

Relationships Between Thinking Skills and Left, Right and Whole Brain Learning Styles

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Abstract

The main purpose of the present study was to explore the relationships between thinking skills and brain learning styles. In this study, brain learning style was measured by the Yanpiaw Brain Style test (YBRAINS) and the Styles of Learning and Thinking test (SOLAT), while creative thinking and critical thinking were measured by three thinking skills instruments, the Torrance Test of Creative Thinking (TTCT); the Watson Glaser Critical Thinking Appraisal (W-GCTA); and the Yanpiaw Creative-Critical Styles test (YCREATIVE-CRITICALS). As the second purpose, this study permitted analyses of the relationships 1) between the two types of brain learning style tests and 2) among the three types of thinking skills tests. The five instruments were administered to 102 student teachers of a Diploma in Education Programme in the Special Teacher Training Institute, Malaysia. Results indicated that the TTCT scores were positively correlated with right brain style scores of the YBRAINS and SOLAT, while the W-GCTA scores were positively correlated with left brain style scores of the YBRAINS and SOLAT. Results also indicated positive relationships between the two brain styles tests on both of the left and right brain scores. The results demonstrated that the left brain learning style is related to critical thinking, while the right brain learning style is related to creative thinking. The present data are consistent with the notions that people who learn and think with right brain are creative. Since competence in creative thinking and critical thinking skills are essential to nearly every aspect of learning in every society, educators should implement whole brain learning strategies, instead of encourage merely the left, or the right brain learning strategies.

Background of the Study

Roger Sperry (1975) was awarded the 1981 Nobel Prize in Psychology and Medicine for his proof of the split brain theory, that human brain is formed by two separate cerebral hemispheres with different functions. The left hemisphere predominantly specialised for analytic, logical, rational, convergent and sequential tasks. On the other hand, the right hemisphere processes visual, non-verbal, intuition, non-linear, spatial, artistic, musical, holistic, and imaginative information. According to Solimon and Torrance (1986), the left and right cerebral hemispheres are both required for problem solving.

However, People naturally do not use both of their hemispheres equally in problem solving. They learn and think in different ways. They tend to solve problems habitually, by using one or another hemisphere of their brain (Torrance,