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Treating Cognitive Problems In Schoolchildren By Applying A New Model: The First Experiment

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Abstract:

The ultimate goal of positive psychology is to align individuals with the path of happiness, which can only be achieved through self-satisfaction and acceptance of both internal (intrinsic) and external (extrinsic) assets. An individual's share of happiness, whether in general or in a specific aspect of their life, corresponds to their level of satisfaction. In the educational field, a child's happiness intertwines with self-perception, self-ability, and friendships, thereby activating both cognitive and emotional dimensions simultaneously. A child who demonstrates competence among peers and gains their approval is considered successful and, consequently, happy, as their satisfaction level is high, and vice versa.

During our field research, we observed that many children identified as having limited abilities and cognitive or emotional difficulties often suffer the negative consequences of such perceptions on their academic success.

In our work with children, after utilizing the neuropsychological approach in mental representation of the perceived world through the complex Rey-A figure, we attempted to develop a diagnostic-therapeutic model focusing on performance-oriented guidance to awaken dormant abilities in children. The cognitive distortion caused by life stressors affecting a child's perception of their abilities can be addressed in a "quick," "simple," and "enjoyable" way, particularly for children who enjoy drawing and colors. This involves designing a model that stimulates attention, enhances performance accuracy, and consequently improves recall ability.

Keywords: Model Design - Performance Guidance - Cognitive Problems - Diagnosis and Treatment – Child.

Introduction:

When addressing cognitive problems and their treatment, psychologists typically rely on traditional methods, such as specialized measures for abilities like attention, perception, and recall, for diagnosis and various assessment techniques. These methods are characterized by their results, which often only emerge through repeated application. This approach is based on the premise that cognitive problems are not to be underestimated—a perspective we fully support, especially concerning fundamental developmental issues. However, while this premise is credible, it inherently conveys a negative stance toward both the problem and the individual facing it.

Based on the notion that problems are often less daunting than they appear and that individuals are capable of overcoming them, we sought to provide a new diagnostic-therapeutic tool. This tool aims to save time and effort for both the therapist and the patient while simplifying the problem on the one hand and addressing it on the other.

The model was designed in phases and is primarily targeted at children suffering from partial or complete cognitive confusion. These children often exhibit a decline in academic performance due to specific learning difficulties and show behavioral changes resulting from chronic life situations they have experienced.

1- Theoretical Approach:

It is essential to have sufficient knowledge about childhood and cognitive activities to form the foundation for any design. The most critical aspects can be summarized as follows:

1.1 Child Development Characteristics:

According to Thomas, Yan, and Stelmach (2000), as cited by Bee and Boyd (2003), children in the primary school stage experience increased physical growth that enhances motor skills, leading to faster performance and improved visual-motor coordination (Bee & Boyd, 2003, p. 115). The most important motor skills at this stage are fine motor

skills (finger movements), which enable children to write and draw.

In relation to this growth, the brain undergoes two significant changes. The first change occurs between the ages of 6 and 8, and the second between the ages of 10 and 12. According to Spreen and colleagues (1995), between the ages of 6 and 8, there is rapid growth in new synapses and an increase in cortical density in the sensory-motor areas, leading to the development of manual skills and improved visual-motor coordination. Between the ages of 10 and 12, another rapid growth in new synapses and increased cortical density occurs in the frontal lobe, where cognitive functions such as logic and planning are controlled.

Myelinization continues during the school years, especially in the connections between the reticular formation and the frontal lobe. The reticular formation manages and controls attention, which significantly improves attention regulation during the school years, as noted by Lin and colleagues (1999) (Bee & Boyd, 2003, p. 256). Between the ages of 6 and 12, selective attention develops, performance speed increases, and visual perception becomes established by the age of six, while spatial perception solidifies by the age of eight (Bee & Boyd, 2003, p. 158).

According to Kail (1990), information processing improves in school-aged children due to memory enhancement observed during this stage (Bee & Boyd, 2003, p. 157).

1.2 Cognitive Activity:

From a cognitive perspective, cognitive processes are interconnected and sequential under normal circumstances. They begin with sensation, which represents the initial aspect of the psychological relationship between the individual and external objects (the environment). Sensation initiates perception, the primary source of knowledge, as sensory knowledge serves as the foundation for all other cognitive processes.

Perception is a mental-cognitive process linked to other psychological functions of personality, such as thinking (awareness of the situation), language (naming the perceived object), emotions (the tendency to feel the perceived object), and will (voluntary perceptual organization) (Al-Rashidi et al., 2000, p. 43). Cognitive processes overlap and influence one another, with attention generally enhancing the speed of perception and thus clarifying perceptions. Attention to images and meanings facilitates their retention, organizes sensations into meaningful constructs, and aids in storing and retrieving information (Anas Shakshak, 2008, p. 29).

The individual's cognitive activity focuses perception in a way that raises awareness of a limited range of stimuli. Thus, another cognitive process, attention, intervenes to support perception. Given the number of stimuli an individual receives simultaneously, a selection process is required. According to Bourne and Ekstrand (1985), the attentional mechanism represents the essence of attention as a mental-cognitive process and as a directive response to stimuli (Al-Rashidi et al., 2000, p. 133).

A distinction can be made between attention and the attentional mental state. Attention refers to the decision-making process by which an individual focuses on one or more specific things while larger, conflicting stimuli are available. The attentional mental state refers to the individual's ability to select, preparing their nervous system to process the selected stimulus, think about a particular subject, or make a specific response that conflicts with other potential responses.

The function of attentional focus (attentional mental state) lies in selectively processing certain information when the total incoming information exceeds the individual's capacity for effective simultaneous (parallel) processing (Al-Rashidi et al., 2000, p. 48).

The individual assimilates phenomena, events, emotions, and relationships within their perceptual field into memory for use in behavior. Behavior does not directly reflect perception but rather reflects the activity of retrieval. Therefore, memory is considered a higher mental process and a cognitive process, or a series of cognitive processes, progressing from sensory memory to short-term (direct, working) memory and then to long-term memory.

To utilize information stored in sensory memory, the individual must process it quickly and fully before it fades. This process begins with attention, where some stimuli are selected from the vast array of inputs, subjected to cognitive processing, and transferred to another memory structure. At this point, a process known as "pattern recognition" occurs, connecting sensory memory information with long-term memory (Al-Rashidi et al., 2000, pp. 99–102).

1.3 Cognitive Problems:

Learning difficulties, as highlighted by several studies, often stem from deficiencies in working memory and short-term memory. Swanson (1994)

found that typical individuals exhibit better working memory than those with learning difficulties, particularly in skills such as listening, verbal recall, spatial-visual imagery tasks, and verbal relations. Furthermore, typical individuals have superior short-term memory compared to those with learning difficulties, specifically in word sequencing and reproducing designs (Zayat, Vol. 2, 2001, p. 471).

Statistically significant correlations were observed between memory measures and academic achievement for both typical individuals and those with learning difficulties. This indicates that memory, whether working or short-term, has a concurrent impact on academic performance.

According to Brown (1984), weak memory capacity leads to problems in processing and managing information, resulting in difficulty following directions or instructions that rely on memory (Zayat, Vol. 2, 2001, p. 474). Pressley (1987) attributes the failure of individuals with learning difficulties to two factors:

1. Lack of a knowledge base in other words, an underdeveloped cognitive structure compared to typical individuals.
2. Weak ability to retain and retrieve information (Zayat, Vol. 2, 2001, p. 466).

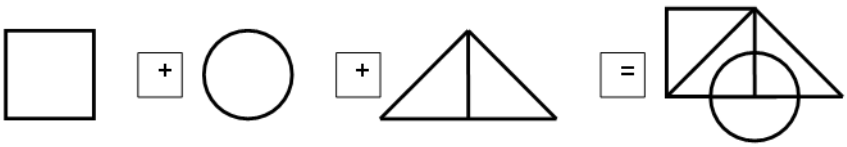
2- Designing the Assessment Model:

The targeted domain for intervention is the cognitive domain, specifically visual perception. The design aimed to serve as an objective tool, with basic geometric shapes familiar to children circle, square, and triangle forming the foundation of the model. These shapes were combined in spatial relationships (dimensions) without implying any emotional meaning.

2.1 How Was the Model Designed?

The basic geometric shapes circle, square, and triangle were selected as the primary elements of the model to be constructed. Various configurations of these three shapes were tested, attempting to integrate them in a way that was harmonious, balanced, and equitable, ensuring each shape had an equal opportunity to be visually perceived.

After conducting multiple studies, repeated applications, and recording observations, feedback, and comments from children involved in the process especially those familiar with the Rey model the final spatial relationship design was determined. This relationship reflects the following structure:



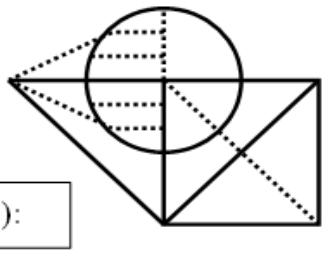
However, presenting these shapes in an explicit and prominent manner does not serve the purpose of studying perception and its organization effectively. Therefore, additional linking elements were incorporated, including the following:

- The secondary diagonal of the square, allowing the viewer to perceive one side of the triangle as a diagonal of the square.
- The radius of the circle, creating the appearance of the circle being divided into four sections by two radii.
- Four parallel lines to the horizontal radius of the circle, to obscure the intersection of the radii, especially as the vertical radius bisects the triangle.
- Disruption of symmetry between the right and left sides of the design, achieved by drawing two lines connecting the outermost parallel lines of the circle's horizontal radius to one of the triangle's corners.

The final design of the model was thus established, as illustrated in Diagram 1.

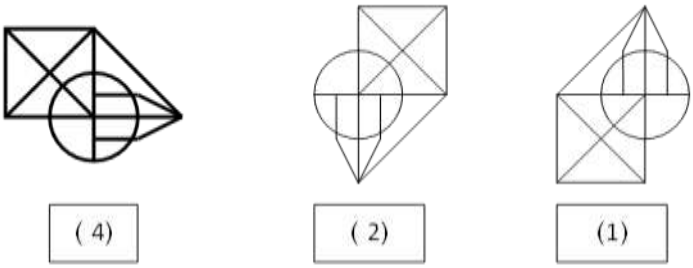
Diagram [1]:

The final design of the model for assessing visual perception.



Position (3):

After completing the design of the shape, and to achieve integration among the three geometric shapes, the horizontal orientation was preferred as in Rey's Model [A] while excluding the other two orientations to avoid the sharp ascending shape (1) or its descending counterpart (2) (see Diagram 2). The question then arose regarding the orientation of the model's presentation: should the fullness be directed downward (Position 3) (see Diagram 1) or upward (Position 4) (see Diagram 2)?



(4) (2) (1)

Diagram [2]:

The rejected positions (1 and 2) and the chosen position (4).

Analyzing children's performance in redrawing Rey's model confirms that their attention, if not directed toward the center, shifts either from right to left or left to right, with a clear preference for upper fullness over lower fullness. Based on this, direction (4) was selected for presenting the model.

2.2 Experimenting with the New Model:

2.2.1 First Phase:

The designed model was presented to three children in two positions: (3) with fullness directed downward and (4) with fullness directed upward. The model was drawn on a card with its lines clearly outlined in black. The following instruction was given: "Copy this drawing onto this sheet" or "Redraw this shape onto this sheet," after providing the child with a blank, unlined sheet and gradually suggesting five different colored pens during the performance. The performance of the three children was as follows:

- **The First Child:**

Tarek (5th Grade) Model Orientation: (4) Fullness directed upward.

Performance Process:

- Started by drawing the square with its diagonals.
- Completed the triangle (the side and its bisector).
- Drew the circle, the two upper parallel lines dividing the circle's radius, and the upper line connecting the circle to the triangle's corner.
- Drew the vertical radius of the circle, the two lines parallel to the horizontal radius, and the lower line connecting the circle to the triangle's corner.

Analysis: The process indicates that attention was directed to the left side of the model, focusing on the square as a separate unit. Tarek began with the second diagonal of the square, which is not a side of the triangle. The completion process suggests a lack of an integrated mental representation of the transferred model.

- **The Second Child:**

Leila (6th Grade) Model Orientation: (4) Fullness directed upward.

Performance Process:

- Started by drawing the square without its diagonals.
- Drew the outer half of the triangle.
- Returned to the square to draw the diagonal that forms one side of the triangle, followed by the other diagonal.
- Drew the circle and its upper fullness.
- Completed the vertical radius of the circle and the lower fullness.

Analysis: Leila's performance closely resembles Tarek's in terms of attention direction and the element that attracted her focus. She also moved from left to right, and her completion process was segmented, indicating a lack of an integrated mental representation of the model. The key difference between Leila and Tarek lies in how they perceived the triangle and its relationship with the square. Leila perceived the triangle as separate from the square, beginning with its outer element before addressing the element contained within the square. In contrast, Tarek's perception of the triangle stemmed from drawing the diagonal of the square, which is one of the triangle's sides.

- **The Third Child:**

Khaled (6th Grade) Model Orientation: (3) Fullness directed downward.

Performance Process:

- Drew the square with its diagonals.
- Completed the triangle.
- Then moved to the circle and its details.

Diagram [3]:
Two colored cards of the assessment model, designed based on the perception method.

Analysis: Khaled's attention shifted direction, focusing on the right side where the fullness is at the bottom. His process of drawing the model did not differ significantly from that of Tarek and Leila. All began with the square, followed by the triangle, and then the circle. Khaled's performance was more similar to Tarek's, as he started drawing the triangle from the inside.

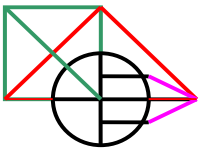
Based on this, two colored cards of the designed model were prepared (see Diagram 3), presented to the child depending on their initial approach to the model (perception method):

Card 1:

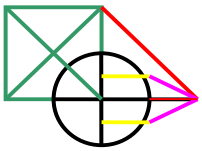
- The circle with its two radii is in black.
- The square with its diagonals is in green.
- The remaining part of the triangle is in red.
- The lines contained within the semicircle are in yellow.
- The two lines connecting the circle to the triangle are in purple.

Card 2:

- The circle with its two radii and its fullness is in black.
- The triangle is drawn in red.
- The square and its diagonal are in green.
- The connecting lines are in purple.



Card 2



Card 1

2.2.2 Second Phase:

The model was re-applied as suggested in Card 1 (starting with the square) for the children Tarek and Khaled, aligning with their tendencies. The following instruction was given: "Copy this shape onto this sheet, using these colors." The drawing was a reproduction, with the same colors used for the pens that matched those of the model in Card 1. The performance was as follows:

Khaled:

- Drew the triangle in black, including its two diagonals.
- Completed the circle's radius and the line parallel to one side of the square (which is half of the triangle's side) in the same color as the square (black pen).
- Completed the triangle in red.
- Drew the circle, its lower half-filled section, and connected it to the triangle.
- Completed the upper fullness of the circle.

Analysis of Khaled's Performance:

- **Consistency:** Khaled replicated the model in the same way he approached the unified (black) model during the initial phase.
- **Color Perception:** Khaled did not perceive the relationship between the suggested colors and the colors of the provided model.
- **Holistic View:** He lacked an integrated overall perspective of the model, reflecting the fourth perceptual pattern of Rey's Model [A].
- **Integration Efforts:** Khaled attempted to establish a relationship between the square, circle, and triangle by drawing connecting lines.

Comparison of First and Second Performances:

When comparing the first performance (copying the unified model) to the second performance (Card 1), discrepancies in dimensions were more prominent in the second attempt, accompanied by reduced precision and attention. For instance, the vertical radius of the circle was incomplete in the second performance.

Tarek:

- Drew the square first, including its diagonals, but did not complete one of its sides.
- Drew the circle, then completed its upper and lower half-filled sections.
- Completed the triangle and then the connecting lines.

Analysis of Tarek's Performance:

- **Color Recognition:** From the beginning, Tarek understood the relationship between the suggested colors and the colors used to draw each shape in the model. He chose the pen color corresponding to the shape he intended to start with (the square).
- **Boundary Perception:** However, he did not initially recognize the boundaries between shapes and only realized them later. For example, he retraced the circle's radius with a black pen instead of a green one, treating it as part of the circle rather than part of the square.
- **Execution:** Tarek's performance was characterized by a degree of precision, although it was not carried out patiently.

Comparison Between First and Second Performances:

- In the first performance (copying the unified model), Tarek proceeded to draw the triangle after the square. In the second performance (Card 1), he moved on to the circle after the square. However, this difference is superficial.
- **Cognitive Pattern Consistency:** Analyzing the underlying motivations and perceptual patterns reveals that the same cognitive pattern was followed in both performances, corresponding to the fourth pattern in Rey's Model [A].

Detailed Observation:

- In the first performance, the motivation for completing the triangle after the square was the proximity of the triangle's second side to its first side, which is the diagonal of the square drawn immediately before finishing the triangle. This indicates a sequential performance process based on proximity.
- In the second performance, attention shifted to the positional proximity between the square and the circle, as highlighted by the colors. Consequently, Tarek transitioned from one shape to another based solely on proximity and positional relationships.

- **Verification:**

To confirm the validity of our analysis and interpretation, we applied the modified Rey test (copying task) to both children (Khaled and Tarek). The results are presented in **Table 01**, which align perfectly with the findings from the application of the assessment model. This consistency indicates that the proposed tool is suitable for research purposes, specifically for influencing cognitive processes related to attention and perception.

Table [01]: Results of the Application of the Modified Rey Test - Copying Phase

CHILD	PATTERN	ACCURACY (POINTS)	RICHNESS / 18 ELEMENTS	TIME	EVALUATION
Khaled	Fourth	22	16	6m	Poor perceptual pattern, lack of attention, and inaccuracy
Tarek	Fourth	28	18	6m	A poor perceptual pattern that affected performance accuracy.

2.2.3 Third Phase:

The perceptual pattern is an essential factor in the processes of perception and knowledge acquisition. Two primary mechanisms can be identified:

- **Holistic Perception:**

  In holistic perception, elements are perceived as a whole within the relationships connecting the parts. The perceiving individual must then analyze these relationships if required to reconstruct the perceived element. This means their performance transitions from the whole to its parts. This approach ensures, at a minimum, that the general framework of the perceived element is maintained, as the space defining the integrated details cannot exceed the boundaries of the overall framework.

- **Partial Perception:**

  In partial perception, elements are perceived individually and disconnected from one another, leading to the absence of comprehensive perception or holistic awareness. The individual must establish these relationships if required to construct the perceived composite. In this case, the child's performance transitions from the part to the whole.

This transition may negatively impact the constructed whole if the dimensions of each part are not well-defined resulting in a disrupted overall structure and, consequently, reduced awareness or accuracy in perception.

2.3 Methods for Applying the New Model:

Two methods were identified for applying the assessment model, as outlined below:

2.3.1 The First Method:

This method is carried out in the following three stages:

- **Stage 1:** The unified model (black lines) is presented for the child to redraw. Colored pens are used to track the performance process.
- **Stage 2:** Card 1 is presented for the child to redraw, and the child is instructed to follow the colors as they appear on the model, with the freedom to choose the color they start with.
- **Stage 3:** Card 1 is presented again for the child to redraw, but this time the child is instructed to respect the colors used for each shape, with the colors being selected by the facilitator (color-guided copying).

Objective:

The objective of this method is to explore the potential use of indicators (colors) in directing attention and thereby organizing spatial visual perception, enabling the ability to analyze a composite and reconstruct it.

2.3.2 The Second Method:

This method is carried out through the following steps:

- The model's elements are identified separately, totaling six (see Diagram 04).
- Each element is presented individually for the child to copy, arranged according to the proposed performance sequence.
- The unified model is then presented for the child to redraw, using color techniques to track the performance process.
- Assistance is provided through analysis (reverse process).

Objective:

The goal of this method is to explore the potential use of partial perception indicators in directing

attention and thereby organizing spatial visual perception, enabling the ability to construct fragmented elements.

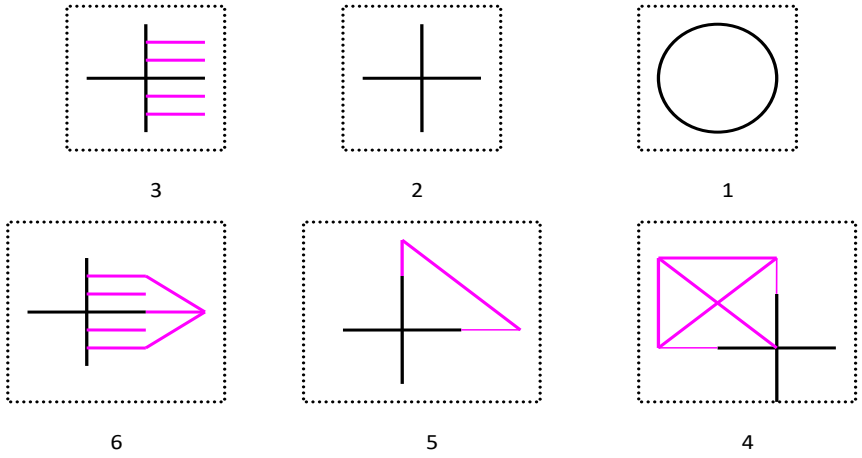


Diagram [4]: The fragmented elements of the visual perception assessment model, presented on cards as introduced to children according to the second method.

2.4 Experimenting with Both Methods:

The first method was applied to Tarek, while the second method was applied to Khaled. The following observations were made regarding Tarek's performance:

- **Unified Model:** Tarek's attention was initially drawn to the square with its diagonals, followed by the triangle, the circle, the upper fullness, and finally the lower fullness. This sequence was based on proximity rather than central focus, transitioning from left to right without a strategic construction plan. As a result, the true dimensions of the shapes were not respected the square became a rectangle, the triangle was not equilateral, and the circle was imprecise. Although Tarek's performance was clear, with visible elements and relationships suggesting an acceptable structure, it lacked coherence and reflected a fragmented assembly of units.
- **Colored Model:** Tarek initially did not recognize the relationship between pen colors and the shapes' colors but quickly adapted and reproduced the drawing accordingly. The accuracy of his performance was similar to the first phase, but the sequence of elements differed. This time, he began with the square, which he drew correctly as a square rather than a rectangle, indicating a higher level of attention. He then drew the circle with its internal lines, followed by the triangle and the connecting lines between the triangle and the circle. While the process was still proximity-based, moving from left to right as in the first phase, it was more organized and precise, particularly in drawing the circle with equal diameters.
- **Third Phase:** Tarek demonstrated a clear understanding of the instructions and followed the proposed performance sequence, guided by the suggested pen color order.

Despite these improvements, some inaccuracies in respecting dimensions persisted, reflecting a lack of conscious perception of the model's shapes. For example, the square's sides leaned toward forming a rectangle, the circle was not symmetrical, and the right horizontal side of the triangle was unequal to the left side. It appears that Tarek's focus on following the color sequence and its corresponding elements during the drawing process may have diverted his attention from achieving the precise characteristics of each shape.

Verification Phase:

After completing the three phases of attention guidance and attempting to influence perception (pattern), the modified Rey Model [A] was presented to Tarek, who was asked to copy it. His performance was as follows:

- Perceptual Pattern: Tarek demonstrated the first pattern, as he began by drawing a rectangle. However, his attention to the element’s characteristics was insufficient, leading him to draw a square instead of a

rectangle, indicating a perceptual distortion.

- He divided this general framework with diagonals but, instead of filling the interior, directed his attention toward external elements.
- Tarek scored 25 points, suggesting a lack of precision in the task. However, his attention was adequate, as he did not miss any elements.
- The performance time was not short (6 minutes) but rather slow-paced.

Comparison of Performance Before and After Exposure (see Table 02): Tarek's performance showed improvement after exposure. His pattern shifted from the fourth (fragmentation) to the first (holistic). However, considering the time taken to complete the task, the level of recorded precision was not high. The performance was slow, indicating the task's difficulty for Tarek. His gestures and frequent gazing at the elements suggested perceptual difficulty or confusion.

Table [02]: Results of the Modified Rey Test - Copying Phase - Before and After Assessment for Tarek

PHASE / PERFORMANCE	PERFORMANCE TIME	PERCEPTUAL PATTERN	ACCURACY LEVEL	MISSING ELEMENTS
Before	11minutes	Fourth	29	0
After	6 minutes	First	25	0

Khaled:

- Khaled redrew the elements well but lacked precision.
- His performance progressed from left to right, beginning with the complete square, followed by the triangle and the circle. This sequence reflects a poor perceptual pattern (fourth pattern), indicating the absence of a mental construction for the overall shape.
- Khaled did not benefit from the first phase, where each element was presented individually. The relational connection and association with the circle, particularly through its drawn diagonals, were not evident.
- Furthermore, he did not take advantage of the sequence of individual shapes, suggesting a lack of mental integration of the elements and an inability to follow the proposed performance sequence.
- Second Attempt: In the second attempt to draw the model, Khaled again progressed from left to right, starting by drawing the square with its diagonals. He extended the square's vertical sides to form the radius of the circle and the horizontal side to form one side of the triangle. He then proceeded to draw the triangle as in the first attempt, continuing with the same performance style.

Observations:

1. Khaled maintained the same performance sequence (fourth pattern), demonstrating no mental construction of the complete model.
2. The extension of the square's sides indicates an influence from his prior detailed performance with the square. This occurred after a time interval between the two attempts, showing that the integration of the square element was slow but eventually achieved.

It is likely that similar gradual integration might occur with the other elements over time. However, this change in performance sequence affected the accuracy of his work, highlighting a lack of attention.

Verification Phase:

After completing the tasks, Khaled was asked to copy the modified Rey Model [A]. The results were as follows:

- **Perceptual Pattern:** Khaled displayed a poor perceptual pattern consistent with the fourth pattern. His performance progressed from left to right. While his approach relied on proximity, there were signs of holistic representation as his detailed performance combined many elements. For example, he drew the left half of the rectangle with some connected details,

moved to external elements, and quickly returned to complete the remaining half of the rectangle with its details. Thus, he achieved the general framework of the model before completing the remaining external details. This suggests that his performance, though classified as the fourth pattern (IV), incorporated characteristics of the second pattern (II).

- **Attention and Accuracy:** Forgetting some details, even prominent ones, indicates a lack of attention during the task, despite the work being slow and taking six minutes. Khaled scored 22 points, reflecting a lack of precision and some shortcomings.

Comparison of Performance Before and After Exposure (see Table 03):

- Khaled's performance before and after exposure was quite similar in terms of the sequence of execution and the tendency to forget elements. However, this tendency was more evident in the second phase (after exposure).
- This raises the question of whether the exposure phase led to a change in how relationships were perceived, which negatively affected attention and reduced focus.

Table [03]: Results of the Modified Rey Test - Copying Phase - Before and After Assessment for Khaled

PHASE / PERFORMANCE	PERFORMANCE TIME	PERCEPTUAL PATTERN	ACCURACY LEVEL	MISSING ELEMENTS
Before	6 minutes	Fourth/Second	25	1
After	6 minutes	Fourth/Second	22	½ 2

Inference:

Based on Tarek's case, we tend to believe in the possibility of using colors as indicators to guide attention and thereby organize visual perception. This enables the child to analyze a complex composite and reconstruct it correctly.

On the other hand, Khaled's case suggests limited potential for altering perception and establishing relationships between elements, as his performance shows slow progress in achieving this. Repeated experiments are necessary to confirm this observation.

Conclusion:

It is crucial to innovate and update assessment tools to align with the era of speed, ensuring they possess this characteristic (speed) in both application and result acquisition. The designed model achieves this by facilitating the immediate observation and analysis of performance upon application. This allows for instant guidance and evaluation by following the first phase with subsequent ones.

One of the greatest advantages of this method in addressing cognitive issues is its focus on directing behavior emphasizing action guidance (silent correction of performance) rather than verbal instruction (performance evaluation), thereby avoiding negative consequences associated with the latter.

References:

1. Abu Fakhr, Ghassan; (2007); Learning Difficulties and Their Treatment; Publications of the University of Damascus, Damascus.
2. Ahmad, Al-Sayed Ali Sayed, & Badr, Faeqa Mohamed; (1999); Attention Disorder in Children: Causes, Diagnosis, and Treatment; 1st ed.; Nahdet Misr Library, Cairo.
3. Ahmad, Al-Sayed Ali Sayed, & Badr, Faeqa Mohamed; (2001); Visual and Auditory Sensory Perception; 1st ed.; Nahdet Misr Library, Cairo.
4. Adam, Sama; (2006); Enhancing Visual-Auditory Memory Performance Using the Information Processing Approach; PhD thesis under the supervision of Ali Mansour, Faculty of Education, Department of Psychology, University of Damascus.
5. Al-Rashidi, Bashir; (2000); Cognitive Disorders and Psychological Disorders Resulting from General Medical Conditions, Series on Diagnosing Psychological Disorders, Vol. 3, 1st ed.; Amiri Diwan, Social Development Office, Kuwait.

6. Al-Zaradd, Faisal Mohamed Khair; (n.d.); Memory: Its Measurement, Disorders, and Treatment; Al-Mareekh Publishing, Saudi Arabia.
7. Al-Zayyat, Fathi Mostafa; (2001); Cognitive Psychology, Part 1: Studies and Research; 1st ed.; University Publishing House, Egypt.
8. Al-Zayyat, Fathi Mostafa; (2001); Cognitive Psychology, Part 2: Studies and Research; 1st ed.; University Publishing House, Egypt.
9. Al-Sabwah, Mohamed Naguib Ahmed Mahmoud; (1987); The Speed of Visual Perception in Schizophrenics and Normals; Unpublished PhD thesis under the supervision of Mostafa Soueif and Faisal Younis; Faculty of Arts, Department of Psychology, Cairo University.
10. Al-Abdan, A.-R. A.-R.; (1993); The Effect of Cognitive Style (Field-Independent vs. Field-Dependent) on the Use of Second Language Learning Strategies; Arabian Gulf Message, Issue 48.
11. Al-Mashati, A. R. (Translation); (1994); Our Children: From Childhood to Adolescence; Dar Al-Majani, Beirut.
12. Hamdan, Mohamed Ziyad; (1996); Academic Achievement: Concepts, Problems, and Solutions; Modern Education House, Damascus.
13. Kharnoub, Fanoun Mahmoud; (2007); Effectiveness of a Metamemory Training Program and Its Impact on Memory Performance in Children with High and Low Academic Achievement from the First Stage of Basic Education; PhD thesis in Educational Psychology under the supervision of Nadia Mahmoud Sherif and Mohamed Abu Alaa Mohamed, Cairo-Damascus.
14. Solso, Robert; translated by Mohamed Naguib Al-Sabwah et al.; (2001); Cognitive Psychology; Anglo-Egyptian Library, Cairo.
15. Shakshak, Anas; (2008); General Psychology: Cognitive Psychological Forces and Motivational Psychological Forces; Dar Al-Nahj, Aleppo.
16. Ghazal, Abdul Fattah; (2001); Studies in Clinical Psychology (Behavioral Problems in Children); 1st ed.; Tayba Publishing and Distribution, Cairo.
17. American Psychiatric Association, tr. J.-D. Guelfi et al. (2004). Mini DSM-IV-Tr: Diagnostic Criteria, French Version with ICD-10 Codes. Masson, Paris.
18. American Psychiatric Association, tr. J.-D. Guelfi. (2003). Diagnostic and Statistical Manual of Mental Disorders (Revised Text) [DSM-IV-TR]. Masson, Paris.
19. Bear, M. F., et al. (1999). Neurosciences: Exploring the Brain, tr. Nieoullow. Pradel Editions, France (1st ed.).
20. Bear, M. F., et al. (2005). Neurosciences: Exploring the Brain, tr. Nieoullow. Pradel Editions, France (2nd ed.).
21. Bee, H., & Boyd, D. (2003). Developmental Psychology: The Ages of Life, tr. F. Gosselin. De Boeck University Press, Brussels, Canada.
22. Benoit, E. (2000). The Causes of School Failure. Retrieved from: http://perso.club-internet.Fr/aflande/psycho/defaillance-pere.htm.
23. Berner, P. (1995). "Anxiety and Nosology: A Historical Overview." Confrontation Psychiatrique, No. 36, pp. 35-51.
24. Bloch, H., et al. (1999). Grand Dictionary of Psychology. Larousse-Bordas, Paris.
25. Bonnet, C., Hoc, J.-M., et al. (1986). Psychology, Artificial Intelligence, and Automation. Mardaga, Brussels.
26. Boujon, Ch., & Quaireau, Ch. (1997). Attention and Academic Success. Dunod, Paris.
27. Braune, R., & Foshay, W. R. (1983). "Towards a Practical Model of Cognition/Information Processing Task Analysis and Schema Acquisition for Complex Problem-Solving Situations." Instructional Science, 12, 121-145.
28. Cahen, C. (1996). Therapy for School Failure. Nathan Editions, Paris.
29. Caonac'h, D., & Golder, C. (Coord.). (1995). Manual of Psychology for Teaching. Hachette Editions, Paris.
30. Caston, J. (1993). Psychophysiology, Vol. 1. Ellipses, Paris.
31. Caston, J. (1993). Psychophysiology, Vol. 2. Ellipses, Paris.
32. Côté, R. L. (1987). Psychology of Learning and Teaching. Gaetan Morin Editions, Quebec.

33. Cottraux, J. (1990). Behavioral and Cognitive Therapies. Masson, Paris.
34. Cottraux, J. (1984). Behavioral Therapies. Masson, Paris.
35. Douki, S., Kacha, F., et al. (1986). Handbook of Maghreb Psychiatry. Masson, Paris.
36. Evequoz, G. (1984). The School Context and Its Hostages: Towards a Systemic Approach to School Difficulties. ESF Editions, Paris.
37. Ey, H., Bernard, P., & Brisset, Ch. (1978). Manual of Psychiatry. Masson, Paris.
38. Ferrari, P., & Epelbaum, C. (Coord.). (1993). Child and Adolescent Psychiatry. Flammarion Médecines-Sciences, Paris.
39. Flahaut, D. (1985). "Perceptual-Cognitive Styles or Psychological Differentiation: A Glossary and Conceptual Framework." CPC, 5(6), 639-666.
40. Gillet, P., Hommet, C., & Billard, C. (2000). Child Neuropsychology: An Introduction. Sollal Editions, Marseille.
41. Golse, B. (Ed.). (1998). The Affective and Intellectual Development of the Child. Masson, Paris.
42. Graziani, P., & Swendsen, J. (2004). Stress: Emotions and Coping Strategies. Nathan/SEJER Editions.
43. Haton, J.-P., & Haton, M.-C. (1989). Artificial Intelligence. Payot, Paris.
44. Hoc, J.-M. (1982). "Data Representation and Control Structure of a Processing Process." CPC, 2(4), 389-419.
45. Male, P. (2000). "The Meaning of School Refusal in Child Psychiatry." Neuropsychiatry of Childhood and Adolescence, Aug., Vol. 50, No. 5, pp. 346-349.
46. Mises, R. (2004). "Instrumental Disorders and Psychopathology." Neuropsychiatry of Childhood and Adolescence, Sept., Vol. 52, No. 6, pp. 353-355.
47. Mucchielli, A., & Bourcier, A. (2001). Prevention and Treatment of School Learning Disorders (with Neuropsychomotor Methods). L'Harmattan, Paris.
48. Netchine-Grynberg, G. (Ed.). (1990). Development and Cognitive Functioning in Children. PUF, Paris.
49. Newell, A. (1990). Unified Theories of Cognition. Cambridge (MA), Harvard University Press.
50. Nguyen, S. H. (1991). Manual of Anatomy and Physiology. Lamare Editions, Paris.
51. Norman, L. (1980). Information Processing and Human Behavior. Montreal E.V. Editions, Paris.
52. Reuchlin, M., et al. (1990). Cognition: The Individual and the Universal. PUF, Paris.
53. Richard, J.-F., Bonnet, C., & Ghiglione, R. (1990). Cognitive Psychology Treatise, Vol. 2: Symbolic Information Processing. Bordas, Paris.
54. Rondal, J.-A., & Esperet, E. (Eds.). (1999). Child Psychology Manual. Pierre Mardaga Editions, Belgium.
55. Roussey, M. (2000). School Difficulties. Retrieved from: file://A:/Difficultés scolaires.htm.
56. Ruble, T. L., & Cosier, R. A. (1990). "Effects of Cognitive Styles and Decision Settings on Performance." OBH, D46.
57. Sellal, F., & Danion, J.-M. (1995). "Memory Biases in Anxiety." Confrontation Psychiatrique, No. 36, pp. 211-230.
58. Siaud-Facchin, J. (2004). "Understanding the Learning Difficulties of Gifted Children: A Unique Intellectual Functioning?" Neuropsychiatry of Childhood and Adolescence, Vol. 52, pp. 142-147.
59. Tordjman, S. (2006). "Developments in Child Psychiatry Research: Towards Subjectivity and an Integrated Psychodynamic and Biological Approach Applied to Normal and Pathological Development." Neuropsychiatry of Childhood and Adolescence, Feb., Vol. 54, No. 1, pp. 3-8.
60. Tourette, C., & Guidetti, M. (2002). Introduction to Developmental Psychology. Armand Colin Editions, Paris.
61. Ydewalle, G. d., & Delhaye, P. (1988). Artificial Intelligence, Knowledge Extraction, and the Study of Natural Intelligence. Riss, 155(Feb.).