

# Academic Performance of Engineering Students; A Predictive Validity Study of First-Year GPA and Final-Year CGPA

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## Abstract

Background: Students' academic achievement is regarded as the scholastic standing of students at the end of a given study period that is expressed in terms of grades. The key to bridging the attainment gap at the end of their study period is through their cumulative grade points over the duration of the study. Predictive validity study on students first-year GPA as a predictor of their final-year CGPA was carried out to predict the students' academic performance in Chemical, Civil, Electrical, and Mechanical Engineering. Purpose/Hypothesis: This study examined the relationship between first-year GPA and final-year CGPA, as well as the relationship between Age, Gender and Geopolitical zones on first-year GPA and CGPA of Engineering students in the Faculty of Engineering students University of Abuja, Nigeria. The data obtained from the four Departments; Chemical, Civil, Electrical and Mechanical were analyzed. Two hypotheses were formulated to guide the study. Design/Method: An ex-post factor research approach was adopted, and Pearson's correlation and Regression Analysis were fitted with the data using Minitab software. Results: The results of the study highlighted that first-year GPA had a strong positive relationship with final-year CGPA. Age, Gender and Geopolitical zones have no correlation with students' final-year CGPA. The regression equations can be used to predict students' CGPA to bridge the attainment gap at the end of their studies. Conclusions: Finally, the study emphasized the need to admit more female students in Engineering studies as they constitute 12.9% of the population.

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### **Conflict of Interest**

The authors declare no conflict of interest.

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