COLLOQUIA

UNIVERSITY
OF TRENTO - Italy
Department of Physics

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Towards a more equitable, diverse, and inclusive physics education: from collaborative exams to interactive lectures

Abstract

In the last three decades Physics Education Research worldwide has been mostly focused on improving students' understanding and academic performances, while producing evidence-based approaches for teaching and learning. Just recently special focus has been given to make this evidence-based teaching and learning practices more inclusive, equitable and diverse.

In this talk I will present a teaching and learning design tailored to the students learning preferences, which promotes the engagement of diverse students' groups while boosting their self-efficacy and sense of belonging. Associated with this inclusive teaching, we developed collaborative exams which incorporate student self-marking and student-generated content. This presentation discusses the study outcomes and the student perceptions on these exams, within the framework of an active learning intermediate optics course.

Further references

Examinations That Support Collaborative Learning: The Students' Perspective:
Georg W. Rieger and Cynthia E. Heiner, Journal of College Science Teaching, Vol. 43, No. 4 (March/April 2014), pp. 41-47.
Collaborative exams:
Cheating? Or learning? Hywon Jang; Nathaniel Lasry; Kelly Miller; Eric Mazur, Am. J. Phys. 85, 223–227 (2017).

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