

METHODOLOGY FOR IDENTIFYING AND DEVELOPING GIFTEDNESS IN PRESCHOOL CHILDREN BASED ON THE ACTIVITY APPROACH

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Abstract

Identifying and developing giftedness during the preschool period is a complex pedagogical task because young children's abilities are still developing and may manifest differently depending on the activity, educational environment, motivation, and level of adult support. Therefore, identifying giftedness only through standardized testing or isolated observations may not fully reveal a child's developmental potential. This article proposes a methodology for identifying and developing giftedness in preschool children based on the activity approach. The study employs theoretical analysis, comparative analysis, content analysis, pedagogical synthesis, classification, and methodological modelling of recent research on giftedness and early childhood education. Within the proposed methodology, giftedness is regarded as a dynamic potential that becomes visible through children's meaningful participation in play, experimentation, construction, creative production, communication, problem-solving, project activity, and other forms of developmentally appropriate activity. The methodology consists of interconnected stages: Initial Observation → Activity-Based Diagnosis → Identification of the Child's Potential Profile → Selection of Developmental Tasks → Differentiated Activity → Pedagogical Support → Monitoring and Reflection. Particular attention is paid to the use of open-ended tasks, problem situations, observation protocols, portfolios, creative products, and dynamic assessment. The article also proposes indicators for identifying cognitive, creative, motivational, practical, and social-communicative manifestations of giftedness. It is concluded that activity-based identification makes it possible to move from the early labelling of children toward continuous observation and development of individual potential. The effectiveness of this methodology depends on an enriched developmental environment, differentiated pedagogical tasks, systematic documentation, teacher competence, emotional safety, and cooperation with families.

Keywords: giftedness, preschool children, activity approach, identification of giftedness, giftedness development, activity-based diagnosis, individual potential, differentiation, preschool education, pedagogical methodology.

Introduction

Supporting children's individual abilities is one of the most important objectives of contemporary preschool education. During early childhood, children differ considerably in their pace of development, interests, cognitive strategies, imagination, motivation, communication, and preferred forms of activity. Some children acquire new information

rapidly, some demonstrate unusual curiosity, some produce original ideas, while others show advanced spatial, mathematical, artistic, linguistic, practical, or social abilities.

Recognizing such differences is important because a child's potential may remain underdeveloped when the educational environment does not provide sufficient opportunities for its manifestation.

At the same time, identifying giftedness in preschool childhood is methodologically difficult.

Giftedness is not a single, easily observable characteristic. Contemporary research increasingly considers it a complex and developmental phenomenon influenced by cognitive, motivational, social, cultural, and educational factors [1]. A child who demonstrates high performance in one situation may not necessarily demonstrate the same level in another. Similarly, a child whose potential is not immediately visible in a formal assessment may demonstrate exceptional performance during construction, experimentation, storytelling, artistic production, or problem-solving.

This creates an important pedagogical question: How can preschool educators identify children's potential without reducing giftedness to a single test result or subjective impression?

Recent research demonstrates that the problem remains relevant. Kuznetsova, Liashenko, Zhozhikashvili, and Arsalidou [1] emphasize that giftedness identification continues to involve considerable conceptual and methodological debate. Their systematic review indicates that identification practices use different cognitive measures and criteria and increasingly require attention to culturally appropriate assessment.

For preschool education, the challenge is even more complex.

Children's abilities at this age are highly dynamic. Development may occur rapidly, unevenly, and differently across domains. A child may demonstrate advanced language development but age-typical motor performance. Another may show exceptional visual-spatial reasoning but limited confidence in verbal communication. A third child may demonstrate high creativity without producing the expected answers in conventional cognitive tasks.

The purpose of the present study is to develop and theoretically substantiate a methodology for identifying and developing giftedness in preschool children based on the activity approach.

The study addresses the following objectives:

1. to clarify the role of activity in identifying preschool children's potential;
2. to determine observable indicators of giftedness in different forms of activity;
3. to develop a staged methodology for activity-based identification;
4. to determine methods for transforming diagnostic information into differentiated developmental activity;
5. to propose monitoring procedures for evaluating the dynamics of children's potential;
6. to identify pedagogical conditions necessary for implementing the methodology.

The central proposition of the study is that the identification of giftedness should not be an isolated diagnostic event but a continuous pedagogical process in which children's potential is observed, challenged, supported, and reassessed through meaningful activity.

Materials and Methods

The study was conducted using a theoretical-analytical research design.

Recent literature on giftedness identification, intellectual precocity, preschool gifted education, differentiation, developmental assessment, and educational support was analysed.

The following research methods were applied:

- theoretical analysis;
- comparative analysis;
- content analysis;
- classification;
- pedagogical synthesis;
- methodological modelling.

The analysis focused primarily on publications from 2021–2025.

The methodological framework was based on four principles.

The first was the developmental principle, according to which giftedness is regarded as potential that may change and become more differentiated over time.

The second was the activity principle, according to which children's abilities should be observed through meaningful actions rather than only through verbal responses or formal testing.

The third was the multidimensional principle, according to which potential may manifest in cognitive, creative, motivational, practical, artistic, and social domains.

The fourth was the dynamic assessment principle, according to which the educator considers not only what a child can do independently but also how the child's performance changes after prompts, examples, questions, or minimal pedagogical support.

Within this study, the methodology was constructed around the sequence: Observe → Diagnose through Activity → Profile Potential → Differentiate → Support → Monitor → Develop Further.

Results

The analysis demonstrated that activity-based identification of giftedness should begin with systematic and purposeful observation rather than immediate classification of children. In the preschool period, children's abilities are still developing, and their potential may become visible in different ways depending on the type of activity, level of motivation, social context, and educational conditions. Therefore, the educator should observe children in their ordinary preschool environment and document recurring manifestations of advanced or unusual potential. An important methodological requirement at this stage is the repetition of similar manifestations across different contexts. A single impressive achievement should not be regarded as sufficient evidence for a strong pedagogical conclusion. For example, if a child constructs an unusually complex structure on one

occasion, the educator should subsequently observe whether similar spatial reasoning, planning, and problem-solving abilities appear during puzzles, modelling, drawing, map-based activities, or other construction tasks. When similar patterns repeatedly emerge in different situations, the evidence of advanced potential becomes more reliable. Consequently, the first methodological principle of activity-based identification is that children's potential should be recognized through **stable patterns of activity rather than isolated achievements**.

The first stage of the methodology is **initial observation**, which takes place during children's natural and familiar activities rather than in a specially organized examination situation. The educator observes the child during free play, construction, drawing, storytelling, mathematical games, experimentation, outdoor investigation, music and movement activities, group discussions, and project work. The diversity of these situations is particularly important because different forms of potential may become visible in different activities. During observation, the teacher records behaviors that appear qualitatively different from typical age-related performance. Such manifestations may include rapid acquisition of new knowledge, unusual or complex questions, advanced vocabulary, original ideas, sophisticated constructions, exceptional memory, sustained concentration, leadership, creative humour, or persistent interest in a particular topic. Nevertheless, every advanced behavior should not automatically be interpreted as evidence of giftedness. At this stage, observation is intended to formulate a preliminary pedagogical hypothesis rather than establish a definitive label. The educator may conclude that a child appears to demonstrate advanced potential in a particular area and that additional observation and appropriately designed activities are required to understand this potential more accurately.

The second stage is **activity-based diagnosis**. At this stage, the educator deliberately organizes activities in which the potential identified during initial observation can become more clearly visible. Unlike conventional testing, these activities should be sufficiently open-ended to allow children to demonstrate different strategies, levels of complexity, independence, and creativity. The purpose is not merely to determine whether the child can provide the correct answer, but to understand how the child thinks, plans, experiments, responds to difficulty, and modifies actions. For example, instead of simply asking a child which of two towers is taller, the teacher may suggest, "Build the tallest tower you can, but it must stand by itself." Such a task provides considerably richer diagnostic information because the educator can simultaneously observe planning, spatial reasoning, experimentation, prediction, error correction, persistence, and creativity. Similarly, instead of asking children merely to name geometric shapes, the educator may provide several shapes and ask how many different pictures they can create from them. In this case, the activity reveals not only knowledge of geometric forms but also flexibility of thinking, imagination, originality, and the ability to transform existing information into a new product.

Activity-based diagnosis may include several interconnected categories of tasks.

Cognitive-problem tasks involve classification, comparison, pattern recognition, reasoning, prediction, and problem-solving. For instance, children may be given several objects and asked to find three different ways of dividing them into groups. A child who first classifies the objects according to colour, then according to shape, and finally according to function demonstrates cognitive flexibility that extends beyond simple recognition or reproduction of a learned rule. The educator therefore evaluates not only the final classification but also the child's ability to change criteria and generate alternative strategies.

Creative tasks are equally important because gifted potential may manifest through originality and the ability to move beyond familiar patterns. Such tasks should permit several possible solutions rather than require one predetermined response. Children may be asked to think of different uses for an ordinary box, draw an animal that has never existed, invent another ending for a familiar story, or construct something that can move without wheels. During these activities, the educator observes originality, flexibility, elaboration, imagination, and the child's willingness to experiment with unconventional ideas. The diagnostic value of these tasks lies in providing sufficient freedom for individual ways of thinking to become visible.

Exploratory tasks provide another important context for identifying potential. These activities allow children to formulate assumptions, make predictions, test ideas, observe results, and revise initial explanations. For example, the educator may present several objects and ask children which ones they think will float and why. After making predictions, the children test the objects in water and compare the results with their original assumptions. In this situation, particular attention should be paid to whether the child can reconsider an initial explanation when evidence contradicts the prediction. This is pedagogically significant because advanced potential may be demonstrated not only through knowing the correct answer but also through the ability to **learn from evidence, revise a hypothesis, and construct a new explanation**.

Gifted potential can also become visible through **social-communicative activity**. Group situations allow educators to observe abilities that may not emerge during individual cognitive tasks. Particular attention can be given to leadership, the ability to explain ideas clearly, organize peers around a common activity, negotiate different viewpoints, recognize other children's perspectives, and generate strategies that help the group solve a problem. Consequently, activity-based identification should not equate giftedness exclusively with advanced individual cognitive performance. Social initiative, communicative competence, organizational ability, and sensitivity to other participants may also constitute meaningful areas of emerging potential.

The third stage of the methodology is **developing an individual potential profile**. After collecting evidence through systematic observation and activity-based diagnostic situations, the educator summarizes the information in a descriptive profile of the child. The purpose of such a profile is not to divide children rigidly into "gifted" and "not gifted" categories. Instead, it should provide a multidimensional description of the child's

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strengths, interests, preferred activities, characteristic strategies, level of independence, motivational features, developmental needs, and the conditions under which advanced performance most consistently emerges. For example, one child may demonstrate strong verbal creativity and storytelling ability, while another may show advanced spatial reasoning during construction and modelling. A third child may display exceptional curiosity and persistence in exploratory activities, whereas another may demonstrate leadership and sophisticated social organization during collaborative play.

Such an individual profile enables the educator to move from identification toward purposeful pedagogical support. It answers not only the question of **what the child can currently do**, but also **which conditions allow the child's potential to become visible and what type of activity should be offered next to support further development**. In this sense, activity-based diagnosis is not an endpoint. It becomes the foundation for selecting differentiated tasks, creating appropriate developmental challenges, monitoring progress, and continuously adjusting educational support according to the child's emerging potential.

Table 1. Indicators for an Activity-Based Potential Profile

Dimension	Observable indicators
Cognitive	Rapid understanding, advanced comparison, generalization, pattern recognition, reasoning
Creative	Original ideas, alternative solutions, imagination, transformation of materials
Motivational	Curiosity, persistence, deep interest, self-initiated investigation
Practical-constructive	Planning, modelling, spatial reasoning, effective manipulation of materials
Verbal	Advanced vocabulary, storytelling, explanation, sophisticated questions
Social-communicative	Leadership, negotiation, explanation to peers, social sensitivity
Self-regulatory	Planning, monitoring actions, correcting errors, sustained attention

This profile allows the educator to recognize that children's potential may have different configurations and may become visible through different forms of activity. One child may demonstrate particularly strong verbal and creative abilities through storytelling, imaginative play, and the generation of original ideas, while another may display advanced mathematical and constructive reasoning during classification, modelling, puzzles, or construction activities. A third child may show leadership, organizational ability, and strong social-communicative potential during collaborative tasks. These differences demonstrate that giftedness in preschool childhood should not be understood as a uniform set of characteristics. Instead, each child may have an individual combination of strengths, interests, motivational features, and developmental needs. Consequently, the educational

response should also be individualized. The purpose of the potential profile is therefore not only to describe what the child currently does well but also to determine which pedagogical conditions and types of activity are most likely to promote further development.

The fourth stage of the methodology is **the selection of developmental tasks**. Once an area of advanced potential has been identified, diagnostic information should immediately become part of pedagogical planning. Identification is meaningful only when it leads to an educational response appropriate to the child's developmental needs. The educator therefore selects tasks that correspond to the observed strength while providing a level of challenge slightly beyond the child's routine performance. This relationship can be understood as a progression from **observed potential to developmental need and then to an appropriate challenge**. In other words, the teacher does not simply record the fact that a child demonstrates advanced performance; the teacher uses this information to determine what kind of task should be offered next.

For example, if a child easily completes ordinary classification exercises, simply providing a larger number of similar tasks is unlikely to produce significant developmental progress. Instead, the intellectual complexity of the activity should be increased. The child may be asked to classify the same objects in several different ways, determine whether one object can simultaneously belong to more than one category, or develop an original classification rule for other children to identify. Although the amount of work may remain almost unchanged, the cognitive demands become substantially greater. The child moves from reproducing a known rule toward comparing alternatives, changing criteria, generating principles, and explaining reasoning. This approach represents **qualitative differentiation**, in which the emphasis is placed not on increasing the quantity of activities but on enriching their intellectual and creative content.

The fifth stage is **differentiated activity**, through which the educator adapts educational tasks to the child's emerging potential. Within the proposed methodology, differentiation can be implemented through complexity, openness, independence, and depth. Differentiation by complexity means increasing the cognitive demands of a task. Instead of repeating an already mastered action, the child is encouraged to establish relationships, formulate hypotheses, compare strategies, or solve more complex problems. Differentiation by openness involves replacing tasks that have only one predetermined answer with situations that permit several possible solutions. Such tasks are particularly valuable for revealing creativity, flexibility, and originality because children are given an opportunity to develop their own approaches rather than reproduce an adult-provided pattern.

Differentiation by independence involves gradually reducing direct teacher assistance as the child becomes more competent. At the beginning of an unfamiliar activity, the educator may provide more explicit guidance, but responsibility for planning, selecting strategies, and evaluating results is progressively transferred to the child. This enables the teacher to observe not only what the child can achieve with adult support but also how effectively the child can organize independent activity. Differentiation by depth, in turn,

allows a child to investigate a topic beyond the basic educational content expected for the group. The objective is not premature academic acceleration but deeper exploration of a meaningful problem.

For instance, during a preschool project about plants, most children may explore the basic conditions necessary for plant growth, such as water, light, soil, and warmth. A child demonstrating particularly strong scientific curiosity can be encouraged to investigate a more complex question, such as what happens when two similar plants receive the same amount of water but different amounts of light. The child may make a prediction, observe changes over several days, record differences, compare the results, and attempt to explain what happened. In this way, an ordinary learning activity develops into an elementary form of research. The child is no longer simply reproducing previously presented information but is actively constructing knowledge through observation, comparison, and evidence-based reasoning. Such differentiation creates an important connection between identified potential and subsequent development.

The sixth stage of the methodology is **pedagogical support**. Differentiated activities cannot produce the desired developmental effect if the child is either left entirely without assistance or receives so much help that the intellectual challenge disappears. Pedagogical support therefore needs to be flexible, responsive, and carefully adjusted to the child's current needs. The proposed methodology follows a gradual scaffolding logic in which the educator may begin with a prompt, continue with a guiding question or a small hint, provide an appropriate resource when necessary, allow the child to make an independent attempt, and finally encourage reflection on the strategy and result. The central principle is that the educator should provide the **minimum amount of support required for further progress**.

This principle also has important diagnostic significance. A child's initial inability to complete a task should not automatically be interpreted as evidence of limited potential. In some cases, a small prompt may enable the child to recognize the central relationship, solve the problem, and subsequently transfer the newly discovered strategy to another situation. Such responsiveness to limited support can reveal developmental possibilities that would remain invisible if assessment considered only independent first-attempt performance. For this reason, dynamic observation within the proposed methodology pays particular attention to how children respond to assistance, how quickly they integrate a hint, whether they can generalize the newly understood principle, and whether they subsequently require less support.

The questions used by the teacher should stimulate the child's thinking rather than substitute for it. Instead of explaining exactly what to do, the educator may ask what the child has already tried, what else might happen, whether another solution is possible, what additional information might be useful, or which particular part of the problem is causing difficulty. Such questions preserve the child's intellectual ownership of the activity. The teacher remains an active participant in the developmental process but does not become the person who solves the problem on behalf of the child. In this way, pedagogical support

becomes both a means of development and a source of additional information about the child's learning potential.

The seventh stage is **monitoring and reflection**. The identification of giftedness in preschool childhood should never be regarded as a final and irreversible conclusion because children's abilities, interests, motivation, and developmental needs continue to change. A strength that is strongly expressed at one stage may later become integrated with another area of development, while abilities that were initially less visible may emerge when new activities and experiences become available. Therefore, the proposed methodology treats identification as an open and continuously revisable process.

Periodic monitoring enables the educator to compare earlier observations with current performance and adjust pedagogical support accordingly. The monitoring process may be organized around a simple recurring sequence in which the teacher observes the child, compares current performance with previous evidence, documents meaningful changes, and adjusts the level or type of challenge. During this process, the educator considers whether the child's interest in a particular area remains stable, whether the complexity of tasks is appropriate, whether the level of independence is increasing, whether new manifestations of potential are emerging, whether previously identified strengths are becoming more sophisticated, and whether additional resources or experiences are required. The purpose of monitoring is therefore not merely to measure progress but to maintain an appropriate relationship between the child's changing potential and the educational environment.

Reflection should also include the child. In preschool education, reflective activity does not need to involve abstract or complicated self-analysis. Simple and concrete questions can help children become increasingly aware of their interests, strategies, difficulties, and achievements. The teacher may ask what the child enjoyed most, what seemed difficult, what was discovered during the activity, what the child would like to explore next, or whether the problem could be solved differently on another occasion. Children's responses provide valuable information about intrinsic motivation and emerging interests while simultaneously supporting early metacognitive development. Reflection helps the child understand that the learning process includes exploration, difficulty, revision, discovery, and improvement rather than merely successful completion of a task.

An important practical instrument for supporting systematic monitoring is the **individual developmental portfolio**. The portfolio makes it possible to collect longitudinal evidence of the child's activities and to observe developmental patterns over time rather than relying on isolated impressions. Depending on the organization of the preschool institution and applicable ethical requirements, the portfolio may include photographs of constructions, drawings, stories created by the child, short teacher observation records, notable questions asked during activities, project products, records of experiments, examples of problem-solving, and brief observations provided by family members. Audio or video materials may also be included where institutional regulations and parental consent permit their use.

The value of the portfolio lies not in the number of materials collected but in their ability to demonstrate changes in the child's thinking, creativity, independence, motivation, and preferred forms of activity. Because gifted potential is not necessarily visible with equal intensity every day, longitudinal documentation makes recurring patterns easier to recognize. For example, an educator may initially perceive several unusual constructions as unrelated achievements, but portfolio evidence collected over several months may demonstrate a stable tendency toward sophisticated spatial planning, structural experimentation, and independent redesign. Similar patterns may become visible in storytelling, artistic production, mathematical reasoning, scientific investigation, or collaborative leadership.

The developmental portfolio should not, however, become a collection consisting only of ideal or highly successful products. Failed attempts, unfinished projects, revisions, changes in strategy, and comparisons between earlier and later work may provide equally important information. A structure that initially collapsed but was subsequently redesigned can demonstrate persistence, causal reasoning, and the ability to learn from error. An early story compared with a later narrative may reveal changes in vocabulary, imagination, structure, and complexity. For this reason, documentation should focus on the **developmental process as well as the final achievement**.

For practical implementation, the proposed methodology also organizes activities and observable indicators according to the type of potential they can reveal. Construction activities, for example, enable the educator to observe planning, spatial relationships, prediction, experimentation, and redesign and can therefore provide evidence of technical or spatial potential. Storytelling and alternative-ending activities reveal verbal fluency, imagination, originality, and narrative thinking. Classification and pattern-based tasks provide information about logical reasoning and cognitive flexibility, while simple experiments allow the observation of prediction, hypothesis formation, causal reasoning, and responsiveness to evidence. Artistic activities may reveal visual imagination and originality, whereas collaborative projects provide opportunities to observe leadership, negotiation, empathy, communication, and organizational ability. Free-choice investigations are particularly informative for evaluating sustained interest and intrinsic motivation because they reveal which activities children voluntarily return to when external direction is minimal.

Accordingly, no single activity should be expected to provide a complete picture of the child's potential. The methodological value lies in comparing evidence obtained from **different activities over time** and examining how particular characteristics recur, develop, or interact. Such an approach enables the educator to construct a more balanced and developmentally meaningful understanding of children's potential and provides a reliable foundation for planning subsequent differentiated educational experiences.

Table 2. Activity-Based Diagnostic Matrix

Activity	What the educator observes	Potential manifestation
Construction challenge	Planning, stability, redesign	Spatial/technical potential
Alternative story ending	Originality, coherence	Verbal/creative potential
Classification challenge	Multiple criteria	Logical potential
Simple experiment	Prediction, hypothesis, revision	Scientific potential
Open drawing	Transformation, originality	Artistic potential
Group project	Leadership, negotiation	Social potential
Puzzle/problem situation	Strategy, persistence	Cognitive potential
Free-choice investigation	Sustained interest	Motivational potential

The matrix should be regarded as a **pedagogical observation instrument rather than a formal diagnostic test**. Its purpose is to help the educator organize observations, compare children's manifestations across different types of activity, and identify recurring patterns that may indicate advanced potential. The matrix does not provide a definitive classification of a child as gifted or non-gifted. Instead, it supports a more systematic and developmentally sensitive interpretation of children's behavior, interests, strategies, and achievements. In this sense, the matrix functions as part of a broader methodological process in which observation, pedagogical interaction, differentiated support, and continuous monitoring are integrated.

The complete methodology can be understood as a sequence of interconnected pedagogical actions. It begins with observation of children's spontaneous activity in natural preschool situations. At this initial stage, the educator pays attention to behaviors that appear repeatedly and qualitatively exceed age-typical expectations. Once such manifestations are observed, the teacher identifies recurring signs of advanced potential and then organizes a specially designed activity that challenges the suspected strength. The purpose of this task is not simply to determine whether the child can produce the correct result, but to observe the strategy used during problem-solving, the level of independence, the ability to modify an unsuccessful approach, and the way in which the child responds to new information.

The educator then provides only the minimum pedagogical support necessary for the child to continue. This may involve a prompt, a guiding question, a hint, or access to an additional resource. The child's responsiveness to this support becomes an important source of developmental information. A child who quickly understands a new principle after limited assistance and is able to transfer it to another task may demonstrate significant learning potential even if the initial attempt was unsuccessful. Based on accumulated observations, the educator develops an individual potential profile that describes the child's strengths, interests, preferred strategies, motivational characteristics, and developmental needs.

The next step is to select differentiated developmental tasks that correspond to the identified potential. These tasks should increase not merely the amount of work but the level of intellectual, creative, or practical challenge. Children's progress is then documented through systematic observation, portfolio evidence, examples of products, records of strategies, and brief developmental notes. Finally, the educator periodically reassesses the child's current performance and adjusts the educational pathway according to changes in interests, independence, complexity of thinking, and emerging areas of potential. Thus, the methodology functions as a continuous cycle rather than a one-time assessment procedure.

The central methodological logic can therefore be expressed as the interaction of **natural observation, challenging activity, dynamic assessment, differentiation, and systematic monitoring**. When these components are combined, identification and development of giftedness become two aspects of the same pedagogical process. Observation reveals potential, challenging activity makes it more visible, dynamic assessment clarifies how the child learns, differentiation provides an appropriate developmental response, and monitoring demonstrates how the potential changes over time.

The effectiveness of this methodology depends on several **pedagogical conditions**. The first is the creation of an **enriched educational environment**. Children need access to varied materials and resources that support different forms of activity. Such an environment may include construction materials, art resources, books, natural objects, puzzles, measuring tools, maps, loose parts, musical materials, age-appropriate digital resources, and objects that can be used for simple experimentation. The educational value of such resources lies not in their quantity or cost but in the diversity of actions they make possible. When children can build, compare, investigate, transform, combine, represent, create, and experiment, different forms of potential are more likely to become visible.

An enriched environment is particularly important because gifted potential may not appear in every type of activity. A child who demonstrates limited interest during formal language exercises may reveal advanced spatial reasoning during construction. Another may show exceptional verbal imagination in storytelling, while another may display scientific curiosity through repeated experimentation with natural objects. For this reason, the environment should offer multiple entry points into learning and should allow children to demonstrate their strengths in different ways. The more varied the activity possibilities, the more complete the educator's understanding of the child's potential can become.

A second important condition is the systematic use of **open-ended tasks**. When every activity has only one predetermined answer or one prescribed method of completion, children have fewer opportunities to demonstrate originality, flexibility, independence, and depth of thought. Open-ended tasks create space for alternative solutions, individual strategies, and creative transformation. For example, asking children to reproduce a model demonstrates whether they can follow instructions, whereas asking them to create several different structures from the same materials may reveal substantially more about

imagination, planning, spatial reasoning, and persistence. Open-ended activity therefore performs both developmental and observational functions.

The third condition is the provision of **optimal difficulty**. Children with advanced or emerging potential should encounter tasks that require genuine intellectual or creative effort. Constant exposure to activities that are too easy may lead to boredom, superficial engagement, reduced persistence, or loss of interest. At the same time, the objective is not to make tasks unnecessarily difficult or to impose unrealistic expectations. The educator should select challenges that are demanding enough to stimulate new strategies but still achievable with appropriate support. This balance between current competence and new challenge is essential for sustaining motivation and promoting further development. Contemporary research on early gifted education similarly emphasizes the importance of differentiated and appropriately challenging educational opportunities for children with advanced potential [2].

Another necessary condition is **systematic documentation**. Teacher memory alone is not sufficient for reliable longitudinal identification because everyday preschool environments contain many simultaneous events, and children's behavior may vary considerably from day to day. Short observation notes, individual developmental portfolios, checklists, photographs of children's products, examples of drawings or constructions, records of notable questions, and periodic summaries can make the process more systematic. Documentation allows the educator to compare current observations with earlier evidence and identify developmental patterns that might otherwise remain unnoticed.

Systematic documentation is also useful for distinguishing a stable pattern from an isolated event. For example, one unusually advanced drawing may result from prior experience or temporary interest, while a series of increasingly complex visual representations over several months may indicate a consistent area of potential. Similarly, repeated examples of sophisticated questioning, original problem-solving, or sustained self-directed investigation provide stronger pedagogical evidence than a single impressive episode. Documentation therefore strengthens the quality of professional judgment without transforming the process into rigid testing.

The methodology also requires the **avoidance of premature labelling**. Expressions such as "potential," "advanced manifestation," and "area requiring further observation" are intentionally preferable to immediate categorical labels. In the preschool period, development remains highly dynamic, and children's strengths may change considerably depending on experience, educational opportunity, emotional state, language development, or the type of activity available. Prematurely identifying a child as permanently "gifted" may create unrealistic expectations, while identifying another child as "not gifted" may close opportunities before potential has had sufficient conditions to emerge.

A developmental approach therefore treats identification as provisional, evidence-based, and open to revision. The purpose of identification is not to fix the child's identity but to expand appropriate educational opportunities. The educator's attention should

remain focused on what the child needs next rather than on maintaining a particular label. This also helps reduce comparison between children and keeps pedagogical decision-making centred on individual development.

Another essential condition is **emotional safety**. Children should feel that it is acceptable to make mistakes, change strategies, ask unusual questions, and attempt difficult tasks. Gifted potential cannot develop fully in an environment where children avoid intellectual risk because they fear failure or fear losing the reputation of being “smart.” For this reason, teachers should avoid excessive praise based solely on intelligence or natural ability. More productive feedback focuses on strategy, persistence, curiosity, effort, revision, and improvement. When children understand that difficulty is a normal part of learning, they are more likely to remain engaged in challenging activity.

Emotional safety is particularly important for children who learn quickly in many routine situations. If they become accustomed to immediate success, they may develop avoidance when faced with a task that requires prolonged effort. The educator should therefore create a classroom culture in which uncertainty, experimentation, and revision are valued. In such an environment, children can learn that being capable does not mean always knowing the answer at once. Instead, competence can include the ability to remain engaged, seek new strategies, learn from evidence, and improve after an unsuccessful attempt.

The final important condition is **family–preschool cooperation**. Families can provide valuable information about children's interests, behavior, questions, and sustained activities outside the preschool institution. Some forms of potential may be more visible at home than in the educational setting. Parents may report, for example, that a child spends long periods constructing maps, repeatedly asks questions about space, creates complex stories, observes insects in detail, experiments with numbers, organizes objects according to self-created systems, or demonstrates unusual interest in machines, music, or natural phenomena.

Such information can help the educator understand whether interests observed in preschool also appear in other contexts and whether a particular area of potential is stable over time. However, family observations should complement rather than replace professional pedagogical observation. Parents may naturally interpret children's behavior emotionally or compare it with siblings and peers in different ways, while teachers observe the child within a broader educational context. The most reliable understanding therefore emerges when family information and systematic preschool observation are considered together.

Cooperation with families also allows educators to provide guidance on how advanced potential can be supported without excessive pressure. Parents should be encouraged to respond to children's interests, provide opportunities for exploration, visit museums or natural environments where possible, read together, offer open-ended materials, and engage in conversations that extend children's questions. At the same time, developing giftedness should not mean replacing childhood with continuous academic training. Even children with advanced abilities need free play, movement, friendships, emotional security, imagination, and rest. Effective family–preschool cooperation therefore

supports the child's potential while preserving a balanced and developmentally appropriate childhood.

Discussion

The proposed methodology changes the traditional logic of giftedness identification by transforming it from a one-time classificatory procedure into a continuous developmental process. In conventional approaches, identification is often associated with a single assessment event, a specific test result, or a brief period of observation. By contrast, the activity-based methodology assumes that children's potential should be observed repeatedly over time and across different situations. This makes it possible to distinguish temporary performance from more stable developmental tendencies and to understand how abilities emerge, change, and interact with motivation, context, and pedagogical support.

A second important shift concerns the transition from result-based assessment to process-based observation. The methodology does not focus exclusively on whether a child completes a task successfully. It also examines how the child approaches the task, which strategies are selected, how errors are managed, whether alternative solutions are generated, how long interest is sustained, and how the child responds to support. In this sense, the process of activity becomes as informative as the final product. Such an approach is particularly appropriate in preschool education, where children's abilities are still developing and may not always be adequately represented by formal or standardized outcomes.

The third shift is from identification followed by education to **identification through education**. Within the proposed methodology, pedagogical activity itself becomes the main context in which potential is revealed and developed. The educator does not first classify the child and only afterwards decide how to teach them. Instead, meaningful and sufficiently challenging activities are organized for all children, and the teacher observes how different children respond. This allows identification and development to occur simultaneously. A child who demonstrates unusual reasoning during a construction task, for example, can immediately be offered a more complex variation of the same activity, enabling the educator to gather additional diagnostic information while supporting further development.

These methodological shifts are consistent with contemporary developmental interpretations of giftedness. Kuznetsova et al. [1] show that giftedness identification remains methodologically complex and that current research uses a broad range of cognitive, psychological, and developmental indicators. This suggests that educators should avoid reducing giftedness to one measurable characteristic or relying on a single assessment result. A multidimensional and longitudinal approach is more appropriate because giftedness may manifest differently depending on the domain, educational context, and developmental stage.

Research focusing specifically on young children reinforces this conclusion. A systematic review of intellectual precocity in children up to six years of age identified

advanced manifestations across several domains and described a range of educational responses designed to support such children [2]. These findings indicate that early giftedness may appear in language, mathematics, problem-solving, creativity, visual expression, and other areas. Consequently, preschool educators need to observe children in different forms of activity rather than assuming that advanced potential will always appear in the same type of task.

Another important issue is the relationship between identification and educational provision. The purpose of identifying potential should not be limited to assigning a child to a category. From a pedagogical perspective, identification becomes meaningful only when it helps answer the question: **“What should we do differently for this child?”** If the educational environment remains unchanged after advanced potential has been recognized, the practical value of identification is significantly reduced. The most important outcome of identification is therefore not the label itself but the adjustment of educational experiences to the child's developmental needs.

Studies of preschool educational processes involving children with gifted potential emphasize the continuing importance of appropriate teacher support, suitable educational organization, and differentiated opportunities [3]. Research based on parents' perspectives has also shown that gifted children may encounter educational difficulties when their needs are insufficiently understood or when activities do not correspond to their level of development [4]. These findings support the view that identification and pedagogical intervention should form a continuous and mutually reinforcing cycle.

The activity approach is especially useful in this respect because it creates authentic contexts in which potential can both manifest and develop. A construction activity, for example, can simultaneously function as a learning experience, a diagnostic situation, a creativity task, a problem-solving environment, and an opportunity for systematic teacher observation. While building, the child may demonstrate planning, spatial reasoning, persistence, experimentation, originality, communication, and the ability to revise an unsuccessful strategy. The same activity therefore generates rich developmental information without removing the child from the natural educational process.

This integration is particularly appropriate for preschool education because formal testing should not dominate children's daily experience. Young children learn most effectively through active involvement, play, exploration, experimentation, communication, and creative production. When identification is embedded in these natural forms of learning, the process becomes less stressful and more developmentally appropriate. The educator can obtain meaningful evidence while the child remains engaged in an activity that is valuable in its own right.

The proposed methodology also addresses the problem of **hidden potential**. Some children may possess significant abilities that are not immediately visible in conventional assessment situations. A shy child, for example, may demonstrate limited verbal performance in a direct interview but show sophisticated reasoning during independent construction. A child with less experience of formal educational tasks may perform

modestly on structured activities but reveal exceptional curiosity, originality, or problem-solving ability during free exploration. Children whose linguistic or cultural experiences differ from dominant assessment expectations may also be disadvantaged when identification relies too heavily on standardized forms of performance.

A broader range of activities increases the likelihood that such children will have opportunities to demonstrate their strengths. This is especially important because recent research has increasingly emphasized the need for culturally responsive and inclusive approaches to giftedness assessment [1]. The activity-based methodology therefore should be understood as **inclusive rather than selective**. Its purpose is not simply to search for children who already fit a predetermined image of giftedness but to create sufficiently diverse educational opportunities for different forms of advanced potential to become visible.

This inclusive orientation also changes the role of the educator. Instead of waiting for a child to demonstrate exceptional achievement according to a narrow criterion, the teacher actively creates situations in which different abilities can emerge. One child may reveal potential through a scientific investigation, another through artistic production, another through storytelling, another through mathematical reasoning, and another through leadership in group activity. In this way, the methodology recognizes that giftedness may have multiple developmental configurations.

Dynamic assessment is another essential component of the proposed approach. A child's response to assistance can provide developmental information that independent performance alone cannot reveal. Two children may initially fail the same problem and therefore appear to have an identical level of performance. However, after a small hint, one child may immediately understand the underlying principle, apply it successfully, and transfer the strategy to a new task, whereas another may require repeated direct assistance. Although the initial result was the same, the learning processes are substantially different.

For this reason, activity-based identification should examine not only **what the child knows**, but also **how the child thinks, how the child learns, how the child responds to challenge, and how much support is required for progress**. These dimensions make it possible to understand developmental potential rather than merely current achievement. A child who learns quickly from minimal guidance may demonstrate strong potential even when prior experience has not provided sufficient opportunities for independent high-level performance.

Dynamic assessment also enables the educator to avoid interpreting initial failure too rigidly. In preschool childhood, unsuccessful performance may result from unfamiliarity, lack of confidence, misunderstanding of instructions, or limited previous experience rather than limited ability. By observing how performance changes after carefully controlled support, the teacher obtains a more nuanced understanding of the child's possibilities.

The proposed approach also reduces the risk of **excessive academicization**. Identifying advanced potential does not mean that preschool children should immediately receive primary-school textbooks, formal acceleration, or an increased quantity of

conventional exercises. Such practices may conflict with the developmental characteristics of early childhood. Advanced potential can be supported effectively through play, experimentation, project activity, storytelling, construction, artistic creation, investigation, and creative problem-solving.

The key issue is therefore not whether the activity appears “academic” but whether it provides sufficient intellectual and creative challenge. A child may engage in very complex reasoning while constructing a bridge, designing an imaginary city, creating a classification system, inventing a story, or testing why certain objects sink or float. These activities preserve the developmental nature of preschool education while simultaneously providing opportunities for advanced thinking.

From a practical perspective, preschool educators should begin by observing **all children**, rather than restricting attention to those who already perform well in formal learning situations. This helps reduce the risk of overlooking children whose potential appears in less conventional domains. Observations should be conducted across several different activity contexts before conclusions are made about a child's strengths or developmental needs.

Teachers should also maintain brief but systematic records of significant observations. The purpose is not to create excessive documentation but to preserve enough evidence to identify recurring patterns. When advanced potential is suspected, the educator should introduce a slightly more complex, open-ended, independent, or deeper version of the relevant activity and observe how the child responds. Such a pedagogical challenge provides additional information about the stability and quality of the observed potential.

Children who complete tasks rapidly should not automatically receive more of the same work. Repetition may increase workload without increasing developmental value. Instead, the activity should be transformed so that it requires greater depth, flexibility, creativity, abstraction, or independence. For example, a child who quickly completes a puzzle may be invited to create a new puzzle, explain the strategy to another child, or solve a related problem using a different method. In this way, differentiation responds to the quality of potential rather than simply the speed of task completion.

Preschool institutions may also organize periodic **potential-discovery activities** that provide broad opportunities for children to reveal strengths in different domains. These may include construction challenges, creative workshops, investigation stations, storytelling laboratories, mathematical puzzles, design tasks, experimental activities, or collaborative projects. Such experiences should be accessible to all children rather than offered only to those already considered gifted. The purpose is to discover strengths through participation, not to create an exclusive examination environment.

Family observations can also contribute valuable information, particularly regarding sustained interests and self-initiated activities outside the preschool setting. Parents may notice that a child repeatedly returns to a particular topic, spends long periods experimenting independently, creates complex stories, organizes collections, asks unusually detailed questions, or demonstrates advanced interest in numbers, maps, nature,

machines, or music. When such observations correspond with patterns recorded by educators, they provide additional evidence of stable interest or emerging potential.

At the same time, early childhood development remains dynamic, and individual potential profiles should therefore be reviewed regularly. The profile should not become a permanent description that limits future expectations. Instead, it should function as a working pedagogical document that changes as new interests, strengths, and needs emerge. Regular review allows the educator to adjust the level of challenge and to recognize new areas of development that were not previously visible.

Although the proposed methodology is theoretically grounded, it requires further **empirical validation** in preschool educational settings. Future research should examine the reliability and practical usefulness of the proposed observation indicators. One important question is whether different educators observing the same children identify similar patterns of advanced potential. Inter-rater consistency would provide valuable evidence regarding the clarity and applicability of the methodology.

Experimental and longitudinal research would also be useful for examining how activity-based identification combined with differentiated pedagogical support influences children's development over time. Such studies could investigate changes in creativity, problem-solving, motivation, independence, persistence, self-regulation, and later learning outcomes. Longitudinal research would be especially valuable because giftedness in early childhood is dynamic, and some forms of potential may become more visible only after sustained educational support.

Research in Uzbekistan could make an important contribution by adapting the proposed indicators and procedures to local linguistic, cultural, and institutional conditions. Giftedness does not develop outside culture, and children's opportunities to demonstrate advanced potential may be influenced by family practices, language, educational traditions, preschool curricula, and social expectations. For this reason, locally grounded studies are necessary to ensure that identification procedures are both valid and culturally responsive.

Teacher readiness also requires systematic investigation. Even a well-designed methodology cannot function effectively if educators lack sufficient knowledge about giftedness, observation, differentiation, dynamic assessment, and pedagogical documentation. Future research could therefore examine professional-development programs designed to strengthen preschool teachers' competence in recognizing emerging potential and designing appropriate developmental activities.

Such professional preparation should include not only theoretical information about giftedness but also practical skills. Educators need opportunities to analyse observation cases, design open-ended tasks, differentiate activities, interpret children's strategies, document developmental changes, and reflect on possible biases in identification. Strengthening these competencies would increase the likelihood that the methodology is applied consistently and inclusively.

Another important direction for future research concerns children with **twice-exceptional profiles**, whose advanced potential may coexist with developmental,

behavioural, communication, sensory, or learning difficulties. In such cases, educational attention may become concentrated primarily on the child's difficulties, while significant strengths remain unnoticed. A child may, for example, experience difficulties in one area while simultaneously demonstrating exceptional visual-spatial reasoning, creativity, memory, mathematical thinking, or specialized interests.

For twice-exceptional children, deficit-focused observation may therefore conceal important developmental resources. An activity-based methodology can be especially valuable because it examines children's performance across different contexts and does not rely exclusively on weaknesses or formal academic outcomes. By creating varied opportunities for construction, creativity, experimentation, communication, and problem-solving, educators may identify strengths that would otherwise remain hidden. Future research should examine how the methodology can be adapted to ensure that both the support needs and advanced potential of twice-exceptional preschool children are recognized simultaneously.

Overall, the proposed methodology positions giftedness identification as a **developmental, inclusive, and pedagogically actionable process**. Its purpose is not simply to determine which children meet a predefined standard of giftedness, but to understand how individual potential emerges, how it changes under different educational conditions, and how preschool practice can respond to it. In this way, identification becomes inseparable from development, and the educator's central task shifts from classification toward the creation of increasingly appropriate opportunities for each child's potential to grow.

Conclusion

Identifying and developing giftedness during preschool childhood requires a methodology that reflects the dynamic and multidimensional nature of children's development.

The activity approach provides such a foundation because children's potential becomes visible most naturally through what they do: how they explore, create, solve problems, communicate, construct, experiment, persist, and respond to new challenges.

The proposed methodology replaces a narrow question —

“Is this child gifted?”

—with a more developmentally productive sequence of questions:

“What potential is becoming visible?”

“In which activities does it appear?”

“Under what conditions does the child perform at a higher level?”

“How does the child respond to challenge and support?”

“What educational opportunity should be provided next?”

The methodology consists of the interconnected stages: Initial Observation → Activity-Based Diagnosis → Individual Potential Profile → Selection of Developmental Tasks → Differentiated Activity → Pedagogical Support → Monitoring and Reflection.

Its principal advantage is that identification does not end with classification.

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Every diagnostic observation becomes a basis for further pedagogical action. A child's advanced reasoning leads to more challenging problems. Creative potential leads to more open tasks. Scientific curiosity leads to experimentation. Verbal ability leads to storytelling and research. Social potential leads to meaningful collaborative responsibilities.

Thus, identification becomes developmental. The central methodological principle can be expressed as follows: identify potential through activity, develop it through activity, and evaluate its growth through changing activity.

For preschool education, this approach is particularly important because giftedness is still emerging. The educator's responsibility is therefore not to establish a permanent label but to create conditions in which individual potential can become visible and continue to grow.

When systematic observation, challenging activities, dynamic assessment, differentiated support, emotional safety, documentation, and family cooperation are integrated into everyday preschool practice, giftedness identification becomes a natural component of developmental pedagogy rather than an isolated testing procedure.

Ultimately, the purpose of identifying giftedness is not identification itself. Its educational value lies in ensuring that each child receives opportunities appropriate to their emerging potential. An activity-based methodology can contribute to this goal by making preschool gifted education more developmental, individualized, inclusive, and responsive to the diverse ways in which young children demonstrate their capabilities.

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