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Students Profiles in a Portuguese Higher Education Institution: Approaches to Learning, Cognitive Development and Academic Success (0026)

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RESEARCH PAPER

Part 2 (max 1000 words)

In this poster we examine concepts referring to learning and teaching in higher education recognized in the literature as *study orientations*, *approaches to learning*, *study behaviours*, *approaches to studying* and *conceptions of learning*.

An investigation on this subject was developed (Valadas, 2007, 2010; Valadas, Ribeiro Gonçalves and Faisca, 2009, 2010), with emphasis on contextual variables, as well as students' perceptions about the learning environment, as constructs that can influence the use of more deep or more superficial approaches to learning tasks, according to Entwistle's work (1988a, 2000, 2001, 2007, 2008, 2009).

The first question arises: how do students conceptualise what they were asked to do in terms of learning at the University? This question has been investigated through different perspectives, which were also considered. Another construct measured is related to the understanding of the student development in an academic context. In the past years different studies indicated that individuals do acquire learning competences in different ways, based on their cognitive development. According to Woltz (2003), for example, students diverge in their cognitive processes and these differences are related to complex forms of learning. Also, Zhang and Sternberg (2009) and Zhang and Watkins (2001) observed that cognitive styles were particularly relevant, not only when we think about individual learning, but also when we consider the nature of the interactions between teacher and students, and performance in the class. In these authors' perspectives, at least some cognitive styles influence the way students learn, teachers teach, their interactions and educational and vocational choices, and seem to have a special role (Zhang and Watkins, 2001). Although these references are considered valuable, our investigation was based on Perry's Model of Intellectual and Ethical Development (Perry, 1970, 1981).

Beyond the relations between conceptions of learning/approaches to learning and levels of cognitive development, we also explored a third construct related to academic performance. In our opinion, the perception of learning experiences can be regulated through cognitive level of development and both behave as variables that moderate academic success.

In this sense, some investigations have a special contribute and justify our options. For instance, Diseth studies (2001, 2002, 2007) about the relations between intelligence, approaches to studying and academic success; Long's work (2003) relating approaches to studying and academic context perceptions; also, Byrne and Flood (2007, 2008) and Byrne, Flood and Willis investigations (1999, 2002, 2004a) related to the explanation of the three learning approaches proposed by Entwistle (Deep, Strategic and Superficial); or Byrne et al. (2004b) study about the relationships between approaches, teaching preferences and academic performance (Entwistle, McCune and Walker, 2001). To a better understanding of the factors associated to academic performance, we analysed student's profiles according to higher or minor success. Potential success indicators referred to in the literature on this subject were considered and also discussed.

This quantitative, non-experimental and descriptive investigation was developed in a public higher education institution in the south of a European country (Portugal). Our aim was not only to study the relations between variables, but also to construct a comprehensive and interpretative model of the phenomena.

The Portuguese version (Valadas, Ribeiro Gonçalves & Faisca, 2009, 2010) of the Approaches and Study Skills Inventory for Students – ASSIST (Tait, Entwistle & McCune, 1998), as well as of the Parker Cognitive Development Inventory – PCDI (Ferreira & Bastos, 1995) were used to collect data concerning the approaches to studying, conceptions of learning, and levels of cognitive development in college students. To assess academic performance we constructed an instrument applied to all students.

Comparative and correlational results from 566 Portuguese higher education students, from different scientific areas (Biological Sciences, Economics, Earth Sciences, Humanities and Social Sciences, Physical and Technological Sciences) and first and last years' graduation are presented.

Overall, considering the results obtained in the differential analysis, and in what concerns learning, students appear to have significant conceptions and preferred courses and types of education that fit in a deep perspective of learning.

Conceptually, students with higher academic success are those that revealed to be more strategic in their approach to learning and tasks and attending, in particular, courses from Humanities and Social Sciences. They are also those who claim to miss school less, whose course was 1st option and who have not moved from the family residence. Since Dualistic level of cognitive development was assumed as a predictor of academic success, in the opposite direction (higher score on this scale indicates less success) we can assume that to obtain better performance students should have higher levels of thinking (and reveal a higher degree of cognitive complexity). Despite these results, we considered some peculiarities, especially with regard to differences in gender, year and the scientific domain.

As postulated in conceptual terms, we found associations between approaches of a more strategic level and the higher cognitive levels of development (Relativism and Commitment within Relativism). As expected, the indicators of success correlated also significantly and positively with deep and strategic approaches to learning, as well as with higher levels of cognitive development. Furthermore, the variable academic success showed negative correlations with the Surface Apathetic Approach and Dualism: these students seem to have less academic success in their studies. Students with higher application grades, better school performance and fewer failed subjects are also those who seem to be more profound in the way they approach learning tasks, standing in a relativistic dimension of cognitive development.

Additionally, results from cluster analysis revealed the existence of different student profiles. These results seem to contribute to the debate on the polarity of contrasting approaches to studying. We did find a kind of bipolar model (similar to that of Long, 2003), that includes students with high scores or on deep, on strategic or on surface apathetic scales. Thus, although it is clear that the same student uses different approaches in different situations, we can see trends for particular approaches, related to different subject/course requirements and previous educational experiences. In terms of practical implication it seems that curricular plans that are not flexible may not develop competencies of analysis and decision-making in students, which tend to occur when they have more opportunities of choice. These and other implications are also discussed.

Keywords: Approaches to Studying; Conceptions of Learning; Cognitive Development; Academic Success; Portuguese College Students.

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