

FLIPPED CLASSROOM PEDAGOGY ENHANCES STUDENT SATISFACTION AND VALIDATED STRATEGIES IN MOLECULAR BIOLOGY

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ABSTRACT

The flipped classroom is a new pedagogical method consisting of online video lectures in their own time prior to attending classes. This paper reports the findings of a research inquiry into undergraduate student perceptions of molecular biology with a flipped classroom experience in sophomores in university and they are majoring in Food Science & Technology at Dong-eui University, Korea. The scores at inquiry courses such as comprehension and comparison were statistically significant, which implied that the students perceived that they learned most of the skills after the flipped classroom module and that the course was effective. The differences between the mean scores of pre-test and post-tests for 'Flipped classroom' 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 ($M=33.69$, $SD=10.870$) and post-test ($M=71.1$, $SD=9.517$). The increase in scores was statistically significant (mean \pm SD, 33.1 ± 1.66 ; 95% confidence interval, 27.43 to 38.67, $t=12.138$, $p>0.001$). Across the 29 contents, coefficient alpha for the traditional classroom was 0.387. Coefficient alpha values for flipped classroom was 0.380. Students generally perceived the flipped classroom as a positive experience.

Keywords: Flipped classroom, inquiry courses, molecular biology, pre-test and post-tests.