

## AN ACTIVITY-ORIENTED MODEL FOR DEVELOPING GIFTEDNESS IN PRESCHOOL CHILDREN BASED ON THE ACTIVITY APPROACH

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### Abstract

The development of giftedness in preschool children is a complex pedagogical process that requires more than the early identification of children who demonstrate advanced cognitive abilities. Contemporary approaches increasingly emphasize the dynamic nature of giftedness and the importance of creating educational conditions in which children's potential can emerge through meaningful activity. This article examines the possibilities of developing giftedness in preschool children on the basis of the activity approach and proposes an activity-oriented pedagogical model for supporting children's individual potential. The study employs theoretical analysis, comparative analysis, synthesis, pedagogical modelling, and content analysis of contemporary research on early childhood giftedness. Giftedness is interpreted as a developing combination of cognitive potential, creativity, motivation, independence, and productive engagement that becomes visible and develops through different forms of activity. The proposed model includes seven interconnected stages: Diagnosis of Potential → Motivational Engagement → Activity Choice → Creative–Problem-Based Activity → Individual Support → Reflection → Demonstration of Achievement. Particular attention is given to play, experimentation, project activity, creative production, problem-solving, construction, communication, and exploratory learning as environments in which children's potential can be observed and strengthened. The article identifies pedagogical conditions necessary for the effective implementation of the model, including systematic observation, enriched educational environments, differentiated tasks, child choice, teacher scaffolding, emotional support, and cooperation with families. The study concludes that an activity-oriented approach can transform gifted education in preschool settings from a selective process focused mainly on identifying exceptional children into a developmental process that creates opportunities for diverse forms of potential to emerge and grow.

**Keywords:** giftedness, preschool children, activity approach, activity-oriented model, child development.

### Introduction

The identification and development of children's individual potential is one of the important tasks of contemporary preschool education. Every child enters the educational environment with a distinctive combination of interests, abilities, experiences, motivational characteristics, and preferred ways of interacting with the world. Some children demonstrate unusually rapid learning, advanced reasoning, exceptional memory, rich imagination, original solutions, strong curiosity, artistic sensitivity, leadership, or persistent

interest in particular areas. Such manifestations may indicate emerging giftedness, but they should not automatically be treated as a fixed and fully developed characteristic.

Contemporary research increasingly demonstrates that giftedness in early childhood is a complex and dynamic phenomenon. A systematic review of intellectual precocity in children up to six years of age identified advanced manifestations in reading, mathematics, problem-solving, and visual arts while also emphasizing substantial variation in definitions, identification procedures, and educational provisions [1]. This suggests that preschool giftedness cannot be adequately understood through a single indicator or one-time assessment.

The developmental nature of early giftedness is especially important. A preschool child's abilities are still forming, and their manifestation may depend significantly on educational experience, family environment, motivation, emotional security, opportunities for exploration, and the types of activities offered to the child. Consequently, the absence of outstanding performance in a formal task does not necessarily indicate the absence of significant potential.

A child who does not demonstrate advanced verbal ability may display unusual spatial reasoning during construction. Another child may show sophisticated causal thinking while experimenting with water, sand, plants, or mechanical objects. A third may demonstrate originality through storytelling, drawing, role-play, music, or movement. Another may reveal leadership and social sensitivity while organizing collaborative play.

For this reason, early gifted education should not be reduced to the question: "Which children are gifted?"

A developmentally more productive question is:

"Under what conditions, and through which activities, can children's individual potential become visible and develop?"

This shift has important pedagogical consequences.

Research on early childhood giftedness has repeatedly identified the need for multidimensional identification, differentiated educational opportunities, appropriate teacher preparation, and enriched environments [2]. A recent systematic review of giftedness in early childhood similarly emphasizes inclusive definitions and educational environments responsive to children's diverse learning characteristics [3].

Within this perspective, the activity approach has particular methodological value.

The activity approach views development as occurring through children's active engagement with objects, people, cultural tools, problems, and meaningful situations. The child is not considered a passive recipient of educational influence. Development occurs when the child explores, acts, chooses, communicates, experiments, creates, solves problems, and reflects on experience.

For preschool children, this principle is especially relevant because activity is the natural context of development.

Play, construction, drawing, storytelling, experimentation, movement, music, communication, modelling, and practical problem-solving are not merely methods of

keeping children occupied. They are developmental environments in which thinking, imagination, motivation, communication, and self-regulation are formed.

From the perspective of giftedness development, activity performs two interconnected functions.

First, activity has a diagnostic function. It allows the educator to observe children's interests, strategies, persistence, originality, questions, speed of learning, problem-solving approaches, and preferred domains.

Second, activity has a developmental function. When appropriately enriched, it creates conditions in which emerging abilities can become more complex and productive.

This distinction is fundamental. Traditional identification may attempt to determine whether a child possesses a particular ability before providing advanced educational opportunities. An activity-oriented approach creates rich opportunities first and observes how children's potential develops within them.

Thus, pedagogical diagnosis and development become interconnected rather than separate processes.

The importance of educational intervention is supported by contemporary studies. Karadağ and Yıldız Demirtaş demonstrated that a structured early intervention program could improve working-memory performance among gifted preschool children [4]. Research examining gifted children's creativity and scientific imagination has also demonstrated the importance of creative potential as a meaningful dimension of early giftedness [5].

These findings suggest that giftedness should not be treated as a reason to provide children with “more of the same” educational content. A child who learns rapidly does not necessarily need a larger quantity of repetitive exercises. Instead, the child may need greater complexity, openness, choice, novelty, depth, and opportunities to generate original solutions.

Accordingly, the purpose of the present study is to theoretically substantiate and develop an activity-oriented model for developing giftedness in preschool children based on the activity approach.

The objectives of the study are:

1. to clarify the pedagogical interpretation of giftedness in preschool childhood;
2. to determine the developmental functions of activity in revealing and supporting children's potential;
3. to identify activity forms that provide opportunities for giftedness to emerge;
4. to define pedagogical conditions for activity-oriented giftedness development;
5. to construct an integrated model that can be applied in preschool educational practice.

The central proposition of the study is that giftedness should be developed not outside children's activity but through increasingly meaningful, challenging, creative, and individually responsive activity.

### Materials and Methods

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The study was designed as a theoretical and analytical investigation. Recent scientific literature concerning preschool giftedness, early intellectual precocity, differentiated education, creativity, early intervention, and gifted education was analyzed.

The methodological framework combined the activity approach, the developmental interpretation of giftedness, child-centered pedagogy, differentiation, and pedagogical scaffolding.

The following methods were employed: theoretical analysis, comparative analysis, content analysis, classification, pedagogical synthesis, and pedagogical modelling.

The analysis focused primarily on research published between 2021 and 2025. Particular attention was given to studies examining early indicators of giftedness, educational interventions, creativity, differentiated learning, and pedagogical conditions for supporting children with advanced potential.

For the purposes of this study, preschool giftedness is defined as a dynamically developing individual potential manifested through unusually productive, original, motivated, or advanced engagement in one or more meaningful activities.

This definition deliberately avoids limiting giftedness to intelligence scores.

Five interrelated dimensions were used to analyse manifestations of potential:

cognitive potential – rapid understanding, advanced reasoning, memory, classification, generalization, and problem-solving;

creative potential – originality, imagination, divergent thinking, generation of alternatives, and transformation of ideas;

motivational potential – curiosity, sustained interest, persistence, intrinsic motivation, and willingness to explore;

activity independence – initiative, choice, planning, experimentation, and independent modification of actions;

social-communicative potential – leadership, cooperation, explanation, sensitivity to others, and productive participation in shared activities.

These dimensions formed the conceptual basis for constructing the activity-oriented model.

## Results

The theoretical analysis indicates that an effective model for developing giftedness in preschool education should integrate several interrelated processes, including systematic observation, motivational activation, differentiation, creativity, pedagogical support, reflection, and recognition of children's achievements. These elements should not function independently. Instead, they need to form a coherent developmental system in which the educator first recognizes emerging potential, creates conditions for its manifestation, and then gradually provides increasingly complex opportunities for its further development. From this perspective, giftedness development is understood not as the transmission of additional knowledge to children who have already been identified as gifted, but as a dynamic process in which potential becomes visible and develops through meaningful activity.

The proposed model therefore includes seven interconnected stages: **diagnosis of potential, motivational engagement, activity choice, creative and problem-based activity, individual support, reflection, and demonstration of achievement**. Although these stages provide a logical structure for pedagogical practice, they should not be interpreted as a rigid linear algorithm. Preschool children's interests and developmental trajectories are highly dynamic, and the stages may overlap, recur, or change in sequence depending on the educational situation. For example, reflection on one activity may reveal a new interest that leads the child back to motivational engagement and the selection of another activity. Similarly, the demonstration of an achievement may reveal previously unnoticed potential and initiate a new cycle of observation and development. The model is therefore cyclical and flexible rather than strictly sequential.

The first stage involves the **diagnosis of potential through systematic observation**. At this stage, the educator observes children both during their natural everyday activities and in specially organized developmental situations. The purpose is not to make an immediate categorical decision about whether a child is gifted. Instead, observation is used to identify behavioral and developmental indicators suggesting that the child may require richer, deeper, or more differentiated educational opportunities. This approach is particularly appropriate in preschool education because children's abilities are still emerging and may not yet be consistently expressed in formal learning situations.

During observation, the educator pays attention to the ways in which children learn, explore, communicate, solve problems, and respond to new experiences. A child may acquire new information unusually quickly, ask questions that extend beyond the immediate content of an activity, generate original solutions, or demonstrate sustained concentration when genuinely interested in a topic. Other significant manifestations may include independent modification of a task, advanced imagination, recognition of relationships or patterns that other children do not immediately notice, willingness to explain ideas to peers, or persistence when a problem cannot be solved easily. None of these characteristics should be considered independently as definitive proof of giftedness. Their value lies in the recurring patterns they form across different situations and over time.

Observation should therefore take place across a sufficiently broad range of activities. Children's potential may be strongly domain-specific, and the same child may perform very differently depending on the nature of the task. For instance, a child who appears relatively typical during a structured language exercise may demonstrate advanced spatial reasoning and planning during construction. Another child may not distinguish themselves during mathematical activities but may display remarkable originality in drawing, storytelling, role play, or imaginative transformation of ordinary materials. A third may demonstrate advanced curiosity primarily through experimentation and investigation of natural phenomena. Consequently, the first principle of the model is that educators should **observe children in diverse activities before drawing conclusions about their potential**.

Such multidimensional observation also helps prevent giftedness from being reduced to academic precocity. In early childhood, advanced potential may appear through

imagination, practical reasoning, social organization, artistic expression, curiosity, experimentation, or the ability to develop unusual connections between ideas. The educator's role is therefore to notice how the child engages with different types of experience rather than searching only for predetermined signs of high intellectual performance.

The second stage of the model concerns **motivational engagement**. High potential does not automatically result in high-level performance. Even a highly capable child may demonstrate little initiative when an activity is repetitive, emotionally uninteresting, excessively controlled, or disconnected from genuine curiosity. The developmental environment must therefore create reasons for children to become actively involved. Motivation is not treated as an additional element that follows ability; it is regarded as one of the conditions through which potential can become visible and productive.

For this reason, the educator should create a meaningful situation rather than simply announce an exercise. Instead of informing children that they will learn about bridges, for example, the teacher might introduce a practical problem by explaining that toy animals need to cross a river but have no bridge. Children can then be invited to design a solution. This apparently simple situation changes the nature of the activity. The children now have a purpose for investigating materials, comparing possible structures, discussing ideas, constructing prototypes, testing stability, identifying weaknesses, and redesigning unsuccessful models.

Such a problem situation integrates several developmental processes at once. Children use reasoning to consider how the bridge might be constructed, creativity to generate possible designs, experimentation to test different materials, communication to exchange ideas, and practical skills to transform their plans into physical structures. The activity also creates opportunities for persistence because the first solution may not work. For children with emerging gifted potential, this combination of intellectual challenge and meaningful purpose can provide a much stronger stimulus than repetitive exercises with predetermined answers.

Motivation can be further strengthened through novelty, complexity, contradiction, mystery, and unanswered questions. An educator may deliberately introduce an unexpected object, an incomplete story, a surprising experimental result, or a problem for which the solution is not immediately obvious. These situations stimulate curiosity and encourage children to move beyond passive participation. For potentially gifted children, opportunities for discovery are particularly important because they allow the child to exercise initiative and engage with a problem at a level appropriate to their emerging abilities.

The third stage introduces **meaningful activity choice**. Within the proposed model, children are not expected to complete every developmental objective through exactly the same activity. Instead, the educator creates a structured environment in which several meaningful alternatives are available. This provides opportunities for different forms of potential to become visible while simultaneously increasing children's sense of ownership over their learning.

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For example, within a project such as “**The City of the Future**,” children may explore the same general theme in different ways. Some may prefer to construct buildings and experiment with structural stability, while others may draw transport systems or create maps. Some children may design parks and public spaces, while others may develop rules for imaginary residents, invent signs and symbols, construct models from recycled materials, or create stories about life in the future city. Although all children participate in a common thematic project, their individual activities can reflect different interests and strengths.

Such diversity is pedagogically important because one activity cannot reveal every type of potential. Construction may provide greater opportunities for spatial and technical thinking, map-making may reveal symbolic and organizational abilities, storytelling may reveal verbal imagination, and designing rules for a city may provide opportunities for social reasoning. Meaningful choice therefore helps the educator observe different developmental configurations while allowing children to work through forms of activity that generate genuine engagement.

Choice also contributes to independence and responsibility. When children participate in deciding how they will investigate a theme or approach a problem, they are more likely to perceive the activity as their own. This can increase persistence, experimentation, and willingness to revise an unsuccessful strategy. However, meaningful choice should not be confused with the complete absence of pedagogical structure. The educator continues to define developmental objectives, organize the environment, prepare resources, and establish appropriate boundaries. The teacher's responsibility is to provide a range of meaningful alternatives rather than simply leaving children without direction.

The central stage of the proposed model is **creative and problem-based activity**. This stage is particularly significant because potential develops most intensively when children encounter situations that cannot be resolved through mechanical repetition or direct reproduction of an adult model. The activity should require children to investigate, predict, imagine, compare alternatives, test ideas, make decisions, and revise strategies.

Problem-based activities may begin with questions for which there is no immediately obvious solution. Children may be asked to determine how many different ways a stable house can be constructed, how an object might be moved without touching it directly with their hands, what could happen to plants deprived of light, or how a vehicle designed for underwater travel might operate. In creative activities, children may invent another ending for a story, construct an object using several unusual materials, develop an imaginary creature adapted to a particular environment, or find different ways to use an ordinary object.

The educational value of such questions lies in their openness. They do not simply test whether children remember information previously presented by the teacher. Instead, they encourage children to transform existing knowledge and experience into new ideas. Several solutions may be possible, and different children may approach the same problem

through different strategies. This provides a particularly rich environment for the development and observation of gifted potential.

Within these activities, the educator should pay attention not only to the final answer or product but also to the **process through which it is created**. A correct result does not necessarily provide complete information about the child's potential. The reasoning, experimentation, persistence, and flexibility demonstrated during the process may be considerably more informative. For example, a construction that ultimately fails may nevertheless reveal sophisticated planning and a strong ability to recognize structural weaknesses. Similarly, a scientific prediction that proves incorrect may still demonstrate advanced thinking if the child analyses the evidence and independently revises the original explanation.

The educator therefore observes whether the child generates several alternatives rather than accepting the first available solution, whether hypotheses are proposed and tested, and whether an unsuccessful strategy is recognized and modified. Attention is also given to whether the child combines ideas or materials in unusual ways, explains the reasoning behind a decision, transfers a previously learned strategy to a new situation, or independently increases the complexity of the original task. These behaviors provide information about cognitive flexibility, creativity, self-regulation, and learning potential.

The process-oriented nature of the model is especially important in preschool education because giftedness may not always be expressed through polished products or consistently correct answers. A child who persistently experiments with several solutions, learns quickly from failure, and independently develops a more sophisticated strategy may demonstrate greater developmental potential than a child who reaches the expected answer immediately through a familiar method. Consequently, **process indicators may reveal emerging potential more effectively than a single final product**.

In this way, the first four stages of the model create a developmental progression in which observation identifies possible strengths, motivational engagement activates children's interest, meaningful choice provides space for individual agency, and creative problem-based activity transforms emerging potential into active intellectual and creative experience. These stages also demonstrate the central principle of the activity approach: giftedness develops not simply because a child possesses advanced abilities, but because those abilities are repeatedly activated, challenged, applied, and transformed through meaningful activity.

**Table 1. Activity Forms for Giftedness Development**

The analysis identified several particularly valuable forms of preschool activity.

| Activity form        | Potential primarily supported | Example                                 |
|----------------------|-------------------------------|-----------------------------------------|
| Exploratory activity | Curiosity, reasoning          | Investigating why objects sink or float |

|                               |                                  |                                                          |
|-------------------------------|----------------------------------|----------------------------------------------------------|
| Construction                  | Spatial and technical thinking   | Designing a stable tower or bridge                       |
| Creative play                 | Imagination, social intelligence | Inventing a new imaginary world                          |
| Experimentation               | Scientific thinking              | Testing effects of light, water, force                   |
| Story creation                | Verbal creativity                | Producing alternative story endings                      |
| Art activity                  | Visual creativity                | Transforming ordinary materials into an original product |
| Mathematical investigation    | Logical reasoning                | Finding multiple ways to classify objects                |
| Project activity              | Integrated potential             | Designing "My Green City"                                |
| Collaborative problem-solving | Leadership, communication        | Solving a construction challenge in a group              |
| Music and movement            | Artistic potential               | Creating rhythms or movement sequences                   |

No single activity should dominate the process of giftedness development in preschool education. Children differ considerably in the ways in which their abilities become visible, and an educational environment centred on only one type of activity may unintentionally privilege certain forms of potential while leaving others unnoticed. For example, an environment dominated by verbal and academic tasks may provide favourable conditions for children with advanced language abilities but offer fewer opportunities for children whose strengths are expressed through construction, artistic production, experimentation, movement, music, or social organization. The broader and more diverse the activity environment is, the greater the possibility of discovering and supporting different configurations of children's potential. For this reason, the proposed model assumes that children should regularly encounter varied forms of play, investigation, communication, creative production, problem-solving, practical experimentation, and collaborative activity.

The fifth stage of the model is **individualized pedagogical support**. Once the educator has observed advanced potential and identified the types of activity in which it becomes particularly visible, the next task is to provide an educational response appropriate to the child's developmental level. Children demonstrating advanced potential may require activities that differ from those offered to their peers in terms of depth, complexity, openness, pace, or degree of independence. The purpose of differentiation is not to separate such children from the group unnecessarily, but to ensure that their participation continues to involve meaningful intellectual and creative effort.

Differentiation should therefore not be understood merely as giving a child additional work after an ordinary task has been completed. If a child finishes a worksheet quickly and is simply given another worksheet of the same type, the quantity of activity increases while its developmental quality remains essentially unchanged. Such an approach

may even reduce motivation because rapid learning is rewarded with repetitive work rather than a more stimulating challenge. A more appropriate approach is **qualitative differentiation**, in which the intellectual structure of the activity itself becomes richer.

For example, while most children may construct a tower according to a demonstrated model, a child who requires greater challenge can be asked to construct a taller tower while using fewer blocks. The basic context remains familiar, but the new condition introduces a problem that requires planning, comparison, prediction, experimentation, and revision. The child is not simply asked to complete more work; instead, the task requires a qualitatively different level of thinking. Similar differentiation can be introduced by asking children to generate several solutions, explain the principle behind a solution, redesign an object according to new conditions, create their own problem, or transfer a previously discovered strategy to an unfamiliar situation.

Individualized pedagogical support can take many forms depending on the child's strengths and interests. The educator may use open-ended questions that extend thinking, introduce additional or less familiar materials, increase the complexity of a problem, provide opportunities for independent investigation, or allow the child to assume meaningful leadership responsibilities within a collaborative activity. Children may also be given access to books, illustrations, maps, diagrams, age-appropriate digital resources, or other sources that enable them to investigate a topic more deeply. Opportunities to explain discoveries to peers or adults can further extend learning because explaining an idea requires the child to organize and communicate thinking. Longer-term projects can be particularly valuable for children who demonstrate sustained interest because they provide time for planning, investigation, revision, and increasingly sophisticated engagement with a topic. Reviews of early gifted education similarly emphasize that identification should be accompanied by appropriate differentiated educational provision rather than functioning as an isolated classification procedure [2], [6].

The sixth stage is **reflection**, which connects children's practical experience with an emerging awareness of their own learning processes. Reflection in preschool education should remain concrete, accessible, and closely related to the activity the child has just completed. It should not resemble formal self-evaluation designed for older students. Instead, short conversations can encourage children to reconstruct what they intended to do, how they approached the problem, what difficulties occurred, and how their ideas changed during the activity.

The educator may ask the child what they wanted to create, what the first idea was, which part did not work as expected, what was changed, and which solution eventually worked best. Other questions may focus on what the child would do differently next time, who or what helped during the activity, and what new discovery was made. These questions gradually redirect attention from the visible final product toward the less visible processes of planning, decision-making, experimentation, revision, and learning.

Reflection is particularly important for children with advanced potential because they may sometimes complete routine activities rapidly and successfully without needing

to consider the strategies they use. When tasks become genuinely challenging, reflection helps them understand that high ability does not mean knowing every answer immediately. Productive learning can involve uncertainty, unsuccessful attempts, changes of strategy, and the recognition of errors. Through reflective dialogue, children begin to understand difficulty not as evidence of inability but as a natural part of exploration and development.

The final stage involves the **demonstration and meaningful presentation of achievement**. Children should have opportunities to make the results of their intellectual, creative, and practical activities visible to others. They may display a construction, explain the results of an experiment, perform an invented story, present a drawing, demonstrate a game they have created, or share the outcomes of an individual or collaborative project. Such presentation gives the activity a social dimension and allows children to experience their ideas as meaningful contributions to the group.

The purpose of demonstrating achievement is not to establish competition or rank children according to ability. Instead, presentation provides another developmental opportunity. When children explain a project, they need to organize their ideas, describe decisions, answer questions, and sometimes reconsider their own conclusions. They also experience the social value of creative and intellectual activity by seeing that their work can generate interest, discussion, or new ideas among others.

The educator's feedback during this stage is especially important. Rather than repeatedly describing a child as "the smartest" or emphasizing fixed intellectual superiority, the teacher should draw attention to effort, originality, strategy, persistence, discovery, revision, and improvement. Such feedback helps prevent motivation from becoming dependent on a giftedness label. It also communicates that achievements emerge through meaningful engagement and continued development rather than from an unchangeable personal characteristic.

Taken together, the stages of the model form a cyclical developmental process in which **potential generates interest, interest supports meaningful choice, choice leads to challenging activity, challenging activity is strengthened through individualized support, experience is consolidated through reflection, and productive achievement creates new developmental possibilities**. Achievement is therefore not the endpoint of the model. Successful participation may generate new questions, interests, strategies, and abilities that require further observation and increasingly sophisticated activities. In this sense, the cycle continually returns to the recognition of new potential.

Giftedness development can consequently be understood as the interaction of several essential factors: **individual potential, meaningful activity, optimal challenge, child agency, and pedagogical support**. Potential alone is insufficient if children do not encounter situations in which it can be expressed. Meaningful activity creates the context for engagement, while optimal challenge prevents both boredom and excessive frustration. Child agency enables children to make decisions and take intellectual ownership of their activity, and pedagogical support helps them move beyond what they can currently accomplish independently. The interaction of these factors creates the developmental

conditions through which emerging potential can become increasingly complex and productive.

From a functional perspective, the proposed model can be organized into four interconnected blocks. The **diagnostic-motivational block** combines observation of children's emerging potential with the activation of meaningful interest. Its function is to identify areas in which children demonstrate unusual strengths and to create situations that encourage them to engage more deeply. The **activity-developmental block** includes choice, exploration, creative problem-solving, and differentiated activity. Within this block, potential is transformed into active experience as children investigate problems, create products, test ideas, and develop increasingly sophisticated strategies.

The **supportive-regulatory block** concerns teacher scaffolding, emotional support, adjustment of task difficulty, and cooperation with other participants in the educational process. Its purpose is to maintain an appropriate relationship between challenge and support so that children remain intellectually engaged without becoming unnecessarily frustrated or dependent on adult direction. Finally, the **reflective-productive block** includes reflection on the learning process, presentation and evaluation of outcomes, recognition of progress, and identification of directions for subsequent activity. These four blocks should not function as isolated components; together they create a unified developmental system.

The effectiveness of the proposed model depends on several **pedagogical conditions for its implementation**. One of the most important is the availability of a rich and varied developmental environment. Children need access to materials and experiences that make different types of activity possible. These may include construction materials, natural objects, art resources, books, maps, puzzles, simple scientific tools, musical instruments, loose parts, modelling materials, and developmentally appropriate digital resources. Such diversity enables children to manipulate, compare, transform, investigate, represent, design, and create in different ways.

An enriched environment should not, however, be equated with expensive equipment. The developmental value of a material depends largely on the possibilities for action that it provides. A simple cardboard box, for example, can become a house, vehicle, robot, theatre, laboratory, shop, or imaginary machine depending on the child's purpose and imagination. A highly programmed electronic toy may offer fewer possibilities if it permits only a limited number of predetermined actions. Enrichment should therefore be evaluated according to the **range, flexibility, and complexity of activity possibilities**, rather than the financial value of the materials available.

Another essential condition is the provision of **optimal challenge**. Activities that are consistently too easy provide little opportunity for new learning and may lead to boredom or superficial participation. Activities that are far beyond the child's current possibilities, on the other hand, can produce frustration and withdrawal. The educator therefore needs to understand the child's present level of functioning and introduce challenges that extend

slightly beyond routine performance while remaining achievable through effort, experimentation, and appropriate support.

This principle is particularly important for children who learn rapidly. Repetition of already mastered tasks may create the appearance of successful participation while doing little to develop potential. In such cases, the teacher needs to increase the depth, openness, complexity, or independence required by the activity. The objective is not simply to accelerate the child through formal curricular content but to create increasingly sophisticated opportunities for thinking and creativity.

A further pedagogical condition is **child agency**. Children should have meaningful opportunities to influence their own activity. Agency may involve choosing materials, selecting between alternative strategies, proposing questions, organizing roles within a group, changing an unsuccessful plan, deciding how to investigate a problem, or selecting a way to present an outcome. These decisions encourage responsibility and strengthen the child's sense of ownership over the learning process.

At the same time, agency should not be confused with unrestricted freedom or the absence of adult guidance. Preschool children continue to need a structured and secure environment. The educator establishes appropriate boundaries, prepares meaningful alternatives, introduces developmental challenges, and ensures that available choices contribute to educational objectives. Within this structure, children are gradually given greater responsibility for decisions they are developmentally ready to make. Agency therefore develops through an appropriate balance between pedagogical organization and meaningful independence.

**Teacher scaffolding** represents another essential condition. The educator should support children's progress without taking control of the activity or solving problems on their behalf. Support may gradually move from demonstration to a guided attempt, then to prompting, independent action, and finally extension into a more complex task. The amount and form of assistance should change according to the child's response.

When a child encounters difficulty, the teacher should avoid immediately providing the correct answer. Questions such as what else could be tried, why a particular result occurred, or whether another solution might be possible can maintain the child's intellectual ownership of the problem. Effective scaffolding gives children enough support to continue thinking while preserving the challenge necessary for development. As competence increases, support should gradually decrease and independence should increase.

The model also requires **emotional safety**. Giftedness development cannot be separated from children's emotional experience. Children need to feel safe enough to propose unusual ideas, ask difficult questions, change their opinions, make mistakes, and attempt tasks whose outcomes are uncertain. An environment dominated by evaluation, comparison, or excessive expectations may discourage precisely the exploratory behavior that the model seeks to develop.

Excessive praise based on intelligence can also create unintended pressure. If a child repeatedly receives the message that personal value depends on always being "smart" or

successful, challenging activities may become threatening because failure appears to endanger that identity. The educator should therefore normalize error as part of learning and emphasize exploration, persistence, strategy, revision, and improvement. A failed attempt can then become a source of information rather than a reason to avoid future challenges.

Finally, effective implementation requires **cooperation with families**. Parents and other family members can provide valuable information about children's interests and self-initiated activities outside the preschool institution. Some children may demonstrate sustained interests at home that are not immediately visible in the classroom. A child may repeatedly investigate a particular natural phenomenon, construct complex objects, create stories, experiment with numbers, draw maps, collect and classify objects, or show sustained interest in music, technology, animals, or other topics.

Regular communication between educators and families can help determine whether such patterns appear across contexts and remain stable over time. At the same time, families may benefit from guidance concerning developmentally appropriate support. Recognition of advanced potential should not result in excessive academic pressure, continuous tutoring, or the elimination of play. Parents should be encouraged to provide resources, conversations, experiences, and opportunities for exploration while respecting the child's interests and emotional needs.

Regardless of the level of cognitive advancement, preschool children continue to require **movement, relationships, emotional security, imagination, rest, and free play**. These experiences are not obstacles to giftedness development; they are fundamental components of healthy early development. The proposed model therefore seeks to develop advanced potential without transforming preschool education into premature formal schooling. Its central objective is to create a balanced environment in which children's emerging abilities can be recognized, challenged, supported, and extended while the essential developmental characteristics of childhood are preserved.

### Discussion

The findings support a **developmental interpretation of giftedness in early childhood**, according to which giftedness should not be viewed as a fixed characteristic that can be fully identified at a particular moment. Rather, it represents emerging potential that develops through interaction between the child's abilities, motivation, experiences, educational environment, and opportunities for meaningful activity. This perspective is particularly relevant to preschool education because children's abilities are still undergoing rapid development and may become visible differently depending on the context in which they are observed.

One of the persistent problems in gifted education is the tendency to treat **identification and educational provision as two separate processes**. Within this traditional logic, a child is first assessed and classified as gifted, after which differentiated educational opportunities are provided. Such an approach may create a gap between recognizing potential and creating the conditions necessary for that potential to develop. It may also

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overlook children whose advanced abilities are not immediately visible through conventional forms of assessment.

The activity-oriented model proposes a different logic in which identification and development occur within the same educational process. Instead of waiting until particular children have been formally classified, educators create a rich and varied developmental environment for all children. Systematic observation of children's participation in this environment then helps identify those who require greater depth, complexity, independence, creativity, or specialized opportunities. In this way, educational activity becomes both the context for discovering potential and the mechanism through which it is developed.

Such an approach makes giftedness development more inclusive. Children are not required to demonstrate advanced ability through one predetermined type of performance before receiving challenging educational experiences. Instead, all children have opportunities to participate in diverse activities, and the educator observes where unusual strengths, interests, or learning patterns emerge. This is particularly important in early childhood because giftedness may manifest across multiple domains. Recent reviews confirm both the complexity of identifying giftedness at this age and the diversity of its possible manifestations [1], [3]. Advanced potential may become visible through language, mathematical reasoning, problem-solving, creativity, artistic expression, spatial thinking, or other forms of activity. Consequently, excessive dependence on a single assessment instrument may overlook children whose strengths emerge in less conventional situations.

The findings also emphasize the importance of **creativity as an integral component of giftedness development**. Creativity should not be regarded as an optional addition that becomes relevant only after intellectual abilities have been developed. Rather, it represents one of the principal mechanisms through which children transform existing knowledge, generate alternatives, explore possibilities, and produce original outcomes. Research comparing gifted young children with their peers has examined meaningful relationships between creative potential and scientific imagination, further demonstrating the developmental importance of creativity [5].

For this reason, the activity-oriented model gives particular attention to tasks involving invention, hypothesis generation, alternative solutions, experimentation, and transformation. A child who is asked simply to reproduce a demonstrated object may reveal accuracy and memory, whereas a child who is asked to redesign that object for a new purpose can demonstrate flexibility, imagination, planning, and problem-solving. Creative activity therefore provides both a developmental opportunity and a valuable context for observing emerging potential.

Another significant implication concerns **differentiated education**. A critical review of gifted education in early childhood published in 2023 identified differentiated educational practices as an important area requiring continued attention and development [6]. This supports the argument that identifying giftedness without changing the educational experience has limited pedagogical value. The purpose of recognizing

advanced potential should ultimately be to determine how educational opportunities can be adapted to meet the child's developmental needs.

The activity approach provides a practical mechanism for such differentiation because the same general activity can be organized at different levels of intellectual demand. A construction activity illustrates this principle clearly. One child may reproduce a structure according to a model, while another may modify the model according to personal ideas. A child requiring greater challenge may design an entirely original structure, investigate why a particular construction remains stable, compare different materials, or determine how the same structure can be created using fewer resources. Although the children participate within a common activity context, the cognitive demands can vary considerably.

This type of differentiation has an important advantage because it allows children with advanced potential to remain part of the social life of the group while receiving developmentally appropriate challenges. Giftedness education does not necessarily require continuous separation from peers. Collaborative activities can provide valuable opportunities for leadership, explanation, negotiation, empathy, perspective-taking, and communication. Children may also develop their understanding when they explain strategies, listen to alternative ideas, or collaborate on complex problems.

At the same time, collaborative learning needs to be carefully organized. A child with advanced abilities should not continually be placed in the role of completing difficult tasks for other children or functioning as an informal assistant to the teacher. Such a pattern may reduce the child's own opportunities for development. Group roles should therefore be deliberately varied so that every child encounters both collaborative responsibility and personal intellectual challenge. The proposed model consequently combines **individualization with meaningful social participation** rather than treating them as opposing educational principles.

The findings also suggest a substantial transformation in the **professional role of the preschool educator**. Within an activity-oriented model, the teacher is not primarily responsible for transmitting increasingly advanced information to children who demonstrate high ability. Instead, the educator becomes an observer of developmental potential, a designer of meaningful situations, a facilitator of exploration, a source of carefully calibrated scaffolding, a questioner who stimulates deeper thinking, and a documenter of developmental progress.

This role requires considerable professional competence. Educators need to recognize possible indicators of advanced potential without interpreting every unusual behavior as evidence of giftedness. They need to understand how to differentiate activities according to complexity, openness, depth, and independence. They must also be able to observe children's learning processes rather than concentrating only on final results, communicate constructively with families, organize inclusive learning environments, and use documentation to identify developmental patterns over time.

Teacher attitudes are equally important. Research examining educators' attitudes toward gifted students and gifted education indicates that teachers may recognize the

distinctive needs of gifted learners while holding more complex or uncertain attitudes toward specific forms of educational intervention [7]. This suggests that successful implementation cannot depend on curriculum design alone. Professional development should accompany methodological innovation so that educators understand both the theoretical foundations of giftedness and the practical strategies required to support emerging potential.

The activity-oriented perspective also provides an important safeguard against **excessive academicization of preschool childhood**. Children with advanced abilities remain preschool children, and recognition of gifted potential should not be interpreted as justification for transforming preschool education into accelerated primary schooling. The objective is not to introduce formal school content as early as possible or to measure development according to how far a child has progressed into the next educational stage.

Instead, the objective is to provide **richer intellectual and creative experiences that remain developmentally appropriate**. Play, exploration, imagination, experimentation, communication, movement, and creativity should therefore remain central components of the educational process. The complexity of children's thinking can be increased without abandoning these forms of activity. A sophisticated construction problem, scientific investigation, imaginative project, or collaborative design task may provide substantial intellectual challenge while remaining fully consistent with the developmental characteristics of preschool education.

In practical terms, educators implementing the model should regularly organize **open-ended activities** in which several solutions or pathways are possible. Children's spontaneous questions, recurring interests, preferred materials, and self-initiated investigations should be documented and subsequently used in pedagogical planning. When a child repeatedly demonstrates interest in a particular phenomenon, the educator can extend the experience through new materials, questions, resources, or related problems rather than waiting for a predetermined curricular sequence.

Assessment should similarly be based on multiple observations rather than a single performance. Educators should document not only what children accomplish but also how they approach activities. Important indicators may include originality, persistence, independence, strategy selection, willingness to revise an unsuccessful approach, ability to transfer knowledge, communication of ideas, and responsiveness to challenge. This process-oriented evidence provides a more comprehensive understanding of emerging potential than the final product alone.

Children who complete ordinary activities rapidly should receive **greater complexity rather than merely a greater quantity of work**. If a child has already mastered a particular type of task, repeated exercises are unlikely to provide sufficient developmental stimulation. Instead, the educator can introduce additional conditions, require alternative strategies, increase independence, invite the child to generate a new problem, or extend the activity into a longer investigation. Such qualitative differentiation preserves engagement while promoting higher levels of thinking.

Project-based activities can be especially useful because they naturally integrate different forms of ability. Themes such as **“Space Station,” “Our Future City,” “How Plants Live,” “Invent a New Toy,”** or **“Protect Our Planet”** can combine scientific reasoning, language, mathematics, art, construction, imagination, communication, and cooperation within a shared developmental context. One child may focus on constructing a model, another on explaining scientific principles, another on developing a story, and another on organizing information visually. The same project can therefore reveal and support several different forms of potential.

Preschool educators should also periodically evaluate the **balance of opportunities within the educational environment**. If almost all advanced activities depend on verbal fluency, for example, children with spatial, technical, artistic, musical, practical, or other strengths may receive fewer opportunities to demonstrate their potential. Similarly, if tasks are consistently teacher-directed, children whose strengths are most visible through independent exploration may remain unnoticed. Reviewing the diversity of activities is therefore an important part of inclusive giftedness development.

The proposed model is theoretically grounded, but its effectiveness requires **empirical validation**. Future research should examine the model through experimental, quasi-experimental, and longitudinal studies conducted in preschool educational organizations. Such investigations could compare children's developmental indicators before and after implementation and examine changes in creativity, problem-solving, motivation, independence, persistence, and productive activity. Longitudinal studies would be particularly valuable because they could demonstrate whether early manifestations of potential remain stable, change domains, or become more differentiated as children gain new experiences.

Future research should also pay particular attention to **culturally responsive identification**. Children's opportunities to demonstrate advanced potential are influenced by language, family experiences, socioeconomic conditions, cultural expectations, and access to educational resources. A behavior regarded as an indicator of giftedness in one context may not be expressed in precisely the same way in another. Identification procedures should therefore avoid privileging only children whose previous experiences correspond closely with the expectations of formal education.

This issue is especially relevant when considering children who have had unequal access to books, digital resources, enrichment activities, preschool programs, or adult-guided learning experiences. Lower familiarity with a particular type of task should not automatically be interpreted as lower developmental potential. Activity-based observation across varied contexts can help educators distinguish between differences in previous experience and differences in learning potential.

Future studies in **Uzbekistan** could make a particularly valuable contribution to this area by examining how giftedness is understood and expressed within local linguistic, cultural, family, and preschool educational contexts. Research could investigate the readiness of preschool educators to identify and support emerging giftedness, including

their knowledge of developmental indicators, differentiation strategies, creative and problem-based activities, observation procedures, and dynamic forms of pedagogical support.

Family perceptions also represent an important direction for future investigation. Parents' beliefs about giftedness may influence which abilities they recognize, how they respond to children's advanced interests, and whether they prefer acceleration, enrichment, additional formal instruction, or more child-centred developmental opportunities. Understanding these perceptions could help preschool institutions develop more effective cooperation with families and reduce the risk of both under-support and excessive pressure.

Finally, future empirical studies could examine the effectiveness of **activity-based differentiated programs in Uzbek preschool settings**. Such research could explore whether systematic implementation of enriched activities, child choice, optimal challenge, creative problem-solving, individualized scaffolding, and reflection produces measurable developmental benefits. It could also investigate which components of the model are most effective for different forms of potential and how implementation varies according to teacher experience, institutional resources, and children's developmental characteristics.

Overall, the findings suggest that the activity-oriented model offers a framework for moving gifted preschool education away from a narrow identification-centred approach toward a **development-centred approach**. The central question is no longer simply whether a child can be classified as gifted. More important questions concern where potential becomes visible, which activities activate it, what level of challenge promotes further development, what support the child requires, and how the educational environment can continuously respond to emerging abilities. In this way, giftedness development becomes an integral part of inclusive, differentiated, and developmentally appropriate preschool pedagogy..

### Conclusion

Developing giftedness in preschool childhood requires a shift from a static understanding of ability toward a developmental understanding of potential.

The central pedagogical task should not be limited to identifying a small group of children who already demonstrate outstanding performance. Preschool education should create conditions in which children's different forms of potential can become visible, receive appropriate support, and develop through meaningful activity.

The activity approach provides a particularly appropriate methodological foundation because preschool children develop through action, exploration, play, communication, experimentation, and creative production.

The proposed model—

Diagnosis of Potential → Motivational Engagement → Activity Choice → Creative–Problem-Based Activity → Individual Support → Reflection → Demonstration of Achievement

—integrates identification and development within a single pedagogical process.

Its central principle can be expressed as follows:

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giftedness becomes pedagogically meaningful when potential is transformed into productive activity.

For this transformation to occur, children require enriched environments, meaningful choices, optimal challenge, differentiated support, emotional safety, teacher scaffolding, and opportunities to demonstrate and reflect on their achievements.

An activity-oriented approach therefore changes the educator's question from "Is this child gifted?" to "What does this child's activity reveal about their potential, and what educational opportunity should be offered next?"

This change is significant because it places development rather than labeling at the center of gifted education.

Ultimately, the purpose of preschool gifted education should not be to accelerate childhood but to enrich it. When children are given opportunities to investigate deeply, imagine freely, create independently, solve meaningful problems, cooperate with others, and experience the satisfaction of discovery, their individual potential can develop in a natural and sustainable way. Such an approach establishes a foundation not only for future academic achievement but also for creativity, curiosity, autonomy, resilience, and lifelong engagement in learning.

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