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Investigating the Impact of Making Chemistry Content Relevant and Meaningful

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Abstract

Making chemistry relevant to students' lives by introducing controversial socio-scientific issues in classrooms motivates students to participate in the discussion of scientific principles that are governing the changes around them. This study aims to explore the influence of integrating two sustainability-oriented socio-scientific issues - alternative energies (SDG #7) and nanotechnology - into the General Chemistry curriculum on students' career aspirations and perceptions of science relevancy. The learning activities incorporated discussion on the United Nations Sustainable Development Goals, environmental and health hazards of technological advances, and the positive grassroots changes that alternative energy, for instance, can initiate. Following each exploration, the students were asked to consider real-world scenarios and come up with solutions to increase the availability of renewable energies through reduced inequalities and the promotion of sustainable communities. With the planned analysis, the team aims to determine if there is any statistically significant increase in the mean scores for the surveys, Changes in Attitude Towards the Relevancy of Science (CARS) and Career Aspirations (CA). Additionally, the data will be examined to reveal any potential correlation between students' demographics and the determined results. The discussion will also involve suggestions on designing such activities that aim to equip students to become global and scientifically literate citizens.

Keywords: career aspiration, higher education, science education, socio-scientific issues, sustainability