Two Approaches to Case-Based Teaching in Science: Tales From Two Professors

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ABSTRACT

Case-based teaching and learning strategies can offer instructors effective pedagogical tools to scaffold student learning through activities designed to fulfill teaching objectives and desired student learning outcomes. In science disciplines, programs strive to impart knowledge in addition to providing students environments through which they can learn through collaboration. Case-based studies can effectively expose students to the process of science and encourage them to work through facts, analyze data, formulate solutions, draw conclusions, and predict consequences. Despite the versatility of case studies as teaching and learning tools, many factors influence their implementation in a given teaching environment. Inasmuch, the manner in which they are used is typically dependent upon specific teaching and learning objectives and the historical context of the course (e.g., student enrolment, year of instruction, lecture vs. lab vs. tutorial settings). In this article, we discuss two novel approaches for case-based teaching and learning in Biology as a means to convey lecture content, encourage students to apply fundamental concepts taught in lectures, while exposing them to the process of science in a dynamic environment.

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