of the task, maintain attention and relate their own actions to the expected outcome. Under these conditions, cognitive activity acquires a directed character: the child not only participates in the game, but also performs a specific intellectual task that supports the development of attention, thinking, concentration and independence.

The structured tasks embedded in didactic games determine the specific nature of their influence on the cognitive components of cognitive activity. Their organisation reduces randomness in children's actions and gives the cognitive process a clear direction. As a result, the child's attention is focused on performing a specific operation and monitoring its outcome. Attention becomes more stable in the context of a didactic game. A clear aim and an understandable result reduce distractions and sustain interest throughout the task. The child concentrates not only at the beginning of the game, but also during its course, since each action affects the final outcome. Thinking is directly linked to the nature of the tasks. Performing actions according to a model, searching for patterns, and identifying similarities and differences activate analysis, synthesis, generalisation and classification. The structured nature of the task ensures the sequence of mental actions: the child focuses on the condition, relates the elements to one another and checks the result. Concentration is supported through a combination of clear rules and the need to complete the action. The most stable concentration occurs when the task corresponds to the child's abilities while also containing an element of exploration. Excessive complexity or oversimplification reduces concentration; therefore, the selection of game content is of fundamental importance (Shaheen *et al.*, 2024). Thus, structured tasks in didactic games ensure

the coordinated interaction of cognitive processes. Attention supports performance, thinking determines the method of action, and concentration ensures its completion.

The structured nature of didactic games had the most pronounced effect not on the children's initial interest in the activity, but on their ability to maintain focus on the task and complete it with less adult assistance. This was explained by the logic of the didactic game itself: the child worked with a rule, a sequence of actions and a verifiable

result. Changes, therefore, appeared primarily in concentration and independence. At the formative stage, the most noticeable changes in the didactic games group concerned concentration and independence. Structured tasks helped children retain instructions more often, complete actions, and require less constant adult support. The dynamics of independence were particularly indicative, as this component had been less developed at the outset and depended most strongly on pedagogical support (Fig. 1).

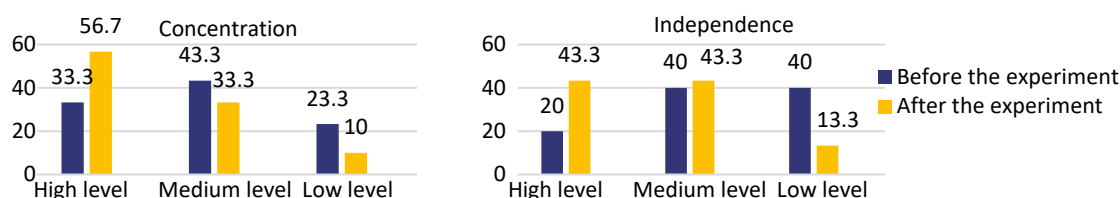


Figure 1. Dynamics of concentration and independence in the didactic games group, %

Notes: percentages were calculated from the total number of children involved in didactic games across the three urban locations (n = 30; 10 children in each institution)

Source: compiled by the authors

Didactic games primarily strengthened the regulatory aspect of cognitive activity. After the formative stage, the children not only became more actively involved in the tasks, but also maintained their logic more effectively, acted more consistently and required external prompts less often. The most important result was a decrease in unstable manifestations: cognitive action was more often completed independently, rather than interrupted because of loss of attention or uncertainty about how to perform the task. This confirmed that didactic games had a stronger effect on the organisation of cognitive behaviour than on the spontaneous expansion of initiative.

Role-play as an environment for developing initiative and cognitive interaction

Role-play is a form of activity in which cognitive activity develops through children's interaction within an imaginary situation. Its content is determined not by a predetermined task, but by the joint construction of a play space in which each action gains meaning in the context of the role and interaction with others. Under these conditions, cognition is not limited to the performance of individual operations, but includes understanding the situation, clarifying conditions, coordinating actions and explaining one's own decisions. This changes the nature of cognitive activity: it becomes more open, variable and dependent on the communicative process (Delfin & Wang, 2023). Initiative and questioning activities become particularly important, as they ensure the development and maintenance of play-based interaction. Role-play appeared as a form of activity in which cognition occurred through interaction with other participants and the reproduction of social situations. Unlike didactic games, where the cognitive task was set through a rule and an outcome, in role-play, the content of the activity was formed as the imaginary

situation unfolded collectively. This meant that cognitive activity was not predetermined, but emerged and changed during interaction.

Cognition within such play acquired a mediated character. The child did not work directly with learning material, but acted through a role, which shaped the way of perceiving, evaluating and responding. The content of cognitive activity was determined not by a separate task, but by the logic of the play situation: the need to reach agreement, clarify conditions, explain one's own actions or understand the actions of another child. As a result, cognitive processes became embedded in communication and acquired social meaning. Social mediation was also evident in the fact that the child's activity depended on the positions of other participants. Each action required consideration of roles, rules of interaction and partners' expectations. This created conditions in which cognitive activity moved beyond individual performance and became part of a shared process. The child not only performed their own role, but also related it to the actions of others, which required constant clarification and adjustment. Within role-play, cognition did not have a fixed outcome, which distinguished it from structured forms of activity. The process of interaction became more important than the final result: how the child understood the situation, what questions they asked, how they built dialogue and how they responded to changing conditions. For this reason, cognitive activity acquired an open character and was not limited to the performance of a predetermined action. Thus, role-play outlined a different model of cognition, in which the leading factor was not operational accuracy, but the ability to navigate a social situation, understand another person's position and build one's own line of behaviour. This feature determined its potential for developing initiative and cognitive interaction.

The imaginary situation served as the central element of role-play, as it set the content of the activity and determined the direction of cognitive activity. The child acted not in real conditions, but in a modelled environment in which every object, action or event acquired a conditional meaning. This required the constant correlation of real experience with the play situation and active reflection on what was happening. The development of cognitive initiative was directly linked to the openness of the imaginary situation. Unlike structured tasks, it did not restrict the child to a clear algorithm of actions. This created space for independently determining the content of the game: children suggested how events might develop, changed the plot, introduced new elements or clarified existing ones. In this case, initiative was expressed not as a response to a task but as the ability to develop the activity independently. The distribution of roles provided the structural basis for this activity. Each role defined the child's position, functions and ways of interacting. Taking on a role required an understanding of its content, rules of behaviour and the expectations of other participants. This encouraged the child to interpret the situation actively: it was necessary not only to act, but also to explain one's own actions, coordinate them with partners and adjust them as the plot developed. Cognitive initiative was formed through this process of coordination. The child asked questions, clarified details and suggested changes or additions to the game. These actions were not externally assigned, but arose from the

need to sustain the play situation. This is why initiative in role-play acquired a more spontaneous and variable character than in didactic forms of play. The development of cognitive initiative was also supported by changes in roles and situations. Moving from one role to another required reorientation to new conditions, which strengthened flexibility of thinking and the ability to adapt to change. This broadened the range of cognitive actions and created additional opportunities for initiative to emerge. Thus, the imaginary situation and the distribution of roles determined the specific nature of cognitive initiative development in role-play. It was expressed through the child's ability to develop the content of the activity independently, interact with other participants and sustain the development of the play situation without external regulation. The openness of the imaginary situation and the need to coordinate actions within roles created conditions in which changes appeared primarily in the components directly related to initiating interaction. In the combined role-play group, formed from three subgroups of 10 children in different urban locations ($n = 30$), the dynamics focused not on the stabilisation of performance, but on the development of cognitive dialogue: children asked questions more often, clarified the conditions of the game and suggested possible developments in the plot. The dynamics of questioning activity and initiative reflected changes not only in the number of manifestations, but also in children's participation in role-play (Table 4).

Table 4. Dynamics of questioning activity and initiative in the role-play group

Component	Stage	High level, n (%)	Medium level, n (%)	Low level, n (%)
Questioning activity	Initial	8 (26.7)	13 (43.3)	9 (30.0)
Questioning activity	Control	16 (53.3)	10 (33.3)	4 (13.3)
Initiative	Initial	7 (23.3)	14 (46.7)	9 (30.0)
Initiative	Control	15 (50.0)	11 (36.7)	4 (13.3)

Note: percentages were calculated from the total number of children involved in role-play games across the three institutions ($n = 30$; 10 children in each urban location)

Source: compiled by the authors

The data show that role-play had the strongest effect on the components associated with the communicative development of activity. Children's questions more often served to clarify, coordinate and develop the plot, while initiative was expressed through the proposal of roles, new actions and alternative directions for the game. Comparison with other types of play activity clarified the nature of these changes. In the didactic games group, the increase in initiative was more moderate, as the activity remained limited by the rules and structure of the task. In the physical games group, activity was expressed mainly as involvement in the action, but did not develop into cognitive clarification or the expansion of content. By contrast, in role-play, interaction itself became the source of cognitive activity, which accounted for the higher indicators of questioning activity and initiative. The analysis of the organisation of activity showed that the changes affected not only individual indicators, but also the way children interacted.

During play, situations were increasingly observed in which children distributed roles independently without adult intervention, agreed on the rules of the game within the group and maintained the game's logic through discussion. The children themselves decided who would perform each function, agreed on the sequence of actions and adjusted it according to the development of the plot. One manifestation of these changes was the emergence of collective planning. By the end of the formative stage, some children, approximately 40.0%, were observed discussing in advance how the game would unfold, which roles would be involved and which actions would be performed. This indicated a shift from situational interaction to a more organised form of activity, in which cognitive activity was combined with elements of self-regulation. Thus, role-play changed the nature of cognitive activity by strengthening its social dimension. The increase in questioning activity and initiative was accompanied by a transition towards

a more independent organisation of activity, in which the child acted not only as a performer of a role, but also as a participant in the joint construction of a cognitive situation.

Physical and free-play activities as a means of maintaining children's general involvement

Physical and free-play activities differed from didactic and role-play games in their lower degree of structure and weaker orientation towards the performance of a specific cognitive task. This feature determined a different type of influence on children's cognitive activity. Whereas in didactic games the child acted within a clearly defined rule, and in role-play within an imaginary social situation, in physical and free-play activities, the process of participation itself became dominant. Action was more often determined by a rapid response, changes in play conditions, imitation of other children's movements and maintenance of the group's general pace. For this reason, the cognitive component in such games appeared indirectly: not through the performance of a special task, but through orientation in the situation, acceptance of rules, response to signals and coordination of one's own behaviour with the actions of peers. Their developmental potential was linked above all to maintaining emotional involvement, activity, readiness for interaction and a positive attitude towards shared activity. In this case, emotional involvement served as the initial condition for cognitive activity, since the child entered the activity more willingly, accepted the rules more easily and responded more quickly to changes in the play situation. At the same time, such involvement did not always develop into more complex forms of cognitive behaviour. The child could move actively, maintain contact with the group and show interest in the game, but not necessarily ask questions, plan an action independently or sustain a cognitive task for a prolonged period. Physical and free-play activities should therefore be regarded as a form of maintaining the general level of activity, rather than as the main means of developing all components of cognitive activity.

In such games, the child responded more quickly to the situation, became involved in the action and followed the general rhythm of the group, but did not always move towards independent cognitive exploration or sustained engagement with the task. This was because the content of physical or free play often did not require a sequential analysis of conditions, the choice of a method of solution or verification of the result. The child's main attention was directed towards participation in a shared action, maintaining the pace, coordinating movements and responding quickly to changes in the situation. These manifestations were important for children's general activation, but they did not provide sufficient duration of cognitive effort. For this reason, the influence of this group of games was expected to be more evident at the level of interest and involvement than at the level of independence or concentration. Within the experiment, physical and free-play activities were treated as separate conditions, making it possible to examine the extent to which children's general activation could influence the cognitive sphere. This group was not expected to show the same pronounced increase in cognitive or regulatory components as the didactic games group, since the tasks did not have a stable object-based and logical structure. Nor was the development of questioning activity and initiative expected to be as active as in role-play games, where children's interaction required constant clarification of the content of the game. The main expected outcome was an increase in interest, readiness to participate and a reduction in passive manifestations. At the formative stage, in the physical/free-play group, formed from three subgroups of 10 children in different urban locations ($n = 30$), the most noticeable changes concerned interest and general involvement. The children participated more willingly in shared play actions, responded more quickly to changes in conditions and showed a positive emotional response to the play situation. At the same time, the increase in independence, concentration and questioning activity was less pronounced than in the didactic and role-play groups (Table 5).

Table 5. Dynamics of individual components of cognitive activity in the physical/free-play group

Component	Stage	High level, n (%)	Medium level, n (%)	Low level, n (%)
Interest	Initial	17 (56.7)	9 (30.0)	4 (13.3)
Interest	Control	20 (66.7)	8 (26.7)	2 (6.7)
Concentration	Initial	10 (33.3)	13 (43.3)	7 (23.3)
Concentration	Control	12 (40.0)	12 (40.0)	6 (20.0)
Independence	Initial	6 (20.0)	11 (36.7)	13 (43.3)
Independence	Control	8 (26.7)	12 (40.0)	10 (33.3)

Note: percentages were calculated from the total number of children involved in physical/free-play activities across the three urban locations ($n = 30$; 10 children in each institution)

Source: compiled by the authors

The most noticeable change was the increase in the high level of interest from 56.7% to 66.7%. This confirmed that physical and free-play activities effectively supported the emotional and motivational components of cognitive

activity. The decrease in the proportion of children with a low level of interest from 13.3% to 6.7% also indicated reduced passivity and greater readiness to engage in the play process. However, the nature of this increase was mainly

general: the children responded more actively to the game and participated more willingly in shared actions, but this was not always accompanied by greater complexity in cognitive behaviour. The summary of the obtained indicators provided grounds for defining physical and free-play activities as a form of mainly supportive influence on preschool children's cognitive activity. They created a favourable emotional background, increased children's readiness to participate in activities and reduced passivity. However, they did not provide the same level of structured cognitive advancement as didactic games, nor did they stimulate the development of questions and initiative as actively as role-play games. This was because physical/free play required, to a lesser extent, the maintenance of a cognitive task, explanation of the method of action or independent planning of play content. Its effect was therefore moderate and concerned primarily with children's general involvement in the play process.

Comparative effectiveness of different types of play activity

Comparison of the results makes it possible to regard play activity as a system of forms with different directions of influence on cognitive activity. The differences between didactic, role-play and physical/free-play activities are related to the way the activity is organised, the degree of its structure and the nature of children's interaction. This results in different dynamics of change, both at the level of individual components and at the overall level of cognitive activity. The comparison of results obtained in the three experimental groups, each formed from subgroups represented in all urban locations, together with the analysis of the dynamics of individual components of cognitive activity, made it possible to specify the nature of the influence of different types of play activity and to determine their functional orientation in the development of preschool children (Table 6).

Table 6. Comparative dynamics of cognitive activity by type of play activity

Indicator	Didactic games	Role-play games	Physical/free-play activities
Overall, the high level after the experiment	46.7%	43.3%	30.0%
Low level after the experiment	10.0%	13.3%	23.3%
Leading dynamics	Concentration increased; independence increased	Initiative increased; questioning activity increased	Interest increased moderately
Nature of changes	Organisation of activity	Development of interaction	Maintenance of activity

Note: percentages for each type of play activity were calculated from the number of children in the corresponding experimental group ($n = 30$), which included 10 children from each urban location

Source: summarised by the authors

Didactic games provide the most pronounced influence on the regulatory components of activity, whereas role-play games have the strongest effect on communicative and initiative-related components. Physical and free-play activities show limited dynamics, mainly maintaining

the level of general involvement. The integral assessment of changes made it possible to compare the overall level of cognitive activity in the three experimental groups after the formative stage, with each group including children from the three urban locations (Fig. 2).

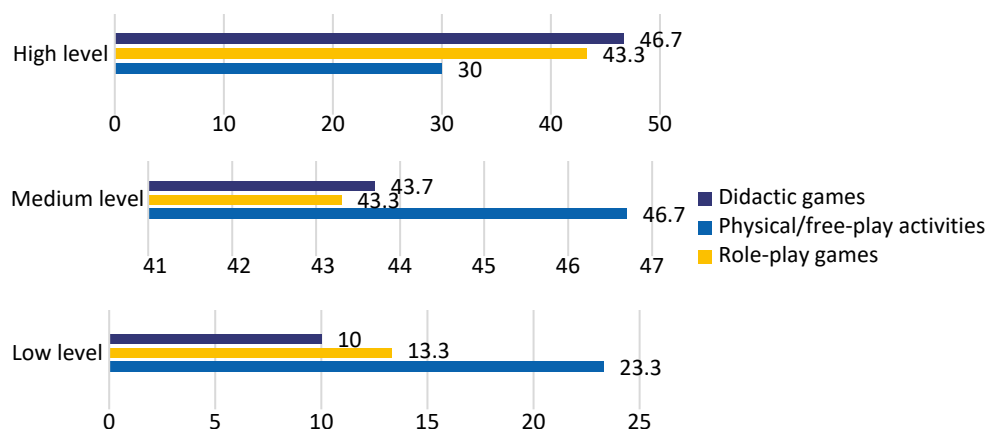


Figure 2. Integral dynamics of levels of cognitive activity by type of play activity, %

Source: compiled by the authors

The most pronounced increase in the high level of cognitive activity was observed in the groups where play had a clear pedagogical orientation or involved meaningful

interaction between children. Didactic games strengthened the organisation of cognitive action, whereas role-play games enhanced initiative and the communicative

development of activity. Physical and free-play activities mainly supported general involvement, but to a lesser extent ensured the transition to stable cognitive activity. The results show that the effectiveness of play activity is determined not by the mere fact of its use, but by the conditions of its organisation. Didactic games organise cognitive behaviour through a clear task structure and the requirement to complete an action. Role-play games develop initiative and cognitive interaction through the openness of the situation and the need to coordinate actions. Physical and free-play activities support general activity, but do not ensure a stable transition to a higher level of cognitive activity. Taken together, these results confirm the appropriateness of using play forms in a differentiated way, depending on developmental aims. The comparative analysis of the results made it possible to clarify that different types of play activity influenced preschool children's cognitive activity unevenly and through different mechanisms of activity organisation. Didactic games proved most effective in developing regulatory components, as the clear structure of tasks, defined rules and the need to achieve a specific result supported concentration and the gradual growth of independence. Under these conditions, cognitive action became more consistent: children were less likely to lose the logic of task performance, maintained attention for longer and more often completed tasks without external support. This showed that the structured nature of the activity created conditions for a shift from situational participation to a more organised form of cognitive behaviour.

Role-play games demonstrated a different direction of influence. Their effectiveness was linked not so much to the organisation of activity as to the expansion of the communicative and initiative-related components of cognition. An open play situation, the need to reach an agreement and the joint development of the plot created conditions in which the child asked questions more often, suggested possible actions and independently sustained the development of interaction. As a result, cognitive activity acquired a more socialised character, since its maintenance depended on the ability to take account of other participants' positions, agree on roles and adjust one's own actions in response to changes in the game. Physical and free-play activities had a more moderate effect on the structural components of cognitive activity. Their effect was mainly related to maintaining emotional involvement, readiness to participate and a positive attitude towards shared activity. The increase in interest and general activity was not accompanied by such pronounced changes in independence, concentration or initiative as in the other two groups. This made it possible to suggest that insufficient structure and the absence of a need to sustain a cognitive task over time limited their influence on the more complex components of cognitive activity.

The summary of the results showed that the effectiveness of play was determined not by the mere fact of its use, but by the relationship between the nature of the play situation and the components of cognitive activity that it

activated. Didactic games proved more suitable for developing the organisation of cognitive action, role-play games for forming initiative and interaction, while physical and free-play activities mainly supported the emotional and motivational basis of activity. This distinction made it possible to specify the functional orientation of different types of play and to clarify the conditions for their pedagogical use in preschool education. The set of identified patterns provided a basis for further comparison of the findings with contemporary studies on the organisation of play activity and the development of cognitive activity in preschool children.

DISCUSSION

The findings showed that the effectiveness of play activity was determined not by its use as such, but by the way it was organised, its degree of structure and the nature of children's interaction. The study found that didactic games had the clearest effect on concentration and independence, roleplay games on initiative and questioning activity, whereas physical/free-play activities mainly supported general involvement without a substantial transition to stable cognitive activity. The influence of physically active forms on preschool children was examined in the study by M.A. AlWalah *et al.* (2024). The researchers established the acceptability of a multicomponent physical activity programme for preschool staff and parents, and identified factors that facilitated or hindered its implementation: clear materials, alignment with the institution's programme, and time and space constraints. In the present study, a similar finding was that physical/free-play activities also supported children's general involvement. The difference was that the authors focused mainly on the acceptability and organisational feasibility of physical activity, whereas the present study clarified its cognitive effect. It showed that physical games did not produce the same increase in the high level of cognitive activity as didactic or role-play games. This made it possible to specify the limits of their influence: they supported emotional and behavioural involvement, but had a weaker effect on independence, questioning activity and concentration.

Another aspect of the organisation of play-based learning was presented in the study by Y. Zhao *et al.* (2023), which proposed a model for improving games and analysing educational data in the training of preschool education specialists using deep learning. Their findings confirmed the importance of analytical modelling for improving the quality of play-based educational solutions. This corresponds with the findings of the present study through the idea that play forms should not be used arbitrarily, but require a carefully planned structure. At the same time, the difference was substantial: in authors' study, effectiveness was understood through technological optimisation and data analysis, whereas in the present study, it was examined through a pedagogically controlled protocol and direct observation of children. The findings complemented their approach by showing that, even without complex

digital models, the effectiveness of play depended substantially on the clarity of rules, the repeatability of the procedure, the stability of materials and the consistency of the type of play activity.

In the conclusions of A.I. Zourmpakis *et al.* (2022), considerable importance was attached to preparing educators to use play-based environments. Their study emphasised the ability of practising and future teachers to design and integrate adaptive gamified environments into science education. This helped explain one of the findings of the present study: the use of a single methodological protocol and preliminary instruction for educators reduced the variability of pedagogical influence. A shared idea was that play requires professional organisation, not merely the presence of game elements. However, the present study shifted the focus from digital adaptive gamification to traditional forms of preschool play: didactic, role-play and physical/free-play activities. This made it possible to clarify that effectiveness depended not only on the adaptability of the environment, but also on the correspondence between the type of play and the specific component of cognitive activity. Didactic games provided stronger support for regulatory components, whereas role-play games better supported communicative and initiative-related components.

The social dimension of play activity was examined in the study by A. Chatzipanteli & M. Adamakis (2022), in which structured play activities were considered as a means of developing children's communication, interpersonal skills and social interaction. The authors' conclusions were consistent with the results of the role-play group, where an increase in questioning activity and initiative was recorded. However, the present study specified that social interaction influenced not only communicative skills but also cognitive activity. Children's questions began to perform not an auxiliary function, but the function of coordinating and developing the plot. The difference also lay in the fact that the authors focused mainly on structured social play, whereas the present study compared three types of play activity. This made it possible to establish that role-play, specifically, rather than interaction of any kind, provided the strongest support for the initiative-based development of a shared cognitive situation.

The importance of didactic games for preschool children's learning was confirmed in the study by M. Muşaşcu (2021), where a survey of educators led to the conclusion that didactic and educational games have a real influence on learning. In the present study, this conclusion was empirically detailed through specific components of cognitive activity. The similarity lay in the confirmation of the pedagogical effectiveness of didactic games. The difference concerned the level at which the result was explained: author emphasised the general learning effect, whereas the present study found that the greatest changes concerned concentration and independence. This clarified the mechanism of influence: didactic games operated through the sequence of "condition – action – result", reduced randomness in behaviour and supported task completion. The

obtained data, therefore, extended previous findings by showing not only the fact of a positive influence, but also which components of cognitive activity changed most noticeably.

The issue of developing cognitive interest through play was central to the study by O. Rui (2024). That study identified organisational and educational conditions that supported the development of cognitive interests in older preschool children. The findings of the present study confirmed the importance of interest as the initial condition for involvement: at the ascertaining stage, it was the most clearly expressed component. At the same time, an important clarification was identified: a high level of interest did not guarantee an increase in independence or initiative. The comparison, therefore, showed that the conclusions of O. Rui (2024) required supplementation through component-based analysis. The present study showed that interest functioned as a starting mechanism, but its pedagogical value depended on whether it developed into questioning, independent choice of action and task completion. For this reason, didactic and role-play games proved more effective than physical/free-play activities: they created conditions for transforming interest into more stable cognitive behaviour. The development of children's independence was the subject of the study by I. Maimunah *et al.* (2025), which substantiated the effectiveness of a holistic approach integrating physical, social, emotional, cognitive and moral independence. This conclusion partly coincided with the findings of the present study, in which independence also emerged as a key indicator of the transition from externally supported participation to the child's own activity. The difference was that authors interpreted independence more broadly as a complex quality of early development, whereas the present study focused on its cognitive and regulatory dimensions. The greatest increase in independence was recorded in the didactic games group, where rules and an expected outcome helped the child act without constant adult prompting. This supplemented the authors' idea by showing that independence requires not only a general developmental environment, but also the specific organisation of a task in which the child can see the method of action and the criterion for completion.

Questioning activity as a tool of thinking was examined in depth in the study by A.K. Salmon & M.X. Barreira (2021). The researchers showed that the quality of educators' questions can either support or limit children's curiosity, thinking and learning. The findings of the present study intersect with this position by recognising questions as an important mechanism of cognitive activity. However, the difference lay in the source of the questions: authors focused mainly on pedagogical questioning, whereas the present study traced the questions asked by the children themselves. The most noticeable increase was recorded in the role-play group, where the need to clarify conditions, agree on roles and develop the plot stimulated independent questioning activity. This made it possible to extend previous findings: questions supported thinking not only when asked by the educator, but also when they arose from

the need to organise shared play. The approach of A. Ruggeri *et al.* (2021) helped to interpret the qualitative changes in questioning activity more precisely. Their study showed that children aged 4-6 years can ask more informative questions when appropriate cognitive support is provided, particularly through categorisation. A similar point in the present study was that children's questions were not treated as random verbal responses, but were linked to the organisation of cognition. The difference lay in the context: in authors' study, questioning developed within a specific task, whereas in the present study, it developed within role-play interaction. The findings showed that the informativeness and functionality of questions can be supported not only through classification tasks, but also through an imaginary situation in which the child has to determine how to act together with others. This clarified the social mechanism underlying the development of questioning behaviour in preschool age.

The review of studies on preschool children's attention and concentration by D.M. Calonge De la Piedra & O. López Regalado (2025) demonstrated growing scholarly interest in these processes and the need to systematise the factors that support them. The findings of the present study gave this general trend specific pedagogical content. Concentration was found to increase most clearly in the didactic games group, that is, where the task had a clear aim, a sequence of actions and a verifiable result. A shared point was the importance of attention as a basic condition of readiness for learning. At the same time, the difference was that the systematic review by authors outlined the field of research, but did not compare types of play across different pedagogical conditions. The present study supplemented the review-based approach with an empirical clarification: preschool children's attention was not strengthened equally in any kind of activity, but increased most in conditions of didactically structured play. In the study by X. Zhiyong (2025), role-play was examined as a form of activity in which the child takes on a particular role, acts in accordance with it and reproduces social situations through conditional interaction. This approach was particularly relevant to the present study, as the findings also showed that role-play games influenced not only children's general involvement, but above all their initiative and questioning activity. At the same time, author's position was specified empirically in the present study: role-play was considered not merely as a psychological phenomenon, but as a pedagogically organised environment for developing preschool children's cognitive activity. The increase in the proportion of children with a high level of initiative and questioning activity showed that taking on a role, coordinating actions with other participants and independently developing the plot created conditions for more active cognitive dialogue. The findings, therefore, confirmed the importance of role-play for socially mediated cognition, while also clarifying that its developmental effect depended on meaningful interaction between children and on their ability to influence the course of the play situation independently. Overall,

comparison with previous studies showed that the findings of the present study did not contradict existing conclusions about the importance of play, physical activity, questions, pedagogical organisation and independence in preschool development. At the same time, they refined these conclusions through a component-based logic: different types of play were found to influence different components of cognitive activity. Didactic games were most effective in organising action, role-play games activated questioning and initiative, while physical/free-play activities supported general involvement without a marked transition to stable cognitive behaviour. This made it possible to regard play activity not as a universal pedagogical tool, but as a differentiated system of influences.

CONCLUSIONS

The study established that preschool children's cognitive activity in play has an integrated character and includes interest, initiative, questioning activity, concentration and independence, which are interdependent. At the ascertaining stage, interest was found to predominate, with a high level recorded in 57.8% of children. This ensured children's involvement in the activity, but was not accompanied by a corresponding level of independence, with a high level recorded in 18.9%, or initiative, with a high level recorded in 23.3%. This indicated the uneven structure of cognitive activity, in which the motivational component was ahead of the regulatory and activity-based components. The influence of didactic games was reflected in changes in the cognitive components related to the organisation of activity. An increase was recorded in concentration, with the high level rising to 56.7%, and in independence, which rose to 43.3%. This indicated a stronger ability among children to maintain focus on a task, act consistently and complete an action without constant adult support. At the same time, the reduction in the low-level group to 10.0% confirmed a decrease in unstable forms of cognitive behaviour. The role of role-play games lies in the formation of initiative and cognitive interaction. An increase was found in questioning activity, with the high level rising to 53.3%, and in initiative, which rose to 50.0%. This reflected a shift from reactive participation to the independent development of activity. The changes were accompanied by the emergence of more complex forms of interaction: independent distribution of roles, coordination of actions and collective planning, which were recorded in approximately 40.0% of children by the end of the formative stage. The comparative analysis of the effectiveness of different types of play activity showed their differentiated outcomes. The most pronounced increase in the high level of cognitive activity was observed in the didactic games group (46.7%) and the role-play games group (43.3%), whereas in the physical/free-play group, this figure was 30.0%. At the same time, the proportion of children at the low level remained highest in the physical play group (23.3%), indicating the limited influence of these forms on the development of stable cognitive activity.

The summary of the results made it possible to establish that didactic games ensured the organisation of cognitive activity through a clear task structure, role-play games supported the development of initiative and interaction through the openness of the play situation, while physical and free-play activities mainly maintained general involvement without a substantial influence on its structural components. Taken together, the data confirmed the appropriateness of using different types of play activity in a differentiated way, depending on the aims of developing preschool children's cognitive activity. Further research should expand the sample to include different age groups, extend the duration of

the experiment in order to record long-term outcomes, and examine the combined use of different types of play activity as an integrated system for developing cognitive activity.

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CONFLICT OF INTEREST

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Ігрова діяльність як засіб розвитку пізнавальної активності дітей дошкільного віку

Анотація. Метою дослідження було встановлення порівняльної ефективності різних видів ігрової діяльності у розвитку пізнавальної активності дітей дошкільного віку. Дослідження здійснювалося як квазіекспериментальне емпіричне вивчення із використанням педагогічного спостереження, формувального експерименту та порівняльного аналізу. Вибірку становили 90 дітей віком 5-6 років, розподілених на три групи відповідно до типу ігрової діяльності за єдиним методичним протоколом. Установлено, що пізнавальна активність має інтегровану структуру з домінуванням інтересу (57,8 %) за недостатньої вираженості самостійності (18,9 %) та ініціативності (23,3 %) на початковому етапі. У групі дидактичних ігор зафіксовано зростання зосередженості (до 56,7 %) і самостійності (до 43,3 %), що відобразило посилення здатності дітей утримувати завдання та завершувати дію без зовнішньої підтримки. У сюжетно-рольових іграх відзначено підвищення питальної активності (до 53,3 %) та ініціативності (до 50,0 %), що супроводжувалося переходом до самостійного розгортання ігрової взаємодії. У групі рухливих ігор зміни мали обмежений характер і стосувалися переважно загальної залученості без суттєвого впливу на структурні компоненти пізнавальної активності. Порівняльний аналіз показав вищу частку дітей із високим рівнем у дидактичній (46,7 %) і сюжетно-рольовій (43,3 %) групах порівняно з рухливою (30,0 %). Практична значущість дослідження полягає в можливості використання отриманих результатів для добору ігрових форм у закладах дошкільної освіти: дидактичних ігор – для розвитку зосередженості й самостійності, сюжетно-рольових – для посилення ініціативності та питальної активності, рухливих і вільних – для підтримання загальної залученості дітей

Ключові слова: інтерес; ініціативність; зосередженість; самостійність; взаємодія; динаміка; організація