A proposal around the problematic of gender, diversity, and inclusion in the undergraduate formation in Physics

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Currently the political and educational agenda of most countries includes issues related to the problematic of gender, diversity, and inclusion; however, different studies and surveys indicate how difficult is to materialize these concerns in concrete practice. Based on our own experience in the educational field, we consider that these difficulties seem to be even greater in the university system and, particularly, in disciplines in the area of natural sciences, such as Physics. Besides, we know that a high percentage of future Physics graduates will be educators and, in addition, they will develop their activities within work teams with a high level of interaction among all its members, assuming, in many cases, management functions and human resources coordination. From this point of view, and facing the current demands of the different educational and professional scenarios, it is essential to design and implement strategies aimed at promoting critical reflection processes in the initial formation in Physics that allow the development of the skills required for promote human understanding in all its dimensions. In this work, we present methodological constructions based on different pedagogical devices -such as group work techniques, life history analysis, and case studies- designed specifically to make explicit and address issues of gender, diversity, and inclusion. Moreover, we present a first qualitative and exploratory study of the main results achieved in concrete implementation of this proposal, in the context of different disciplinary subjects.