

# Empowering Student Engagement and Academic Achievement in Physical Education Classes After COVID-19: Integration of Three Teaching Models

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## ABSTRACT

This study aims to analyze the effects of tactical game model (TGM) and peer teaching model (PTM) in increasing student engagement and academic achievement. The true experimental method with a 10-week randomized controlled design was adopted in this study. 54 students were allocated into experimental class 1 (TGM,  $n = 18$ ,  $19.60 \pm 1.17$  years), experimental class 2 (PTM,  $n = 18$ ,  $20.00 \pm 1.05$  years) and control class (traditional,  $n = 18$ ,  $19.40 \pm 1.43$  years). The instrument in this research used the student engagement questionnaire to assess student engagement in PE classes, while semester exam scores were used as academic achievement instruments. The results of the Student's paired t-test, we observed that participants in TGM, PTM and CC experienced significant differences from pre- to post-test scores on student' engagement and academic achievement (all,  $p < 0.05$ ). Meanwhile, results show that there is a significant effect of time, group and time\*group interaction on student' engagement (all,  $p < 0.05$ ), and academic achievement (all,  $p < 0.05$ ). Conclusions: Thus, we highlight the application of TGM and PTM in PE classes is important to improve students' levels of engagement and academic achievement.

**Keywords:** Tactical game model, peer teaching model, engagement, academic achievement, physical education