

ABSTRAK

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PENGARUH PENGELOMPOKAN KEMAMPUAN MATEMATIKA ANTAR KELAS TERHADAP PERFORMA DAN MOTIVASI SISWA DENGAN MENGGUNAKAN GEOGEBRA DI SEKOLAH XYZ TANGERANG

(xiv + 90 halaman: 14 gambar; 36 tabel; 16 lampiran)

Penelitian ini bertujuan untuk mengkaji pengaruh Between-Class Ability Grouping (BAG) terhadap Performa Akademik (AP) dan Motivasi Belajar (LM) siswa, serta untuk memeriksa peran dari GeoGebra (GG) sebagai variabel moderasi. Penelitian ini dilakukan di SMA XYZ Tangerang, dengan berfokus pada siswa tahun pertama. Penelitian ini menggunakan pendekatan kuantitatif dengan desain penelitian survei, serta melibatkan 303 siswa sebagai sampel dari total populasi berjumlah 654 siswa. Siswa-siswa dikelompokkan ke dalam tingkat kemampuan tinggi, sedang, dan rendah berdasarkan hasil tes kemampuan matematika mereka. GG dipilih sebagai teknologi pendidikan yang berpotensi dalam mempengaruhi AP dan LM di dalam pembelajaran matematika. Data penelitian dikumpulkan menggunakan kuesioner yang telah divalidasi dan juga hasil tes matematika. Analisis statistik yang digunakan meliputi statistika deskriptif, korelasi Pearson, dan analisis regresi berganda. Hasil penelitian menunjukkan bahwa BAG memiliki pengaruh positif yang signifikan terhadap AP dan LM. AP dan LM juga terbukti memiliki korelasi yang signifikan. GG berpengaruh positif terhadap LM, walaupun demikian, efek moderasinya terhadap hubungan antara BAG dan variabel dependen tidak signifikan secara statistik. Kesimpulan dari penelitian ini menunjukkan bahwa BAG merupakan metode yang efektif dalam meningkatkan pembelajaran matematika, sementara GG lebih bermanfaat sebagai alat pendukung daripada sebagai moderator.

Kata Kunci: GeoGebra (GG), Hasil Siswa, Motivasi Belajar (LM), Pendidikan Matematika, Penelitian Kuantitatif, Pengelompokan Kemampuan antar Kelas (BAG), Performa Akademik (AP).

Referensi : 49 (1997-2025)

ABSTRACT

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EFFECTS OF BETWEEN-CLASS MATH ABILITY GROUPING ON STUDENT PERFORMANCE AND MOTIVATION USING GEOGEBRA AT XYZ SCHOOL IN TANGERANG

(xiv + 90 pages; 14 figures; 36 tables; 16 appendices)

This research investigated the effects of Between-Class Ability Grouping (BAG) on students' Academic Performance (AP) and Learning Motivation (LM). At the same time, it also examined the role of GeoGebra (GG) as a moderating variable. The research was conducted at Senior High School XYZ, Tangerang, focusing on the first-year students. A quantitative approach with a survey design was used, involving a sample of 303 students from a total population of 654. The students were grouped into high, medium, and low levels based on their mathematics proficiency test results. GG was chosen as an education technology platform which could influence the students' AP and LM while learning mathematics. The data were collected using validated questionnaires and mathematics test scores. The descriptive statistics, the Pearson correlation, and the multiple regression analysis were implemented as the statistical analysis tools. The results have indicated that the BAG had a significant positive effect on both AP and LM. AP and LM were also proven to have a significant correlation. GG had some positive effects on LM, nevertheless its moderating effects on the relationships between the BAG and dependent variables were not statistically significant. The conclusions have suggested that the BAG is effective in improving the processes of mathematics learning; however, the GG is more useful as a supporting tool rather than a moderator.

Keywords: Academic Performance (AP), Between-Class Ability Grouping (BAG), GeoGebra (GG), Learning Motivation (LM), Mathematics Education, Quantitative Research, Student Outcomes

References: 49 (1997-2025)