

FLIPPED CLASSROOM PEDAGOGY ENHANCES STUDENT SATISFACTION AND VALIDATED MOTIVATED STRATEGIES IN EVOLUTION BIOLOGY CLASSROOMS

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ABSTRACT

This paper reports the findings of a research inquiry into undergraduate student perceptions of a flipped classroom experience in a 4th-year students in molecular biology major at Dong-eui University, Korea. The purpose of the research was to discuss the impact on promoting student satisfaction and improving their involvement in their own learning when applying a “Flipped classroom” design in evolutionary biology class. The participants involved in this study were lecture evolution biology. Out of the 20 students trained, 20 completed the retro-pre-questionnaires. The increase in scores at ‘Not Confidence’ was statistically significant (mean \pm SD, 0.7 ± 5.37 ; 95% confidence interval, -0.52 to 2.92). The increase in scores at ‘Confidence’ was statistically significant (mean \pm SD, 4.31 ± 5.89 ; 95% confidence interval, 1.36 to 7.26). The differences between the mean scores of pre-test and post-tests for ‘Comprehension’ were also calculated separately to see if there was any difference in the results. There was a statistically significant difference in the scores obtained in the pre-test (M=29.06, SD=7.43) and post-test (M = 32.20, SD = 7.79); $t = 5.18$, $p > 0.001$). The increase in scores was statistically significant (mean \pm SD, 3.18 ± 2.53 ; 95% confidence interval, 1.89 to 4.46). We found that flipped-class pedagogy enhanced the validated motivated strategies for observation, comprehension, comparison, reasoning, application, and experience except organization.

Keywords: Confidence, evolution biology, flipped classroom, validated motivated strategies.