

Author	Macale, Aphrodite M.
Title	Effect of Flipped Classroom With Peer Instruction (FCPI) on The Chemistry Achievement and Classroom Environment of Grade 7 JHS Students
Year	December 2019
Program	Doctor of Philosophy in Education (Mathematics)

ABSTRACT

This study used a two-group quasi-experimental pretest-posttest research design to determine the effect of flipped classroom with peer instruction (FCPI) on the chemistry achievement and classroom environment of Grade 7 junior high school students. In the flipped classroom with peer instruction setting, the students were introduced to the lesson using the science courseware developed by the Department of Science and Technology (DOST) and the researcher-modified science videos. The teacher focused the discussion during class on concept questions which were answered using peer instruction. The traditional classroom with peer instruction (TCPI) set-up is a variation of the traditional lecture method with the students made to answer formative assessments with peers.

The effectiveness of the treatment was measured using a researcher-developed chemistry achievement test supplemented by classroom observations, journal entries, perception survey, and focus group discussions. Results showed that the two groups of students significantly increase their Chemistry achievement after the implementation of the strategies. However, it was worth noting that the students in the FCPI set-up gained more than the students in the TCPI set-up in terms of Chemistry achievement. The estimated increase in the Chemistry achievement of the students in the FCPI set-up was 4.99% while the students in the TCPI set-up only had a 3.67% increase.

The results of the survey on the student participation in class showed that the students in the FCPI set-up demonstrated better classroom participation than the students in the TCPI set-up. The design of the FCPI implemented in this study made students complete their assigned tasks on time, show a cooperative and supportive attitude during classroom discussion and activities, share ideas in class, and show respect for the opinion of others. The students in the TCPI set-up performed poorly on these aspects of classroom participation.

In terms of classroom environment, the FCPI set-up scored better than the TCPI set-up in the following aspects of the classroom observation: positive climate, teacher sensitivity, regard for student perspective, behavior management, productivity, quality of feedback, language modeling, instructional learning format, and concept development. Statistical analysis showed that there was sufficient evidence to say that the classroom environment in-class observation days 8, 9, 10, 13, and 14 were significantly different for the two classroom set-ups with the FCPI set-up showing a better classroom environment.