

# ACADEMIC AND LIFE-SATISFACTION IN PORTUGUESE AND MOZAMBIKAN COLLEGE STUDENTS: A COMPARATIVE STUDY

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The social-cognitive model of well-being [1] has become an important framework to study satisfaction and adjustment in specific life contexts and in overall life [1] [2]. Taking into consideration this integrative perspective, this paper aims to understand and compare the process of academic satisfaction in European and Mozambican Portuguese speaking college students, and to draw implications for psycho educational interventions and research in those contexts. We present and discuss the results of the assessment of self-efficacy, goal progress, environmental supports, academic adjustment, positive affect and overall life satisfaction dimensions (AAQ; Academic Adjustment Questionnaire [1]), conducted with 305 students attending one public university and one public polytechnic institute in Portugal, and with 465 students attending one public university in Mozambique. A first study of the instrument in Portugal with higher education students [3] revealed values of internal consistency for the seven scales ranging between 0,75 and 0,88 ( $M = 0,84$ ,  $SD = 5,00$ ). In this study, the range of internal consistency coefficients (Cronbach alpha) were between 0,52 and 0,78 ( $M = 0,67$ ,  $SD = 9,5$ ) for the Portuguese sample, and between 0,65 and 0,83 ( $M = 0,75$ ,  $SD = 5,4$ ) for the African Mozambican sample. Moreover, in the Portuguese sample, positive correlations were registered between the dimensions of academic adjustment, positive affect and satisfaction with life in general. In the Mozambican sample, in turn, in general, moderate and positive correlations were obtained, statistically significant between all the dimensions of the academic adjustment that were evaluated. An analysis of the mean tells us that, in both samples, students tend to have moderate values on the dimensions of the academic adjustment model. The comparison test of means reveals significant differences between the two countries in the overall dimensions of academic adjustment, with the exception of the scale factors to stimulate the academic adjustment. Specifically, the Portuguese students obtain the highest values in the dimensions of self-confidence, overall adjustment, and satisfaction with life. The Mozambican students registered higher results on self-confidence to face academic barriers and progress in their academic goals. The results obtained also evidence that students from both countries perceive they have a support system and incentives in the academic and classroom environments. This is a dimension that is directly and indirectly correlated with academic adjustment, in both samples, which suggests the importance of socio-cognitive dimensions of adjustment to college.

Keywords: higher education, academic adjustment, social-cognitive career theory.

## 1 INTRODUCTION

The integration of different lines of research, recently done by Lent and colleagues (e.g. [1] [2] [3] [4] [5] [6]), has enabled a deeper understanding about the type of factors that affect the causal strength and direction of the relations between satisfaction with life in general and satisfaction with particular life-domains, such as working (e.g., academic and professional work-life).

Besides that, research has shown that the perceived importance or relevance that a certain life domain has for a particular individual is a potential moderator of the relation between the satisfaction about life in general and the satisfaction about the academic life in particular [5]. It is then probable for people to develop and to be oriented by targets in activity domains where they feel they are efficient and capable of reaching positive results. The results of other identical studies [3] [4] [7] suggests that personality and the socio-cognitive factors may represent completely separated and independent sources of well-being. Following this idea, Lent and his collaborators [8] defend that instead of isolating those two groups of factors as empirical competitors, it should be pondered if they may work together as predictors and causal mechanisms that promote comfort.

Considering the vocational development as a continuous process occurring throughout life as well as the analysis of the adjustment process as a product of dynamic interactions between individuals and contexts, together with the consideration that the higher education objectives are fulfilled by the

students' complete training, lead us to the need of taking into account the personal and contextual factors that may be behind the higher education career adjustment.

Lent, Brown & Hackett [5] defend that the focus of the adjustment study should be put in the social conditions that shape the learning opportunities, which students are exposed to in interpersonal relationships (e.g., those of support and indifference), and in the results anticipated by the individuals according to their choices, involvement and persistence in certain activities. According to a review by Lent, Brown and Hackett [5], a significant part of research based on social cognitive theory has occurred in the context in education, involving samples of students in the areas of science, technology, engineering and mathematics; this emphasis is related to the recognition by scholars of social cognitive theory, the central role that experience and expertise in these areas take in limiting or expanding career options. A social cognitive theory focuses on the general self-regulatory capacity to learn and develop adaptive strategies to deal with personal and situational contingencies.

The social cognitive theory [9] emphasizes the role of school and family as the prime means of vocational development and integrates the previous approaches, or developmental, or differential, and has been considered innovative in that it lets you position the vocational problems and processes of self-regulation, lifelong learning. This perspective is based on theoretical foundations focused on the individual, understood as having the ability to decide their fate and well-being. The social cognitive theory of career [9] [10] is rooted in Bandura's general social cognitive theory [11] and in previous studies and theories of career self-efficacy and self-academic efficacy [2].

In the vocational field, social-cognitive perspective has been developed by Lent and colleagues that have proposed, initially, in sequential order, three interrelated models that explain respectively: a) the formation of career interests, b) the vocational choices and c) academic achievement and professional. These three models were followed by a fourth, more recent [1] which proposes a unifying approach to the general satisfaction with life and satisfaction in specific domains of life, among which highlights the academic domain and specifically the experience of higher education. The models presented by social cognitive theory of career embody a set of personal variables (e.g. self-efficacy), environmental (e.g., social support) and behavioral (e.g., implementation of objectives) directly related to academic and career development [13] [2].

The work and study dimensions, According to social cognitive theory of career, academic and professional work are conceived as life tasks that can be managed and monitored by the individuals. Some studies have shown that personal variables such as self-efficacy are good predictors of interest in the sciences and mathematics, objectives, and persistence and academic performance [14] [15]. The actions and academic goals and career interests are largely influenced by the expectations of self-efficacy and expectations of results, as well as the media and environmental barriers experienced or anticipated, in direct relation to the alternative choices [2]. Self-efficacy and outcome expectations are two basic dimensions of career development, and hypothetically derived from personal experiences (e.g., affective states, socially mediated experiences such as encouragement) [12].

The analysis of interests and self-efficacy in relation with the academic adjustment process has been evidenced by several authors [16] [17]. It is argued that interests and self-efficacy, among other variables, can play a supportive role in the expansion of self-knowledge and information gathering. Self-efficacy in specific areas has been perceived as a key predictor of interests, choices, achievement, persistence, and indecision and career exploration [5]. According to several studies [2] [4] [5], it seems plausible, that the cognitive biases associated with particular conditions, such as personal positive affective disposition, self-efficacy, perceived progress on valued life goals, perceived contextual resources/barriers, and satisfaction in specific areas as well as satisfaction with life in general, can predict adjustment and well-being in specific life domains, such as the academic life [4] [6]. Within such a socio-cognitive framework of academic adjustment understanding, adjustment is measured as a composite variable of perceived satisfaction with academic life and perceived academic stress.

Based on the role of self-efficacy expectations, outcome expectations and personal goals on educational attainments, career social cognitive theory authors have explained the influence of school and peer group on various aspects of vocational development of students in higher education [18] [19] [20]. These are important contributions, especially as higher education institutions have been confronted with demanding challenges related with the quality of teaching and learning offered to different groups of students [18] [19] [20].

A social cognitive theory of career is an approach that allows us a unified reading of the elements identified by prior career theorists such as, Super, Holland, Krumboltz, Lofquist or Dawis. The career

models based on trait-factor approach, as exemplified by Holland's typology and theory of work adjustment, contributed greatly to the understanding of vocational behavior. In this approach the features attributed to the characteristics of individuals and environments, if properly matched, result in personal satisfaction. On the other hand, theories of career development such as the career construction theory of Donald Super, the theory of career aspirations of Linda Gottfredson or the contextual developmental theory of Fred Vondracek and colleagues are more focused on the career behavior changes along life-span and with the ways through which individuals and their interactions with the life-contexts are intended to promote the role of worker and relationships across life trajectory.

Like the career models based on trait-factor approach, the career socio-cognitive theory values the important role that the interests, skills and values play in the process of career development. Similar to the developmental theory, career social cognitive theory based his study on how individuals deal with marks and hurdles of development, relevant to their future career.

In an overall assessment, any of the three theoretical perspectives mentioned focuses on predicting, understanding and optimization of career development.

As opposed to career models based on the perspective of trait-factor, the social-cognitive theory of career is more dynamics and examines specific contextual and personal dimensions. Furthermore, the theory of social cognitive career perspective offers a complementary study to career models based on trait-factor approach, namely to systematize the form in which individuals are able to change, develop and regulate their own behavior in different circumstances and periods of life. As a result it is expected that career socio-cognitive theory can help answer questions like: What are the factors, in addition to the personal traits that encourage choice and career changes? As can be increased the career success and how can be remediated poor career performance?

The characterization of distinctive social cognitive theory of career and developmental theory of career is more complex in that it is high heterogeneity among the developmental theory. However, and a general level, the theory of social cognitive career tends to be less focused on specific tasks of different ages and stages of career, being more oriented towards the study of the theoretical elements that can promote effective career behavior, these behaviors maintained at different developmental stages and tasks.

The social cognitive theory of career can, among others, support the search for answers to questions such as: How does the work and other life roles are assumed as more or less relevant? How are the career options become limited? How can individuals take self-directivity in its development progress?

Based on Bandura's social cognitive theory [11], the socio-cognitive career [9] emphasizes the personal variables of self-efficacy, outcome expectations, goals and interaction with environmental variables such Examples of important personal and career development, such as social support. These authors characterize the relationship between self-efficacy, achievement and interests, assuming that a complex set of factors - culture, gender, socio-structure, state of health - works together and influence the cognitions, the nature and scope of skills and career opportunities. In all four theoretical models of socio-cognitive approach to career there are three groups of variables. The first group of variables includes the variables of a personal nature (eg, sex, health, race) and situational (eg, family, school, culture). These variables take on meaning only if there is bi-directional relationship between person and context. In the second group of variables, sources of self-efficacy, including in the social persuasion, vicarious experiences, the experiences of mastery and emotional states. The third group includes variables of efficacy expectations and the expectations of the results, which influence the representation of the potential and division of interests and objectives. Tests performed on different models presented by social cognitive theory of career have found good support for the hypothesis theorized both in samples of a generic university students [1], as well as samples of students in higher education in the area of computer science and Engineering [4]. The central variables of social cognitive theory of career have attracted a large number of studies in recent years. Review studies meta-analytic studies have identified that a substantial body of independent research found that cognitive variables support the understanding of behavior and conduct educational career, at various stages of career development, specifically in the context of the research focused on socio-cognitive, self-efficacy has received considerable attention, pointing out that results have allowed the conclusion that specific measures of self-efficacy are predictive of career interests, the conduct of exploration and career choice, as well as results of studies that support the existence of causal relationships between measures of self-efficacy, performance and interests (e.g., [11]; [17]).

In an effort to extend the study of subjective well-being to the field of vocational psychology, the authors of social cognitive theory of careers proposed a unifying approach to the adjustment /

satisfaction with life and satisfaction in specific areas, with the fourth presentation of the theoretical model. This theoretical approach includes elements of cognitive, behavioral, social-emotional and trace elements. This theoretical effort incorporates the core elements of social cognitive theory generally, it has proven to be a versatile area of study in the study of adaptive processes and positive adjustment [11].

The integrative model of adaptation and well-being under normative life conditions argues that the overall satisfaction of life is influenced by personality variables, the central satisfaction in specific areas, participation in valued tasks and progress in achieving personal goals relevant. The satisfaction in specific areas, a forerunner of overall satisfaction of life is understood by this model as partially determined by factors of personality and social-cognitive mechanisms, in particular the activities aimed at goals, self-efficacy expectations result, resources and environmental sources. The model argues that, apart from benefiting from particular traits, individuals are content to specific areas of life when they realize or perceive in advance personally valued goals, when they anticipate the scope of favorable goals and perceive their environment as boosting the range of desirable goals. This model also considers the nature of the relationship between the socio-cognitive precursors of satisfaction in specific areas. For example, self-efficacy and outcome expectations are both assumed by this model, as influenced by the availability of relevant resources and social supports.

In 2006, Lent and Brown [21] extended the general approach of unifying the adjustment / satisfaction with life to the specific areas of job satisfaction and academic satisfaction, and satisfaction with the work referred to as representative of job satisfaction and satisfaction with school professional work. According to the integrative model of adaptation and well-being, adjustment in specific areas (eg, satisfaction and functioning in educational settings) and subjective well-being overall, are jointly determined by variable cognitive, behavioral, social and personality. According to this authors [21], the socio-cognitive approach offers potential as a platform for conceptualizing and organizing methods that promote the academic satisfaction, the authors present an example, the existence of a general scheme by which useful can envision themselves as the dissatisfaction resulting in several circumstances: (a) prevented from achieving goals, (b) failed attempt to reach the objectives and desired conditions to perform the duties or conditions of exposure to conflicts of interest, (c) lack of perceived self-efficacy through the implementation of tasks, specific academic goals or low capacity for coping with barriers, and/or (d) environmental media (e.g., social dimensions) or personal resources (eg, limitations on ability) inadequate. There are few empirical studies in this theoretical line. In 2005, Lent, Singley and collaborators [22] presented studies to test an integrative model of well-being under normative life conditions, with samples of students in higher education. These studies seek to explain the satisfaction in the social and academic and satisfaction in general, in both studies, progress in personal goals emerges as a predictor of satisfaction in the field, which in turn emerges as a predictor of overall life satisfaction. In a more recent study, Lent, Taveira, Sheu and Singley [3] reassessed the integrative model of well-being under normative life conditions, this study was longitudinal, we investigated the extent to which the model explains the academic adjustment of students Portuguese higher education, extending the previous tests the model and expanding the definition of well-being in specific areas through the inclusion of the following variables: (a) perceived academic stress, (b) perceived adjustment and (c) perceived satisfaction. In this study, similar to previous studies of Lent, Singley et al [22], concluded that environmental resources are a predictor variable of self-efficacy. The results of this study suggest that academic adjustment can be promoted by interventions that enhance self-efficacy and from providing social support (e.g., access to social models and encouragement for peer group). According to the results, resources and social support may be useful either as a source of self-efficacy, either as direct facilitators of adjustment. In general, in testing this model, environmental resources have behaved as a predictor variable domain of satisfaction. Apart from the conceptual consistency, this model is presented as useful from the standpoint of vocational counseling, because it allows designing intervention strategies, the promotion of occupational alternatives as free as possible cognitive and perceptual distortions in the identification and resolution of barriers in implementation choices and modification of self-efficacy beliefs dysfunctional. The proposed strategies do not presuppose an epistemological break with the traditional models of counseling, because they have three of the basic assumptions of social cognitive theory of career: a) the interests of students and professionals from the beliefs of self-efficacy and outcome expectations; b) the relationship between interests and career choices is mediated by perceived barriers, and, c) the beliefs of self-efficacy and outcome expectations derive from the strengthening of previous performances performed by the individual or by others.

In the theoretical framework of social cognitive theory of career, these principles win, however, a dimension potentiating the development of new forms of intervention that allow the student, upon

reaching adulthood, has already developed a wide range professional options, a process that can be worked in the vocational counseling for those who have not yet done.

## 2 METHODOLOGY

### 2.1 Participants

This study involved a sample of 770 college students, including 305 students attending one public university and one public polytechnic institute in Portugal, and 465 students attending one public

Participants include 246 (31.9%) women and 524 (68.1%) men, aged between 17 and 57 years (M: 26.49; SD: 7.315).

The students were distributed by the 4-year degree of which 177 (24.3%) attending the first graduate year, 398 (51.7%) attended the second year, 130 (16.9%) attended the third year and 55 (7.1%) attended the fourth and final year of graduation.

### 2.2 Instruments

The Academic Adjustment Questionnaire (QAA; Lent, 2004 adap. Taveira, 2004) was used to measure academic adjustment. The QAA is a 55 items questionnaire with 7 measures scales in likert format. For each multi-item measure, total scores were obtained by summing item responses and dividing by the number of items on the measure. Higher scores on all measures reflected more positive expectations or experiences (e.g., stronger self-efficacy, greater satisfaction, lower stress). Measures included academic self-efficacy, goal progress, environmental support, satisfaction, stress, and self-reported adjustment related to students' academic behaviour; life satisfaction and trait positive affect; and demographic and academic status information. The measures were originally developed in English, then translated into Portuguese by the second author and back-translated into English by a Portuguese/English translator. The first author reviewed the back-translation to ensure that the translated measures retained their original meaning. A first study of the QAA in Portugal with college students [3] show for the 7 scales an internal consistency reliability vary between .75 e .88 (M=0,84; SD=5,00). In the current sample, we found coefficient alphas for the Portuguese students that vary between .52 e .78 (M=0,67; SD=9,50), and for the Mozambican sample coefficient alphas that vary between .65 e .83 (M=0,75; SD=5,40).

### 2.3 Procedures

Students were recruited for participation by the fourth and last authors within intact classes. They did not receive incentives to participate in the study. Data were gathered in the time elapsed between the 1st and 16th week of the same (Spring) academic semester. For analysis we used the capabilities of the informatics program SPSS 14.0. Specifically, held descriptive analysis of the dimensions assessed, analysis of internal consistency (Cronbach alpha), analysis of relationships between QAA measures and T-test comparison of means for independent samples.

## 3 RESULTS AND DISCUSSION

The correlations among QAA measures in Portuguese sample are shown in Table 1.

Table 1. Means, Standard Deviations, and Correlations among QAA Measures in Portuguese sample (N=305)

	SE1	SE2	GP	ES	PA	OAA	LS	M	DP
SE1	1.0							34,9	1,87
SE2	.15**	1.0						35,2	4,73
GP	.09	.35**	1.0					28,4	3,51
ES	.09	.04	-.06	1.0				36,7	2,65
PA	.05	.07	-.05	.43**	1.0			40,4	3,01
GAA	.06	.07	.02	.35**	.75**	1.0		48,4	4,14
LS	.09	.07	-.02	.27**	.65**	.80**	1.0	25,4	2,26

\*\*p<0.01 \*p<0.05

SE1 – Self-efficacy; SE2 – Self-efficacy to face barriers; GP – Goal Progress; ES – Environmental support; OAA – Overall Academic Adjustment; PA – Trait Positive Affect; LS – Life Satisfaction.

In the Portuguese sample there are high and positive correlations between academic adjustment, the positive affect and satisfaction with life in general.

The perception of environmental support also correlated with statistic significance with academic adjustment, positive affect and life satisfaction.

The dimensions of self-efficacy (degree of confidence in their abilities and degree of confidence to face barriers) seem to relate to each other, but do not statistically correlate with the other measures of the adjustment considered.

The degree of confidence to face barriers also correlates with statistical significance with the progress in the objectives. However this measure does not relate to others measures.

In the following table (Table 2) are presented means, standard deviations and correlations among QAA Measures in Mozambican sample.

Table 2. Means, Standard Deviations, and Correlations among QAA Measures in Mozambican sample (N=465)

	SE1	SE2	GP	ES	PA	OAA	LS	M	DP
SE1	1.0							31,2	5,69
SE2	.40**	1.0						47,3	9,52
GP	.29**	.36**	1.0					33,0	4,05
ES	.23**	.40**	.35**	1.0				36,8	4,75
PA	.21**	.25**	.34**	.34**	1.0			45,9	4,91
GAA	.25**	.35**	.37**	.45**	.43**	1.0		37,6	5,52
LS	.10*	.22**	.26**	.36**	.43**	.41**	1.0	22,6	5,81

\*\*p<0.01 \*p<0.05

SE1 – Self-efficacy; SE2 – Self-efficacy to face barriers; GP – Goal Progress; ES – Environmental support; OAA – Overall Academic Adjustment; PA – Trait Positive Affect; LS – Life Satisfaction.

In the Mozambican sample, in turn, were obtained moderate, positive and statistically significant correlations.

Somehow these data support the integrative model of adaptation and well-being referenced in this text introduction.

Table 3 shows the results of t-test to compare means of the QAA measures in Portuguese and Mozambican samples.

Table 3- Means Comparison of QAA Measures in Portugal and Mozambique (N=770)

	Portugal (n=305)			Mozambique (n=465)			t	p
	M	SD	Ampl.	M	SD	Ampl.		
SE1	34,9	1,87	[24,36]	31,2	5,69	[0,36]	11,06	0,00**
SE2	35,2	4,73	[21,46]	47,3	9,52	[6,63]	-20,57	0,00**
GP	28,4	3,51	[17,37]	33,0	4,05	[19,40]	-16,50	0,00**
ES	36,7	2,65	[27,42]	36,8	4,75	[10,45]	- 0,25	0,80
GAA	48,4	4,14	[37,55]	45,9	4,91	[30,59]	7,02	0,00**
PA	40,4	3,01	[30,46]	37,6	5,52	[22,50]	8,07	0,00**
LS	25,4	2,26	[19,29]	22,6	5,81	[6,35]	7,89	0,00**

\*\*p<0.01 \*p<0.05

SE1 – Self-efficacy; SE2 – Self-efficacy to face barriers; GP – Goal Progress; ES – Environmental support; OAA – Overall Academic Adjustment; PA – Trait Positive Affect; LS – Life Satisfaction.

An analysis of the mean tells us that, in both samples, students tend to have moderate values on the dimensions/measures of the academic adjustment model. The comparison test of means reveals significant differences between the two countries in the overall dimensions of academic adjustment, with the exception of the measure Environmental Support to stimulate the academic adjustment. Specifically, Portugal obtains the highest degree of self-efficacy or confidence in himself, in the overall academic adjustment, in affective dimensions and in satisfaction with life.

In Mozambique there are higher results on scales of a degree of self-confidence to face barriers and progress in the objectives.

This analysis highlights the results obtained in the scale concerning the support, which indicates that students in both countries perceive a support system and similar incentives, although the level of development of higher education in these two countries show a little gap. This is a dimension that is directly and indirectly correlated with academic adjustment, in both samples.

It also appears to show the importance of cultural and even historical factors in how students construct and adapt their careers during their passage through Higher Education.

#### **4 CONCLUSIONS**

In conclusion, it seems relevant and essential to proceed with studies to validate the QAA on different academic and cultural realities.

This continuation of studies around the academic adjustment will be useful to understand how these different measures operate in academic adjustment.

It should take into account these results to design individual or group interventions to promote academic adjustment to assume the cultural, geographical, historical or social context in which they will be developed.

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