

CULTURAL INFLUENCES ON CREATIVITY AND ACADEMIC ACHIEVEMENT

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It has been found that high achievers tend to be very academically oriented either due to the home and school environment or the education system that tends to encourage rote learning and convergent thinking. At the same time, these same factors have been found to stifle their creative thinking abilities. Hence, students who are high academic performers tend to be less creative than low academic performers and this is especially true with students in the higher end of the intelligence continuum. In the late 1990s several initiatives had been taken to revamp the Malaysian curriculum and teaching to enhance the thinking skills and creativity among elementary and secondary school students. Since then no studies have been undertaken to investigate whether changes have occurred in the nature of the relationships between creativity and academic achievement and how these relationships vary in the intelligence continuum. Cultural influences have been found to influence the development of creativity and academic performance (Palaniappan, 1994; Yong, 1986). Since the culture of western countries such as the United States is quite different from that of Malaysia especially in the teaching and learning context, it would also be beneficial to investigate whether any cultural differences exist in the nature of these relationships and the possible existence of the intelligence thresholds.

Objectives

The aim of study is to ascertain the nature of creativity and creative personality characteristics of Malaysian Form Four and American Grade 10 students. The study is also aimed at finding the differences in the relationships between creativity and creative personality characteristics and academic achievement between Malaysian and American students and how these relationships vary in the intelligence continuum.

Research Questions

Based on the above rationale, this study hopes to investigate the following research questions:

1. What is the nature of Figural Creativity among Malaysian and American students as measured by the Torrance Tests of Creative Thinking?
2. Are there significant differences in Figural Creativity between Malaysian and American students?
3. What is the nature of Creative Perception among Malaysian and American students as measured by the Khatena-Torrance Creative Perception Inventory?
4. Are there significant differences in Creative Perception between Malaysian and American students?
5. What is the nature of the relationship between Figural Creativity and academic achievement among Malaysian and American students?

6. Are there significant differences in the relationship between Figural Creativity and academic achievement among Malaysian and American students?
7. What is the nature of the relationship between Creative Perception and academic achievement among Malaysian and American students?
8. Are there significant differences in the relationship between Creative Perception and academic achievement among Malaysian and American students?
9. Are there intelligence thresholds in the relationship between Figural Creativity and academic achievement among Malaysian and American students?
10. Are there intelligence thresholds in the relationships between Figural Creativity, Academic Achievement and Intelligence among Malaysian and American students?

Methodology

This survey research involved a sample comprising 40 Malaysian Form Four students (Mean age = 15.95 years, $SD = .22$) and 32 American Grade 10 students (Mean age = 15.00 years, $SD = .54$) obtained via random cluster sampling. Creativity was measured using Torrance Tests of Creative Thinking (TTCT) which provide measures of Figural Originality, Flexibility, Fluency and Elaboration while Khatena-Torrance Creative Perception Inventory (KTCPI) gives measures of Creative Perception via two dimensions namely, Something About Myself (SAM) which also give measures of 6 factors and What Kind of Person are You (WKOPAY) which provides measures of another 5 factors. Cattell Culture Fair Intelligence Tests afforded measures of intelligence both groups of students.

Findings

The order for creativity components for the Malaysian sample was Figural Fluency > Figural Originality > Figural Elaboration. The American students also obtained a similar order. The American sample was found to score significantly higher on all components of the Creative Process, the largest difference being on Elaboration. The American students have slightly lower perception of themselves as capable of creative achievements (SAM) and also in the areas of Intellectuality, Individuality and Artistry. There are significant differences between Malaysian and American students on WKOPAY, Acceptance of Authority, Awareness of Others and Disciplined Imagination. The factors of Creative Perception (SAM) appear to be similarly correlated among the Malaysian and American students. There are no significant differences in the relationships between the factors among the Malaysian and American students. There are significant differences between the Malaysian and American students in the correlation coefficients of composite score of Figural Creativity, Figural Fluency, Figural Flexibility and Figural Originality with Academic Achievement. However, on the correlations between Figural Elaboration with Academic Achievement, there are no significant differences.

For the Malaysian sample all components of SAM are not significantly related to academic achievement except the factor Initiative which is found to be related significantly to academic achievement. For the American sample, the relationship between SAM and academic achievement is found to be positively significant, indicating that American students who perceive themselves as creative appear to perform better academically. There are no significant correlations between the other factors and academic achievement except for Artistry which is significantly and positively correlated to academic achievement. There are no cultural differences in the relationships between creative perception and academic achievement among Malaysian and American samples. There is a possible intelligence threshold in the relationship between creativity and academic achievement of about 150 below which this relationship appears to be negative for the American sample. For the Malaysian sample, at high IQ levels the relationship between Intelligence and Academic Achievement is negligible; for the American sample this relationship appears to be significantly positive above an estimated IQ level of 128, indicating a possible intelligence threshold of 128. There appears to be an intelligence threshold of around IQ = 155

beyond which the creativity-intelligence correlation is negative for the Malaysian sample, a threshold not found among the Americans.

Discussion and Conclusion

This study showed that the order of the various components of Figural Creativity of Malaysian and American adolescents is similar: Figural Elaboration followed by Figural Flexibility, Figural Fluency and Figural Originality. This finding does not support the order reported by Torrance (1974): Figural Elaboration, Figural Originality, Figural Flexibility and Figural Fluency. However, the level of creativity of Malaysian students based on its components is significantly lower than those of American students. A previous comparative study on a sample of similar age group (Palaniappan, 2004) found there were no significant differences in creativity between Malaysian and American students. Further investigations involving a larger sample would throw more light on these conflicting findings of cultural differences in creativity.

The findings support the threshold theory as well as the law of diminishing returns, first posited by Spearman (1927) which states that at higher levels of cognitive abilities like intelligence, other cognitive abilities do not correlate as well as those in the lower levels. However, studies by Runco and Albert (1986) and Preckel, Holling and Wiese (2006) did not provide any support for this threshold theory. Runco and Albert's (1986) study of intermediate school children used the Stanford-Binet or WISC-R as measures of intelligence while the Wallach and Kogan (1965) battery of tests provided measures of creativity. Since this study employed a different set of measures for all constructs, the inconsistency could be attributed to the different measures used. The Preckel et al. (2006) study involving 1,328 German school students used the Culture Fair Intelligence Test (CFT 20) (Weib, 1998) to obtain measures of intelligence and Berlin Structure-of-intelligence-test (BIS-HB) (Jager et al., 2005) as measures of both intelligence and creativity. Since different measures were used it could be possible that the detection of intelligence threshold depends on the type of measures used.

References

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