ACADEMIC RETENTION: RESULTS FROM A STUDY IN AN ITALIAN UNIVERSITY COURSE

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ABSTRACT

This study analyzes the possible influences of some individual variables related with the attendance of specific online laboratory activities on the academic retention and achievement of a group of freshmen attending the first year of the Bachelor of Education. Online platforms allowed students both to use a supporting network and autonomously taking advantage of suitable materials to achieve their learning goals and to bridge an orientation gap that often, in Italy, is present in the transition between high school and University. In general, we can say that the experience of the online laboratory was positive and represented a supporting element for these students.

KEYWORDS

Drop-out; Online laboratory; Freshmen; Self-regulation; Academic retention.

1. INTRODUCTION

Frequently, the so-called drop-out phenomenon among early University leavers coincides with a lack of adaptation to the new context (Allen & Seaman 2011). An in-depth review and analysis of the academic system in the Italian and the European scenario evidenced the role of the student within a new reality and which can be the advantages that a student can have from these constant changes (Afonso et al. 2007; Braga et al. 2013). In this regard we remember that in Italy the high school-University transition is particularly deficient with respect to the international context (Malaspina & Rimm-Kaufman 2015). One of the weakness point in the Italian University system is that there is not an educational continuum from the upper secondary school to University. The educational goal of both systems is the same; however, they differ in the degree of organizational complexity. Indeed, the university attendance requires students to take a more active and self-regulating role with respect to secondary school. In this regard, many theories focus on the analysis of sociological and organizational factors, while others take into greater account the individual aspects. Anyway, we lack the individuation of a single variable that can explain retention process, since we need to take into consideration most variables reciprocally interacting: What appears evident is a lack of a model accounting for these interactions. Besides, we remark that, actually, the models that attempt to account for the maintenance of choice and achievement of academic success have been mainly introduced in an Anglo-Saxon context (Harvey et al. 2006).

In this contribution, the principal aim is to investigate some psychological and individual dimensions related to the academic success or failure. Among the variables present in the literature, we take into account the role of motivation, self-concept, perception of the time perspective and self-regulation (Ryan & Deci 2004; Moliterni et al. 2011; de Bilde et al. 2011; Di Benedetto & Zimmerman 2010; Lehmann et al. 2014). As international and national literature states that it is necessary (above all in the first year) to support students in order to promote retention and to enhance students engagement (Box et al. 2012) we also took into account the influence of some university educational supports, with particular reference to e-learning (Mohamad et al. 2013), which can be a motivational stimulus if backed up by frontal lectures (Penna & Stara 2009). In particular, we made reference to a online laboratory of the Cagliari University. Within our study, two specific hypotheses have been formulated. Hypothesis 1: is it present a positive correlation between academic self-concept, motivation, self-regulation, time perspective, frequency at the online laboratory and

the academic success? Hypothesis 2: is it possible to assess the validity of a retention model based on the association between the observed variables?

2. METHOD

2.1 Participants

One hundred and eighty five freshmen, enrolled in the first year of the degree course in Education Science (University of Cagliari), took part in the study. The sample consisted of 174 females and 11 males aged between 19 and 54 years (M = 24.37; SD = 6.32). Students came from different high schools, with percentages of 37.3% from high schools, 18.9% from technical schools, 43.2% from secondary school diploma with specialization in teacher training. In the current study 28% were from the municipality (Cagliari), 52% from the province and 20% from outside the province of Cagliari. Finally, 71% of the sample had a low average high school diploma grade, while 29% of the sample had a high average high school diploma grade.

2.2 Materials

Students were presented a standardized multidimensional questionnaire, constituted by: *Academic Motivation Scale* (Alivernini & Lucidi 2008); *Self-Description Questionnarie III* (Marsh & O'Neill 1984); *Self-regulation questionnaire (*Moè & De Beni, 2000); *Stanford Time Perspective Inventory – short form* (D'Alessio et al. 2003).

The online laboratory was supporting the General Psychology class.. The proposed activities supported students in their studies and provided guidance during their first academic year. The laboratory provides for the presence of the online tutor as manager and supervisor of contents and interactions (Rotta & Ranieri 2005; Michinov et al. 2011; Mattana 2014). The class was entirely available on the University Moodle platform (moodle.unica.it). The activities were those allowed by the platform, namely forum, documents, chat, and learning objects on topics already covered. The tutor also answered orientation questions. In this study, academic success was measured through the number of credits reached by the student at the end of the first academic year.

2.3 Procedure

The questionnaire was given in a single administration, in paper format and the distribution has been collective. Students were tested in one session during the first semester, and were divided in two groups: participants only to frontal lectures and participants both to frontal lectures and to Moodle online laboratory.

3. RESULTS

The observed variables were represented by the values of nine indicators: Lab (attendance to the laboratory), Academic Success (number of obtained credits), Academic Self (assessment of academic self-concept), Amotivation (degree of amotivation in Academic Motivation Scale), Intrinsic Motivation (degree of intrinsic motivation in Academic Motivation Scale), Autoregulation (assessment of self-regulation ability), Hedonistic Present (assessment of tendency towards Hedonistic Present attitude in Stanford Time Perspective Inventory), Fatalistic Present (assessment of tendency towards Fatalistic Present attitude in Stanford Time Perspective Inventory), Future (assessment of tendency towards Future attitude in Stanford Time Perspective Inventory). In relation to the *hypothesis 1* the analysis of the matrix of correlations between variables shown below (see Table 1) evidences the emergence of positive associations between high levels of self-regulation and future time perspective. This characterizes a behavior dominated by an effort to achieve goals and future rewards, participation in the laboratory, intrinsic motivation, academic success and good academic self-concept. We also observe a positive correlation between intrinsic motivation, academic self-concept and

participation to the online laboratory activities, as well as with self-regulation and self-concept, and between the latter and the academic success. The data highlight the negative correlations between levels of "amotivation" and intrinsic motivation and future time perspective.

Table 1. Correlation among variables observed (*p<.05 - *p<.01)

	1	2	3	4	5	6	7	8
1 Lab	1							
2 Academic success	**,199****	1						
3 Academic self	0,002	0,075	1					
4 Amotivation	0,048	-0,045	-0,027	1				
5 Intrinsic Motivation	0,052	0,14	,220**	**-,461****	1			
6 Autoregulation	0,105	**,216****	0,075	**-,165***	**,389****	1		
7 Hedonistic present	0,125	-0,058	-0,06	0,063	-0,124	-0,089	1	
8 Fatalistic present	**-,227****	-0,072	-0,056	0,022	-0,079	-0,083	**,679****	1
9 Futur	-0,036	**,164***	**,188***	-0,116	,706**	**,438****	**-,213****	**-,195****

The values present in the correlation table and the use of a Path Analysis allow proposing a retention model, whose logical structure is depicted below (see *Figure 1*).

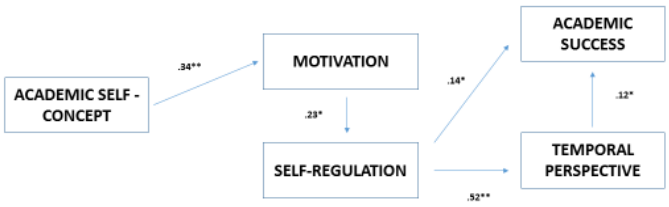

Figure 1. Path Analysis Model

The model shows a causal relationship between high self-concept and self-determined motivation. The high self-concept influences positively the ability to self-regulate in studies, which, in turn, affects both the success in studies and future time perspective of the student. The latter finally has a positive weight on academic achievement. This path analysis is interesting because it shows the influences among variables in order to create an interrelation system and a set of tools in order to support academic success and retention.

4. DISCUSSION AND CONCLUSIONS

The maim results confirm the evaluations carried out during the previous years of experience of the online laboratory, highlighting the benefits perceived by the involved students, useful in promoting an approach towards a more self-regulated study and an academic achievement

Data on laboratory attendance show that students had benefits in terms of strengthening and growth of all variables considered as crucial for the development of academic success and retention in the university system. Today, both through the activity of the online laboratory and its data collection work (in more University courses), we are allowed to pursue the goal of finding a model that can support the academic success in the Italian context and can be the base to create a solid bridge between high school and University.

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