

For Whom Do Incorrect Worked Examples Work? Evaluating the Effectiveness of an Error-Correction Intervention for Undergraduate Chemistry Students

Research suggests that correcting and explaining errors improves future problem-solving, as students are less likely to make the same mistake in the future (Siegler, 2002; Booth et al., 2015). The first goal of this SOTL project was to examine the effectiveness of an error-correction intervention for students enrolled in an undergraduate chemistry course. The second goal was to determine whether the intervention was beneficial for students with negative prior experiences in chemistry. Students enrolled in either introductory or upper-level biochemistry courses completed the intervention during class time. Students were presented with an example problem that had been completed by a hypothetical student and told that the student had made an error; they were then asked to find and correct the error. The effectiveness of the intervention was evaluated using a pretest-posttest design. Prior to administering the intervention, students were asked to complete a survey about their prior experiences with chemistry.