

RELATIONSHIP AMONG CREATIVITY, COGNITIVE STYLES, ACADEMIC SELF-EFFICACY AND SENIOR SECONDARY SCHOOL STUDENTS' PERFORMANCE IN MATHEMATICS IN SOUTH-WEST, NIGERIA

By

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DECLARATION

I hereby declare that this Thesis entitled “Relationship among Creativity, Cognitive Styles, Academic Self-efficacy and Senior Secondary School Students’ Performance in Mathematics in South-west, Nigeria” was written by me and it has been the record of my own work. I also proclaim that neither the whole work nor part of it has been, is being, or is to be submitted for another degree at this or any other University or examining body.

Signature:.....

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November, 2019

CERTIFICATION

This is to certify that this study was carried out by SAADU Kayode Yunusa and has been read and approved as meeting part of the requirements of the Department of Social Sciences Education, Faculty of Education, University of Ilorin, Ilorin, Nigeria for the award of the Doctor of Philosophy (Ph.D.) in Educational Psychology.

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DEDICATION

This research is dedicated to God Almighty for His mercy; guidance and protection throughout the period of this work and Ambassador Sheik AbdulAzeez for his moral supports towards the successful completion of this programme.

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ABSTRACT

Mathematics is key to science and the technological development of any nation. Research has revealed the downward trend in students' performance in Mathematics and this has been partly traced to teacher and learner-related factors. As such, there is need to examine salient factors that can enhance students' performance in the subject. Therefore, this study investigated the relationship among creativity, cognitive styles, academic self-efficacy and students' academic performance in Mathematics in South-West Nigeria. The objectives of the study were to: (i) assess the profiles of students' creativity, cognitive styles (field independence vs. field dependence), academic self-efficacy and performance in Mathematics; (ii) assess the relationship among creativity, cognitive styles, academic self-efficacy and students' performance in Mathematics; (iii) determine the extent of the relationship among creativity, cognitive styles, academic self-efficacy and students' performance; (iv) examine the relationship among field independent, field dependent and students' performance in Mathematics; and (v) identify the extent of the relationship among field independent, field dependent cognitive styles and students' performance.

The study adopted a correlational research design. The sample comprised 1,620 senior secondary school students III out of a population of 1,961,505 in South-west Nigeria. Adapted instruments namely: Creativity Assessment Scale developed by Olatoye, Akintunde and Ogunsanya, (2010); Cognitive Styles of Field Dependence/ Field Independence Scale by Wyss (2002); Academic Self-efficacy Scale by Owen and Froman (1988); and an adopted West African Senior School Certificate Examination in Mathematics were used for data collection. The reliability coefficients of the instruments were determined using internal consistency based on Cronbach's alpha which yielded 0.84, 0.71, 0.75 and 0.87 respectively. The data collected were analysed using percentage and Multiple regression at 0.05 level of significance.

The findings of the study were that:

- i. 61.3% of the respondents had high creativity, 83.0% had high academic self-efficacy, 49.8% had field independent cognitive style and 50.2% had field dependent cognitive style;
- ii. there was a significant positive relationship among creativity, cognitive styles, academic self-efficacy and students' performance in Mathematics in South-west, Nigeria ($R^2 = .150$; $F = 95.011$, $p \leq 0.05$);
- iii. there was a significant relative contributions of creativity ($\beta = 0.055$, $p \leq 0.05$), cognitive style ($\beta = .161$, $p \leq 0.05$), and academic self-efficacy ($\beta = .219$, $p \leq 0.05$) to the students' performance in Mathematics;
- iv. there was a significant positive relationship among field independent and field dependent cognitive styles and students' performance in Mathematics in South-west, Nigeria ($R^2 = .060$; $F = 51.357$, $p \leq 0.05$); and
- v. there was a significant relative contribution of field independent cognitive style ($\beta = 0.231$, $p \leq 0.05$) to the students' performance in Mathematics.

The study concluded that students' academic performance in Mathematics is positively related to creativity, cognitive styles and academic self-efficacy. The implication of this study is that students' performance in Mathematics may be enhanced by sustaining creativity, academic self-efficacy and field independent cognitive style. The study recommended that stakeholders especially teachers should encourage students to sustain creativity, academic self-efficacy and field independence as a means of improving performance in Mathematics.

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