

An Interdisciplinary Curricular Activity for Environmental Awareness Inspiring Sustainable Campus Vicinity

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Abstract

Most Universities are tackling sustainability issues in a compartmentalised manner. Universities can optimise their role as agents of change with regard to sustainability by adopting a ‘Whole – of – University’ approach. This approach explicitly links research, educational, operational and outreach activities and engages students in each. By such interdisciplinary methods of learning, students will develop problem – solving and critical thinking skills; and learn to apply scientific knowledge to address real – world issues such as water quality, climate change, emerging technologies and other concerns involving health, environment, education, ethics and policy. To study this approach of learning, undergraduate chemistry students of Navrachana University, Vadodara were given an assignment to study water quality index of two perennial water bodies around the campus, via comprehensive ‘teaching – research – operational’ approach involving academic inputs, group discussion among members, field visits and finally a report presentation of the data analysed and inference drawn. This interdisciplinary and integrative activity provided students with the scientific knowledge and skills to understand and research surface water ecosystem, including chemistry, biology, hydrology, limnology and resource management. It also helped them to integrate scientific research with environment, social and economical issues of sustainable management. Activities of this nature foster an understanding of both, the core principles within the intersections between three pillars of sustainability: environment, social and economic systems, with a particular emphasis on surface water science and also prepares students to address the complex regional, national and global challenges related to the sustainability of water resources.

Keywords: Sustainability, Surface Water, Interdisciplinary