

أنماط التفكير المرتبطة بنصفي الدماغ الأيمن، الأيسر  
لدى طلبة المرحلة الإعدادية وعلاقتها بالتفكير التباعدي

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كلية التربية للبنات - جامعة الموصل

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ملخص البحث :

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## **Styles of Thinking Related to the Right and Left Hemispheres of Students Brains at the Preparatory School and the Relation of These Styles With Divergent Thinking**

**Lecturer Dr. Azhar Yahya Qassim**

*College of Education for Girls/ University of Mosul*

### **Abstract:**

The significance of the current research is related to the educated sector of society on which there are certain responsibilities and duties that participate in the society development. They take part in developing and raising the scientific and achievement levels reaching the highest mental levels of social creativity. For this reason, it has been important to have generation depending on brain skills comprehensively through developing students mind and types of thinking.

The current research aims at investigating the types of thinking related to the brain hemispheres (right, left) at the secondary schools of students in Nineveh city center. Then, measuring divergent thinking and investigating the relationship between types of thinking and divergent thinking. The present research composed out (513) students, (268) males and (245) females. Furthermore, the researcher has chosen types of thinking test related to (right, left) brain hemispheres prepared by Al-Dulaimi (2005) as well as divergent thinking test (2001). Face validity factor for the two tests has been calculated, and it has been (90%) of consistency.

Reliability factor for both tests has been calculated separately by using test-retest method. In addition, coefficient correlations have been (0.75), (0.77) and the mean has been (0.76). Moreover, reliability for divergent thinking has been calculated by test-retest method (0.82). Data analysis has been treated statistically by using Pearson Correlation factor and t-test. The findings have shown a statistically significant difference between mean achievement and obvious mean of thinking types related to brain hemispheres (right, left) for the benefit of attained value. Moreover, a significant change in the calculated means variable of the research sample for each type of thinking in the left brain direction. Finally, divergent thinking has been found and a positive relation between the right type of thinking and divergent thinking as well as having a negative relation in type of thinking and divergent thinking. As a point of departure, several recommendation and suggestions have been presented by the researcher.

## الفصل الأول : أهمية البحث والحاجة إليه

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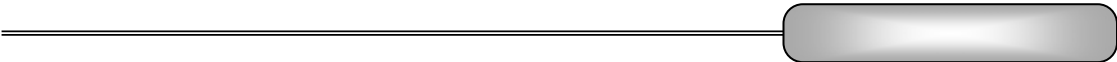
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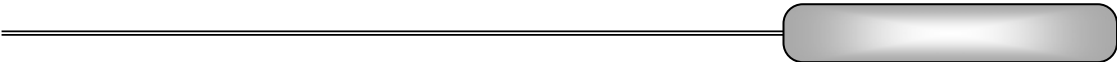
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(Malcom , 1981)

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(Seamon & Ezzaniga, 1973)

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(Divergent Thinking)

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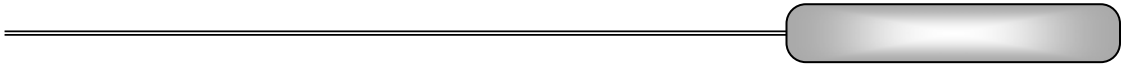
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(Sabaty, Davis, 1989)

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**Thinking Style :** -

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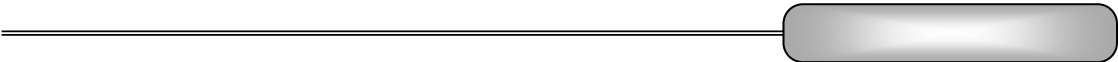
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( (Stemmerberg, 2003) .



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١- دراسة كوشنير (Kushner, 1985) :

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٢- دراسة هوك (Hauck , 1986) :

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(Hauck, 1986, p. 466-481) ( ) .

٣- دراسة القيسي (١٩٩٠) :

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٤- دراسة السليمانى (١٩٩٤) :

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٥- دراسة العلي (١٩٩٥) :

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٦- دراسة زانج ، ريتشارد Zhang, Richard (1997) :

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٧- دراسة قطامي (١٩٩٨) :

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٨- دراسة رازمينكوفا Ra- Zoumnikova (2000) :

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(Amthoner's Test)

(Keirsey )

(Razoumnikova , 2000 , p. 1-25) .(

٩- دراسة الدليمي (٢٠٠١) :

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١٠- دراسة وهيب وندى (٢٠٠١) :

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١١- دراسة بركات (٢٠٠٥) :

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١٣- دراسة الزعبي وآخر (٢٠٠٧) :

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١٤- دراسة نصر الله (٢٠٠٨) :

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١٥- دراسة إبراهيم و عيواص (٢٠٠٩) :

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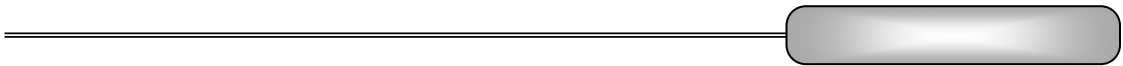
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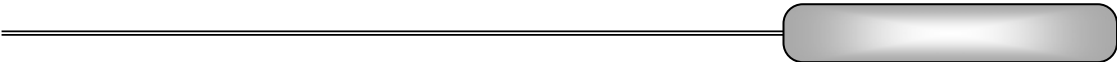
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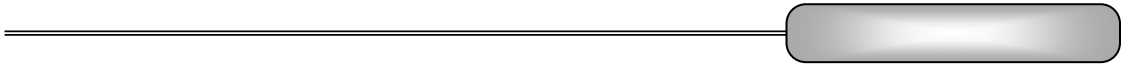
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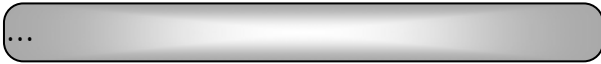
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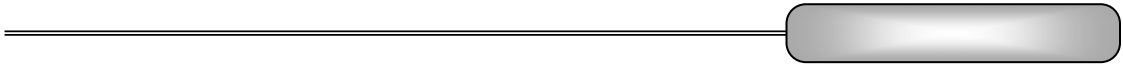
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## الفصل الخامس أولاً. التوصيات

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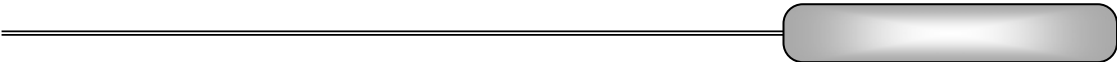
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46- Anderson, J. (1995) . Cognitive psychology and Its Implications 4<sup>th</sup> Edition, W.H. Freeman and company, New York.

47- Berk, L.E (2002) Infants, children, and adolescents. (4<sup>th</sup> ed). Boston : Allyn & Bacon.

48- Cotton, Kathleen (1991) Teaching Thinking skills, (North west) Regional Educational Laboratory school Improvement series.

49- Haunch, L.S. (1986) "Difference in Information Mapping strategies in Left/Right Brain Leavers" DAI, v.46, N.2 .

50- Kaschub, M. (1997) : "Exercising the Musical Imagination". Music Educators Journal, vol. (84) . No. (3) .

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- 51- Kushner-John, R. Ledger-Gwen (1985) "Effect of sex, intelligence, and style of thinking on creativity: A comparison of gifted and average IQ children" . ERIC document reproduction service, No. 00223514.
  - 52- Malcom, p. etal (1981) Learning Style Identification style, A service of CTB\McGraw-Hill.
  - 53- Ra-Zomikova, O.M. (2000): "Reflection of convergent and Divergent Thinking in topographlcecg organization" . Institute of physiology, Novosibirsk, Russia.
  - 54- Shaffler Davied R. (2002). Developmental psychology childhood and Adolescence wadsworth. Australia.
  - 55- Stenberg, R. (2003) . Cognitive psychology . 3<sup>th</sup> Edition, tomson, wads worth, Australia 24(8).
  - 56- Yildirim, A (1994) . Teachers Theoretical orientations Toward Teaching thinking. Journal of educational; research: v. 88 , p.28-35 . Sep-Oct.