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CREATION OF VIDEOS BY STUDENTS AS A WAY TO PROMOTE LEARNING IN THE AREA OF MECHANICS: AN EXPERIENCE IN HIGHER EDUCATION

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The degree courses in Mechanical Engineering and Technology and Industrial Management of Polytechnic Institute of Bragança (Portugal) include in the 2nd semester of the 2nd year of their study plan, the course units of Mechanical Technology I and Manufacturing Processes I, respectively. The contents of these course units are mostly theoretical, so it is important to find approaches that motivate the students and involve them directly in their learning. The creation of videos for later presentation to colleagues can fulfil this role, as it requires students to search, interpret, select and organize information about the contents and reflect on the best way to transmit it to their peers. Within the mentioned course units, in one of the academic years in which classes were essentially online due to the pandemic, it was proposed to the students the creation, in group, two videos (each one at a different stage of the semester), with the themes assigned by the teacher so that, as a whole, they would cover all the contents that it was essential to explore.

The following steps were followed:

- (i) research on the theme and production of the video by each group;
- (ii) sharing the videos with classmates;
- (iii) extra-class viewing of the videos produced by classmates;
- (iv) students answering general questions about the videos they watched;
- (v) brief oral presentation in a class by each group about the video produced;
- (vi) class discussion on the themes of the videos, based on questions posed by the students, and
- (vii) an evaluation test on the themes covered.

Only when all the steps concerning the videos produced in the first phase were fulfilled did we proceed to the preparation of the videos for the second phase, following again the whole process described above. We consider that, with this methodology, the students were more motivated and started to have a more active role in the classes, becoming also (together with the teacher who had the role of an advisor) responsible for the learning of the class, as they contributed with their work and questions to the exploration of the contents. We underline that the described approach, besides promoting the acquisition and deepening of knowledge about the course unit contents, contributed to the development, by the students, of several transversal skills, which can be useful in their daily life or in their professional future.

keywords: higher education, videos creation, learning, mechanics.