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Title: Innovative Pedagogical Strategies in Science Education

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Abstract

Student engagement is a vital component of education; however, it can be quite challenging to engage the student in the classroom. Our research group, at IISER Tirupati, is interested in the development of an Outcome-based Enhanced Learning (ObEL) program aimed at improving student engagement and learning through innovative pedagogical strategies. In this presentation, I will discuss the various aspects of this program that we are currently working on including: active learning, tech-enhanced teaching and learning, guided inquiry and innovative assessments. I will also highlight how we have redesigned undergraduate science courses with pedagogical strategies to foster active participation, promote deeper understanding, and create a more dynamic learning environment^{1,2}. Responses from student surveys and interviews have revealed that our pedagogical strategies and interactive tools are engaging and intellectually stimulating, enhance content understanding and encourage peer engagement and learning^{3,4}. Overall, our research shows that through exploration and application of theoretical knowledge in interactive settings, students can go beyond passive reception of information to constructive and interactive modes of engagement.

References

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