Dr. Ambedkar College, Deekshabhoomi ,Nagpur.

Department of Biochemistry & Biotechnology

Topic: "Enhancing Academic Engagement Through Participative Learning: A Case Study of Undergraduate Students in Biochemistry and Biotechnology at Dr. Ambedkar College, Nagpur (Session 2023-24)"

Date: 28th April 2024

Report

This report presents a case study on the implementation and effectiveness of participative learning strategies among undergraduate students studying Biochemistry and Biotechnology at Dr. Ambedkar College, Nagpur during the academic session 2023-24. Participative learning methodologies were introduced to enhance student engagement, critical thinking, and collaborative skills within the curriculum. The study evaluates the impact of these strategies on student learning outcomes and provides insights into the students' perceptions and experiences.

Participative learning is an educational approach that emphasizes active involvement, collaboration, and interaction among students and instructors. In recent years, there has been growing recognition of the benefits of participative learning in promoting deeper understanding, retention of knowledge, and development of essential skills. This report investigates the integration of participative learning techniques in the Biochemistry and Biotechnology undergraduate program at Dr. Ambedkar College, Nagpur.

1. Methodology:

A mixed-methods approach was employed to assess the effectiveness of participative learning methods. Data was collected through surveys, interviews, classroom observations, and analysis of student performance. Participating students were enrolled in various courses within the Biochemistry and Biotechnology curriculum during the academic session 2023-24.

2. Implementation of Participative Learning:

Participative learning strategies such as group discussions, problem-based learning, case studies, peer teaching, and collaborative UG Lab projects were integrated into the course syllabus across different modules. These activities were designed to encourage active participation, critical thinking, and knowledge application among students.

3. Findings:

a. Improved Engagement: Participative learning activities resulted in increased student engagement and participation during classes. Students reported feeling more motivated and invested in the learning process.

b. Enhanced Critical Thinking: Participative learning fostered critical thinking skills as students were required to analyze, evaluate, and apply concepts to real-world scenarios.

c. Better Collaboration: Collaborative projects and group activities facilitated teamwork and communication skills among students.

d. Positive Student Feedback: Surveys and interviews revealed overwhelmingly positive feedback from students regarding the effectiveness and enjoyment of participative learning methods.

4. Challenges and Limitations:

a. Time Constraints: Implementing participative learning activities within the existing curriculum posed challenges in terms of time management and coverage of syllabus content.

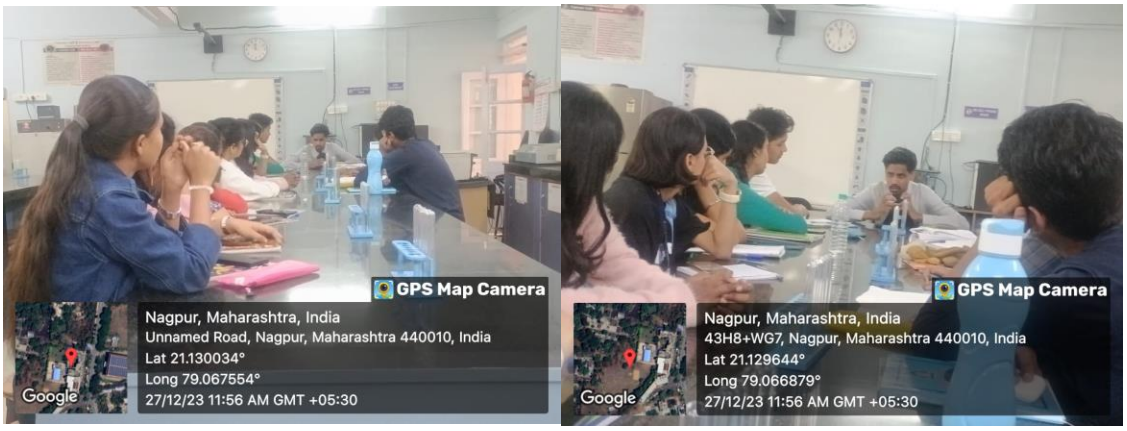
b. Student Resistance: Some students initially resisted participative learning approaches due to unfamiliarity or discomfort with collaborative learning environments.

c. Assessment Methods: Aligning assessment methods with participative learning activities required careful consideration to ensure fairness and validity.

5. Conclusion and Recommendations:

The integration of participative learning techniques in the Biochemistry and Biotechnology curriculum at Dr. Ambedkar College, Nagpur proved to be beneficial in enhancing student engagement, critical thinking, and collaboration. Based on the findings of this study, it is recommended to further explore and expand the use of participative learning methods in other courses and academic programs. Faculty development initiatives and

ongoing support are essential for the successful implementation of participative learning approaches.



Glimpses of Peer interaction

UG Lab projects