

Beyond Learning Classrooms: An Undergraduate Experience at Instituto Politecnico Nacional Mexico

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Abstract : This work aims to share innovative educational experiences at IPN Mexico, that involve collaborative learning at institutional and global level through course competition and global collaboration projects. Students from universities in China, USA, South Korea, Canada and Mexico collaborate to design electric vehicles to solve global urban mobility problems. The participation of IPN students in the 2015-2016 global competition (São Paulo, Brazil and Cincinnati, USA) Reconfigurable Shared-Use Mobility Systems allowed to apply pedagogical strategies of groups of collaboration and of learning based on projects where they shared activities, commitments and goals, demonstrating that students were motivated to develop / self-generate their knowledge with greater meaning and understanding. One of the most evident achievements is that the students are self-managed, so the most advanced students train the students who join the project with CAD, CAE, CAM tools. Likewise, the motivation achieved is evident since in 2014 there were 12 students involved in the project, and there are currently more than 70 students.

Keywords : collaboration projects, global competency, course competition, active learning

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