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The Role of four-hour Blocks in Promoting Active Learning Strategies: The impressions of students and teachers

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The technological degrees offered at the Polytechnic School of Águeda – University of Aveiro have been organized, since 2001, around a project-based learning environment [1]. One of the features of the curriculum implementation is that courses' contact hours are not divided in several types of classes, as in traditional learning environments. Following an idea adapted from the Aalborg model [2], all courses are taught in four-hour blocks that can be organized differently according to the course, or the learning needs at any stage of the process, thus enhancing flexibility and allowing for re-organization of the provision for teaching according to students' needs. This format was also meant to encourage the adoption of active learning strategies within the classroom, since traditional lectures in such a format would be little less than excruciating.

This article describes an investigation into the "on the field" experience of both students and teachers with these four-hour blocks. The research questions were: How are four-hour classes being implemented "on the field"? What are the advantages and disadvantages of this format? Does the format actually foster the implementation of active learning strategies? Discussion sessions were organized for three groups of students, one for each of the academic years of the Electrical Engineering program, with the goal of identifying the various categories of four-hour classes to which they have been exposed so far. Each group of students elected a "secretary" and were left alone to discuss for about twenty minutes, after which the Author re-entered the room and discussed with the students any issues in need of clarification. Afterwards, each of the participating students was asked to list, in writing, the three most posi-



tive and the three least positive aspects of each of the blocks' categories identified earlier [3]. All teachers involved in the program were also asked to list, in writing, the three most positive and the three least positive aspects of teaching in four-hour blocks. The results of the discussion sessions and the lists, from both students and teachers, were qualitatively analysed to answer the research questions.

The results of the investigation show that students identify four categories of classes, ranging from more traditional approaches, to very engaging active-learning organized sessions, namely: "Full lecture", "Traditional layout", "Tutorial-like organisation" and "Active learning sessions".

From the analysis of the results presented in the article, it is possible to hint that the four-hour format pressures teachers to engage in less traditionally organized classes. Students also value more engaging learning environments, which are fostered by this format of classes. This trend becomes more apparent for students in more advanced stages of the programme, which may reflect their greater exposure to the PBL environment and also their increased maturity. However, students also value the formal structure provided by more traditional environments, possibly a consequence of their previous learning experiences and study habits.

Naturally, further research into these findings is needed in order to get a better grasp of the dynamics of four-hour blocks and their role in ESTGA's PBL environment. The results of this study will guide that research, establishing the general lines on which to pursue further enquiries. ■

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