

EFFECT OF TEACHING WITH PhET SIMULATION ON THE KNOWLEDGE OF HYBRIDIZATION IN THE SHS

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ABSTRACT

The study examined the effect of the usage of PhET simulation to teach hybridization at Collins Senior High school. Quasi-experimental design was adopted for the study. Using the convenient sampling technique, all the 45 SHS 1 science students in one class from the Collins Senior High School were involved in the study. Researcher-made tests was the instrument used in collecting data for the study. The data were analyzed through the computation of frequency counts, percentages, paired sample t-test as well as independent sample t-test. The study demonstrated that the use of the PhET simulation intervention is significant and has a positive effect on students' knowledge and understanding on hybridization. The difference that was found to be statistically significant can be partly attributed to the intervention of the PhET simulation. Again, the use of the PhET simulation intervention was significant and had a positive effect on male students' knowledge and understanding on hybridization as compared with their female counterparts. This may attribute to the fact that males are more technology inclined than females. There is the need for a further investigation to evaluate the degree to which these factors influence post-test results and to also find out the factors accounting for these differences in terms of gender. It is important that the Ministry of Education and the Ghana Education Service ensure that school heads and teachers adopt the use of PhET simulation as a teaching learning resource for teaching hybridization.

Keywords: Hybridization, PhET, Teaching, Simulation.