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Student and Teacher Related Variables as Determinants of Secondary School Students Academic Achievement in Chemistry

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ABSTRAK

Kajian ini membina dan menguji sebuah model untuk menyediakan penjelasan secara kausal pencapaian kimia di kalangan pelajar sekolah menengah dari aspek pemboleh ubah-pemboleh ubah pelajar – jantina, tabiat pembelajaran, kebolehan matematik dan pemboleh ubah guru. Sebuah rekaan ex-post facto diadaptasi untuk kajian ini. Populasinya pula terdiri dari seluruh pelajar sekolah menengah tahun dua (SSII) dan guru mereka di Epe dan kawasan kerajaan tempatan Ibeju-Lekki di wilayah Lagos, Nigeria. Enam dan empat buah sekolah telah digunakan di dalam kedua-dua kawasan kerajaan tempatan itu. Sebanyak empat set instrumen atau alat digunakan; ianya adalah (i) Soalan Berkaitan Maklumat Peribadi Guru (PDQT), (ii) Kajian Inventori Tingkahlaku (SHI), (iii) Ujian Keupayaan Matematik (MAT), (iv) Ujian Pencapaian Kimia (CAT). Keputusan yang diperoleh menunjukkan bahawa 7.60% kepelbagaian kejayaan pelajar dalam mata pelajaran Kimia (X8) telah diambil kira oleh kesemua tujuh pemboleh ubah penentu apabila dinilai bersama. Ia juga menunjukkan bahawa hanya pemboleh ubah – usia guru (X1), jantina guru (X2), kelayakan (X3) dan pengalaman (X4) mempunyai kesan secara langsung terhadap keupayaan pelajar dalam mata pelajaran Kimia (X8). Cadangan berdasarkan kepentingan pemboleh ubah turut dikemukakan.

ABSTRACT

The study constructed and tested a model for providing a causal explanation of secondary school achievements in chemistry in terms of student variables – gender, study habit, mathematical ability and teacher's variables – gender, age, qualification and years of experience. An ex-post facto design was adopted for the study. The population was made up of all senior secondary school year two (SSII) students and their teachers in Epe and Ibeju-Lekki local government areas of Lagos state, Nigeria. However, six and four schools were used in the two local government areas respectively. Four sets of instrument were used; these were, (i) Personal Data Questionnaire for Teachers (PDQT) (ii) Study Habit Inventory (SHI) (iii) Mathematical Ability Test (MAT) and (iv) Chemistry Achievement Test (CAT). The results showed that 7.60% of the variability in students' achievement in chemistry (X_8) was accounted for by all the seven predictor variables when taken together. It was also revealed that only four of the variables-teachers age (X_1), teacher gender (X_2), qualification (X_3) and experience (X_4) had direct causal effect on student's achievement in chemistry (X_8). Recommendations based on the importance of these variables were then highlighted.

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