

Transdisciplinary approaches for education innovation in biological, chemical and biomedical sciences: fostering creativity, critical thinking and collaborative learning
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The coauthors of this communication are involved in undergraduate and postgraduate teaching in the fields of Biology, Chemistry and Biomedicine. We are implementing an Education Innovation Project aiming to foster creativity, critical thinking and collaborative learning in our students. This project promotes meaningful and relevant learning through the use of collaborative learning strategies based on cases (real or simulated, CBL), problems (PBL), projects (PrBL), and challenge-based learning (ChBL). We will emphasize that the cases, problems, projects and challenges designed and proposed simulate authentic real-world tasks or simulate professional situations. We will also promote that our students acquire skills and practice the search and selection of relevant scientific information, the identification of pseudo-scientific, manipulated or technically false information, the comprehensive reading of scientific articles, the presentation and discussion of results. These skills are key to foster their critical thinking and their capacities in science communication. Our project also includes the involvement of professor and students in several annual workshops, namely, a Vocational Guidance and Entrepreneurship Promotion Workshop, a Metabolism Workshop, and a Advances in Molecular Oncology Workshop. This work is supported by an Educative Innovation Project (PIE22-118, funded by University of Málaga). [Grants: PID2023-148504OB-I00 (Spanish Government). Funds from BIO 267 (Andalusian Government, University of Málaga, EU FEDER)].

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