Abstract

Over the last decade, enrollment in college-level computer science course has been rapidly increasing, while many departments struggle to keep up with the demand for faculty, leading to increased class size. This has led many classes to move material online to attempt to reach students more efficiently. We sought to determine if worked examples can be beneficial to improve understanding of programming concepts. We gathered baseline data from an introductory programming course for non-majors and selected several problems students struggled with. In the next semester, each of these problems were supplemented with a worked example that parallel the concepts used in the problem as well as the problem’s general structure. Usage and problem completion data was then gathered and compared to the previous semester to determine the effectiveness of the worked example. A survey was also given to students in the experimental section to gauge the perception of the worked examples. The results of this experiment could help teacher develop online material for introductory classes more efficiently to alleviate the pressure of growing class sizes.