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CONTRIBUTIONS TO THE LEARNING IN LINEAR ALGEBRA: AN EXPERIENCE WITH THE MATHE PLATFORM

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Abstract

The current pandemic context has highlighted the importance of looking for technological alternatives that contribute to students having more autonomy in their learning. As the teaching of mathematics in higher education must also accompany this reality, we believe that the use of the MathE platform can be an asset in the teaching and learning process of this area, both in the classroom or online environment and self-study.

The MathE platform (<https://mathe.pixel-online.org>) emerged as the product of a project, funded by the European Commission through the Portuguese National Agency for the Erasmus + Programme, whose main objective is to help students in higher education to improve your math skills and knowledge. In this sense, with the support of a community of teachers from various European institutions, it intends to make a set of resources free of charge for the academic communities, such as, videos/documents on specific topics or on solving tasks, sets of questions of multiple choice, for self-assessment by students or for teachers to take assessment tests.

Currently the platform encompasses 15 domains of mathematics, some of which with subtopics. For example, the topic Linear Algebra involves, among others, the subtopics Vector Spaces and Linear Transformations. It was precisely the resource "Self Need Assessment", available in these subthemes, that served as the basis for a study in which it was intended to listen to the students' opinion about the potential of this platform functionality for their learning.

In summary, 84 students who attended the course unit of Linear Algebra and Analytical Geometry, as part of the 1st year of a bachelor in engineering or technology in Portuguese higher education, solved some tasks of self-assessment on Vector Spaces and Linear Transformations. They also answered a questionnaire in which they expressed their opinion on the platform, with emphasis on the self-assessment component.

Thus, we intend to present the MathE platform and, based on the perceptions/opinions of students and teachers involved in the experiments carried out, analyse its potential for the promoting the teaching of linear algebra.

Keywords: Higher education, MathE platform, self-need assessment, linear algebra.