Traditional, Online, and Flipped: A Preliminary Analysis of Instructional Approaches on Student Performance in a C# Programming Course

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Abstract

Although various approaches to course redesign have been proposed over the years "flipping" the classroom is quite popular across many disciplines, information systems notwithstanding. The purpose of this paper is to examine whether the instructional approach (i.e., traditional, online, and flipped) has an impact on student performance on specific course requirements in an undergraduate C# programming course. Data from several semesters were collected and analyzed using the Kruskal-Wallis H Test. Results indicated interesting but few statistically significant findings. A bright spot revealed that the median score for the flipped instructional approach for Course Average was within striking range of the online instructional approach and was approaching statistical significance in relation to the traditional instructional approach. This is encouraging given the time and effort put into the design of the flipped classroom. In sum, the study suggests that performance is approach-neutral. Future research will involve more students in the flipped classroom.

Keywords

Flipped classroom, C# programming, course redesign, instructional approach, student performance