Extension of Compulsory Schooling: characterization and analysis of the students' profiles of the science and technology course

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Since the school year of 2012/2013, school education in Portugal rose to compulsory up to 18 years of age or until the completion of secondary education (Law no. 85/2009 from august 27th and Decree-Law no. 176/2012 from august 2nd) for students from that school year entered it.

This article is within the scope of a study on the scientific-humanistic courses (CH) and the extension of compulsory education, contracted between the General-Directorate for Education (DGE) and the Centre for Research in Education and Psychology from University of Évora (CIEP-UE) and aims to contribute to the deepening of knowledge about the different profiles of students accessing the Science and Technology course (CT), one of the four courses of scientific and humanistic path of secondary education, traditional and preferable in access to higher education.

To identify the CT students' profile was built and applied a online questionnaire to a random sample of 4676 students of the 10th year of secondary school CH courses of public school of Portugal, which allowed the establishment of a set of sociodemographic attributes, territorial and other elements related to the socio-cultural and economic family context of students with their previous academic itinerary, attitudes towards school, satisfaction with the course, with academic achievement and socio-professional expectations.

The characterization and analysis of student profiles was conducted using classification trees by growing method CHAID (Chi-square Automatic Interaction Detector), which constitutes, in the context of decision trees, a statistical method suitable for identifying, classifying and explore complex structures.

The generated solution, with 72% of cases correctly classified, has a non-binary structural configuration with three levels deep and 17 knots or profiles has been calculated, of which 10 are terminal nodes. From the set of input variables, proved statistically significant with a type I (α) error probability less than 0.05 and some of which are recursive, the previous academic itinerary of the students, the frequency of explanations out of school (recursive), gender (recursive) and the mother's education level, these results suggest that the choice of frequency of the course is conditioned by family contextual factors of socio-cultural nature and that the successful completion of secondary education and the expectation of pursuing higher studies doesn't seem to dismiss, at least some of the profiles, the appeal to explanations out of the school.

On the other hand, by systematization of issues and a greater comparative highlight of established profiles, it was decided to select three pairs of knots with higher contrast, standing

out as main features in those three profiles with the highest density of the CT students are made up of students with a school record with no failures, which tend to resort to explanations out of school, with a higher family educational capital and that, simultaneously, tend to associate academic results in the 10th grade significantly higher, greater satisfaction with the course and higher expectations of further education.

keywords: secondary education, access, students' profiles.