

Academic Failure: Individual, Organizational, and Social Factors

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ARTICLE INFO

Article history:

Received 17 July 2020
Accepted 1 January 2021
Available online 31 March 2021

Keywords:

University dropout
University satisfaction
Academic integration
Academic self-efficacy
Academic success

Palabras clave:

Abandono universitario
Satisfacción universitaria
Integración académica
Autoeficacia académica
Éxito académico

A B S T R A C T

The high percentage of university dropouts in Europe underlines the relevance of understanding which factors lead students to leave university and to be dissatisfied with this experience. Previous studies have focused on only some predictors of academic failure. The present study tested a structural equation model with latent variables to determine the impact of psychological, organizational, and relational variables on the intention to drop out of university and dissatisfaction with the university experience. An online survey was completed by 431 university students ($M = 23.06$, $SD = 5.5$, 362 females) recruited from different courses at several Italian universities. Results showed that the intention to drop out of university was negatively related to self-efficacy, institutional commitment, and academic integration, and positively related to an external locus of control. Dissatisfaction with the university experience was negatively associated with self-efficacy, institutional commitment, and academic integration. Implications for preventive programs and interventions are presented.

El fracaso académico: factores individuales, organizativos y sociales

R E S U M E N

El alto porcentaje de abandono universitario en Europa subraya la pertinencia de la comprensión de los factores que llevan a los estudiantes a abandonar la universidad y a estar insatisfechos con esta experiencia. Estudios previos se han centrado solo en algunos predictores de fracaso académico. El presente estudio puso a prueba un modelo de ecuación estructural con variables latentes para determinar el impacto de las variables psicológicas, organizativas y relacionales en la intención de abandonar la universidad y la insatisfacción con la experiencia universitaria. Una encuesta en línea fue cumplimentada por 431 estudiantes universitarios ($M = 23.06$, $SD = 5.5$, 362 mujeres) reclutados de diferentes cursos de varias universidades italianas. Los resultados mostraron que la intención de abandonar la universidad estaba relacionada negativamente con la autoeficacia, el compromiso institucional y la integración académica y positivamente con locus de control externo. La insatisfacción con la experiencia universitaria se asoció negativamente con la autoeficacia, el compromiso institucional y la integración académica. Se exponen las implicaciones para los programas e intervenciones preventivas.

Due to the high percentage of university dropouts in Europe, it is important to better understand which factors lead students to leave university prior to completion (Vossensteyn et al., 2015). With the Europe 2020 strategy, the European Committee seeks to promote academic success and increase the number of young people with a tertiary education (Vossensteyn et al., 2015).

Italy has one of the lowest percentages of graduates in Europe, with only 27.8% of persons aged 30-34 years with a tertiary education (only Romania ranks worse, 24.6%). Italy is also among the European Union countries with more dropouts after Spain, Malta, and Romania (Eurostat, 2020; Istat, 2019). In recent years, the Italian university system has launched programs aimed at reducing university dropout rates (Belloc et al., 2010); however, scientific research is needed to

support such programs, specifically by identifying students at high risk of dropping out, in order to inform the development of effective preventive and intervention measures to promote student retention.

If in other countries attention to factors underlying academic success and failure has been accompanied by numerous studies in this area (e.g., Ballo et al., 2019; Fernández et al., 2017; Han et al., 2020), in the Italian context, research on university dropouts is scant (Clerici et al., 2015); despite this, in recent years, some studies have investigated factors that promote university retention. These studies have largely investigated the phenomenon of academic dropout and university success from sociological and economic perspectives (Contini et al., 2018; Di Pietro, 2004; Di Pietro & Cutillo, 2008), or have only taken into account socio-demographic factors (Belloc et al.,

Cite this article as: Morelli, M., Chirumbolo, A., Baiocco, R., & Cattellino, E. (2021). Academic failure: Individual, organizational, and social factors. *Psicología Educativa*, 27(2), 167-175 <https://doi.org/10.5093/psed2021a8>

Funding: The authors received no financial support for the research, authorship, and/or publication of this article. Correspondence: mara.morelli@uniroma1.it (M. Morelli).

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2010; Cingano & Cipollone, 2007; Clerici et al., 2015; Dante et al., 2011; Meggiolaro et al., 2017), or aspects related to preventive programs, such as tutoring (Da Re et al., 2017). Always with respect to the Italian context, only three studies have investigated the psychological factors underpinning university success, investigating the protective role of autonomous motivation, self-efficacy (Costabile et al., 2013; Girelli et al., 2018), and self-regulatory strategies (Costabile et al., 2013), as well as how women report less self-efficacy, greater social adjustment, and more motivation to complete university (Monaci et al., 2012). In other countries these aspects have been investigated too, but within more complex models that also include other factors, both internal and external (de la Fuente et al., 2020; Jeno et al., 2018; Kehm et al., 2019). As suggested by Clerici et al. (2015), motivational and emotional factors could affect academic success; therefore, such factors should be taken into account in research on university retention (Pekrun et al., 2009).

As suggested by Heublein and Wolter (2011), students perceive dropping out of university as a personal failure with possible negative repercussions, such as lower financial remuneration, worse job prospects, and fewer life opportunities. Thus, academic success seems to be an important developmental task in young adulthood related to identity and personal growth. Therefore, considering the centrality of the university experience for many young adults who undertake university study courses, the present study has the general objective of analysing some of the psychological, organizational, and relational factors which can affect two aspects of academic failure, that is, intention to drop out of university and dissatisfaction with university experience. An in-depth study of the relationships between these factors can contribute to the implementation of dropout prevention projects and the promotion of satisfaction with the academic experience.

Intention to Dropout and Dissatisfaction with the University Experience

As described by Respondek et al. (2017), academic success and failure were initially studied in terms of “real dropouts”, measuring retention or persistence (i.e., duration of time in which a student remained enrolled at a university), or identifying students who have already decided to drop out of university (Kehm et al., 2019; Robbins et al., 2004). However, such research, which measured factors that led to real dropouts, had the limitation that dropouts had already occurred. To make up for this shortcoming, later research began to investigate students' dropout proneness (Jessor, 2016), which was strongly correlated with real dropout rates. Intention to drop out is described as a combination of both considering leaving university and speaking with someone (e.g., a parent or friend; Bonino et al., 2005) about this course of action. Institutions that are able to identify students with this intent may be able to effectively activate interventions and preventive programs.

In addition to students' intention to drop out, students' dissatisfaction with university experience – that is, another important indicator of university failure (Elsharnouby, 2015; O’Gorman, 2020) – can also be used to conceptualize educational failure. Dissatisfaction with university experience is a multifaceted concept referring to dissatisfaction with one's course of study, relationships with teachers and other students, and institutional and administrative services. Dissatisfied university students tend to demonstrate negative behaviors towards other students, such as not helping them when they face difficulties; such behaviors can decrease well-being and the likelihood of academic failure in all students (Elsharnouby, 2015), leading to lesser student retention (de la Fuente et al., 2020; Schertzer & Schertzer, 2004).

Academic failure is characterized by an inconsistent student engagement, which sheds light on a problematic situation. It does not

consist of a single event, but is the final phase in a dynamic, cumulative, and multifactorial process of student disengagement (Chipchase et al., 2017; De Witte et al., 2013; Nicoletti, 2019). Particularly, more current studies show that the process of disengagement that leads to drop out begins during the first months of the first academic year (Hatch & Garcia, 2017). Among the initial reasons that may start the intention to abandon there are cognitive and noncognitive factors. Among the cognitive factors, for instance, low motivation, inadequate high school students' academic preparation, and unrealistic expectations predict students' disengagement and academic performance at college. Noncognitive factors are more numerous and complex, and their effects on college success is less clear (Han et al., 2020). Some examples of noncognitive factors that can affect academic disengagement and failure can be traced from competing demands, teaching quality, and institutional structure and processes (Chipchase et al., 2017); also the option of entering the university can affect academic disengagement, since in some cases lack of motivation towards studies' completion comes from the fact that the student has not been able to access the degree he wanted to do first choice, and this causes low motivation towards study and low satisfaction with the career and with the institution. Another crucial factor can be traced in the lack of social integration due to the scarce attendance of lessons (Chipchase et al., 2017) or the lack of inclusion in social media groups (Coetzee et al., 2019; Tras et al., 2019).

Because academic failure is a multiform phenomenon, it merits testing with more than one indicator. A previous review of the literature on school dropout (De Witte et al., 2013) underlined the complex interaction of factors contributing to academic failure. Thus, it is important for any research on academic failure to consider multiple protective and risk factors, such as individual, psychological, organizational, and relational factors (Nicoletti, 2019).

Theoretical Models of Academic Success and Failure

Several theoretical models on academic success have been developed. The first and most recognized model is Tinto's (1975) student integration model. Tinto conceived academic persistence as a multifactorial phenomenon that is favored by the integration between student and educational environment. Subsequently, Bean and Metzner (1985) suggested that organizational and contextual variables affect not only intention to drop out, but also satisfaction with the university experience. Again, Pascarella and Terenzini (1980, 2005) stressed the protective role of a positive relationship between students and faculty in determining academic persistence.

More recently, Mackie's (2001) life stress reduction model, which was developed from Tinto's (1975) model using qualitative methodology, conceptualized that academic persistence and success depend on the reduction of stress factors in different domains: individual (e.g., motivation, emotions, beliefs, long-terms goals), social (e.g., relationships with other students, academic integration), organizational (e.g., teaching quality and academic student services), and contextual (e.g., financial support, work, family).

Several literature reviews and meta-analyses have attempted to summarize and identify the factors that are relevant to academic achievement and failure. The meta-analysis by Robbins et al. (2004) investigated psycho-social factors in relation to academic success and found that the strongest predictors of retention was academic self-efficacy, followed by academic goals and academic skills. Indeed, self-efficacy for self-regulated learning has also been found to play a relevant role in school success, mediating the relationship between external regulation and school achievement (Cattellino et al., 2019). Sirin's (2005) meta-analytic review identified a relationship between contextual variables (e.g., family socio-economic status) and academic achievement. The meta-analysis by Valentine et al. (2004) found that academic self-beliefs and academic self-esteem

affect academic achievement. The review by [Schneider and Preckel \(2017\)](#) stressed the importance of positive academic interactions in determining academic success. Finally, the review by [O'Neill et al. \(2011\)](#) found that, although socio-demographic variables seem to play a role in determining university dropout, the effect is – at best – only modest; moreover, these variables are not modifiable (i.e., universities cannot intervene to alter them). [O'Neill et al. \(2011\)](#) suggested the need for further research to investigate the role of organizational and institutional factors in academic success.

The Present Study

Based on the theoretical models and the research reported above, this study aimed to evaluate the joint effect of some variables belonging to different levels – personal, organizational, and relational (as suggested by [Mackie's, 2001](#) model) – on two indicators of academic failure, that is, intention to drop out and dissatisfaction with academic experience. These are two aspects often linked to each other, but not superimposable: in fact, if it is true that, in some cases, dissatisfaction can favour intention to drop out, it is also true that, in other cases, the students, while wanting to complete the university course, are dissatisfied with their academic experience. More specifically, the present study investigates the role of: (a) self-efficacy for self-regulated learning and internal/external loci of control as individual variables, (b) subsequent institutional commitment as an organizational variable, and (c) academic integration with other students as a relational/social variable.

Self-efficacy for self-regulated learning assesses students' beliefs to structure environments conducive to learning and to planning and organizing their academic activities; locus of control refers to the perception of control of events that everyone has: it can be attributed to themselves or to external factors. Self-efficacy and internal locus of control constitute self-regulation mechanisms that play a central role in young adulthood and in their learning processes, as highlighted also in the European Higher Education Area (EHEA) declarations and in a recent review of the literature ([Duckworth et al., 2019](#)). In fact, starting from adolescence and even more in this period of life, agency plays a crucial role and self-efficacy beliefs become central to guiding choices and managing circumstances ([Bandura, 1997](#)). Similarly, perceiving oneself as capable of controlling one's study experiences and academic results increases satisfaction perceived with university experience.

Subsequent institutional commitment refers to the level of attachment held by students towards their university. In other words, it is a sense of belonging to a specific institution and represents a protection factor with respect to dropout and dissatisfaction ([Krause & Armitage, 2016](#)). Finally, academic integration with other students has been found by several scholars to have a significant impact on retention of college students ([Kehm et al., 2019](#); [Tarazona & Rosenbusch, 2019](#)) and wellbeing ([Cattellino et al., 2020](#)).

Regarding individual and psychological variables, it was hypothesized that self-efficacy for self-regulated learning and an internal locus of control would negatively relate both to intention to drop out and to dissatisfaction with university experience; conversely, it was expected that an external locus of control would be positively associated with both intention to drop out of university and with dissatisfaction with university experience. Research has found that self-efficacy for self-regulated learning is the strongest predictor of academic success ([Robbins et al., 2004](#)) and that a low external locus of control and a high internal locus of control relate to greater academic achievement ([Abouserie, 1994](#); [Marôco et al., 2020](#)). With respect to organizational variables, it was hypothesized that subsequent institutional commitment would be negatively related to the intention to drop out and dissatisfaction with

university experience, because students with a stronger attachment to and satisfaction with their university tend to demonstrate greater university retention and success ([Tinto, 2015](#)). Finally, regarding social/relational variables, it was hypothesized that academic integration with other students would be negatively related to the intention to drop out of university and increase satisfaction with the university experience. Several studies have demonstrated that positive relationships with teachers and other students ([Hagenauer & Volet, 2014](#)) and a feeling of academic integration positively influence personal growth and intellectual interests, thereby increasing academic persistence and success ([Schneider & Preckel, 2017](#)).

Although self-efficacy for self-regulated learning, internal/external loci of control, subsequent institutional commitment, and academic integration with other students are all factors that have proven to be able to affect both dropout and satisfaction/dissatisfaction with academic experience, there are few studies that have empirically tested in a single statistical model the effects of these constructs on academic failure in its double meaning of intention to drop out and dissatisfaction with experience. This is even more true in the Italian context and in other countries characterized by a low rate of graduates and a large number of young people who do not finish their academic career.

Method

Participants

An a priori power analysis was conducted to determine the required sample size. Power was set to .80 ([Cohen, 1988](#)) and alpha to the conventional level of .05. A small anticipated effect size was assumed ($r = .15$; [Cohen, 1988](#)). The power analysis revealed a required minimum sample size of $N = 347$.

The online survey was administered to 431 university students ($M = 23.06$, $SD = 5.5$, age range 18–59 years, 362 women and 69 men) who were recruited from different Italian universities in the geographical areas of northern, central, and southern Italy and the Italian islands. Ninety-two students (21.3%) were attending their first year of university, 113 ($n = 26.2\%$) their second year, 103 ($n = 23.9\%$) their third year, 43 ($n = 10\%$) their fourth year, and 41 ($n = 9.5\%$) their fifth year; 39 ($n = 9\%$) students were taking longer than usual to complete their university course (more than 5 years). Regarding the type of attended courses, 70% ($n = 300$) of participants were attending a course in humanistic sciences and the remaining 30% ($n = 142$) an economic, political, or law course. Most students (75.9%) reported that their families had a medium socio-economic status; regarding their own socio-economic status, 123 students (28.5%) reported a low level and 277 (64.3%) reported a medium level. Finally, 262 students (60.8%) reported that they had no outside employment, 132 (30.6%) had a part-time job, and 37 (8.6%) were in full-time work.

Procedure

Students were contacted to participate in the study via email, using a snowball sampling procedure. Each student provided informed consent by clicking “Yes, I accept to participate in the study” on the first page of the online survey, in accordance with the Declaration of Helsinki. The research was approved by the Ethical Committee of the Sapienza University of Rome.

Measures

Self-efficacy for self-regulated learning. Perceived self-efficacy for self-regulated learning was measured using the modified version

of the Perceived Efficacy Scale for Self-regulated Learning (Bandura, 1990; Italian validation by Bandura et al., 1996; Pastorelli & Picconi, 2001). This scale evaluates students' self-perception of their ability to ask for help when having difficulty studying, organizing, and planning study activities, and choosing suitable places to study. It is comprised of 11 items that are rated on a 5-point Likert scale ranging from 1 (*not at all capable*) to 5 (*totally capable*). An example item is: "How well can you finish the exam program in time?"

An explorative factor analysis was run on the items of the scale, yielding a unidimensional solution which accounted for 40.35% of variance with factor loadings ranging from .33 to .79. In the present study, the scale was adapted for university students. It showed good reliability, with Cronbach's alpha of .84.

Internal and external loci of control. The causal attribution of academic success/failure was measured using the Locus of Control Scale (Levenson, 1981). This scale, which was adapted for university experience, is comprised of 19 items that are rated on a 5-point Likert scale ranging from 1 (*completely disagree*) to 5 (*completely agree*). The scale calculates three dimensions: (1) internal locus of control, which assesses whether the student attributes the cause of academic success and failure to their efforts and abilities (e.g., "Passing or not passing an exam depends above all on my study skills"); (2) powerful others, which assesses whether a student attributes the cause of academic success and failure to other people (e.g., teachers); and (3) chance, which measures whether the student attributes the cause of academic success and failure to chance or (good or bad) luck. The powerful others and chance dimensions can be grouped into an external locus of control factor (e.g., "I have the impression that success and failure in exams are largely determined by teachers").

An explorative factor analysis was run on the items of the scale, yielding a bidimensional solution. The first factor accounted for 27.91% of variance, composed of 12 items with factor loadings ranging from .47 to .77 which referred to the external locus of control dimension. The second factor explained 11.88% of variance, with 7 items whose factor loadings ranged from .39 to .74. This factor tapped the internal locus of control dimension. In the present study, total score for external locus of control (LoC-E; 12 items) and total score for internal locus of control (LoC-I; 7 items) showed good reliability, with Cronbach's alphas of .85 and .72, respectively.

Subsequent institutional commitment. Commitment to university (i.e., institutional commitment) was measured using the Subsequent Institutional Commitment Scale (Berger & Milem, 1999). This scale is comprised of three items that are rated on a 5-point Likert scale, ranging from 1 (*completely disagree*) to 5 (*completely agree*). The scale assesses the level of attachment held by a student towards their university (i.e., the extent to which a student feels it is important to attend and to graduate from their university). An example item is: "I'm sure this university is the right place for me." An exploratory factor analysis was run on the items of the scale, yielding a unidimensional solution which accounted for 84.35% of variance with factor loadings ranging from .87 to .95. In the present study, the scale showed good reliability, with Cronbach's alpha of .91.

Academic integration with other students. Academic integration with other students was measured using two items of the Academic Integration Scale (Berger & Milem, 1999). On this scale, all items are rated on a 5-point Likert scale ranging from 1 (*completely disagree*) to 5 (*completely agree*). The scale assesses the extent to which a student believes that interpersonal relationships with other students at their university have had a positive influence on their personal and intellectual growth. An example item is: "My interpersonal relationships with other students have had a positive influence on my intellectual growth and my intellectual interests." In the present study, the scale showed good reliability, with Cronbach's alpha of .87.

Intention to drop out of university. Intention to drop out of university was measured using six items that were inspired by the

intention to drop out of school measure developed by Bonino et al. (2005). Students rated each item on a 5-point Likert scale ranging from 1 (*completely disagree*) to 5 (*completely agree*). An example item is: "Have you ever talked seriously with your parents (or someone) about abandoning university?"

An exploratory factor analysis was run on the items of the scale, yielding a unidimensional solution which accounted for 67.91% of variance with factor loadings ranging from .73 to .89. The scale showed good reliability, with Cronbach's alpha of .89.

Dissatisfaction with the university experience. Satisfaction with university experience was measured using five items that were created ad hoc to assess satisfaction with the entire university experience, relationships with teachers and other students, university services for students, and university curricula. An example item is: "How satisfied are you with your relationships with teachers?" Each item was rated on a 10-point Likert scale ranging from 1 (*totally unsatisfied*) to 10 (*totally satisfied*).

An exploratory factor analysis was run on the items of the scale, yielding a unidimensional solution which accounted for 58.10% of variance with factor loadings ranging from .61 to .86. The scale showed good reliability, with Cronbach's alpha of .80. We computed the total scores of the scale so that higher scores indicated higher dissatisfaction with academic experience.

Data Analysis

First, correlations among all variables were run. Following this, a structural equation model with latent variables was conducted considering self-efficacy for self-regulated learning, internal locus of control, external locus of control, subsequent institutional commitment, and academic integration with other students as exogenous variables. Intention to drop out of university and dissatisfaction with university experience were considered endogenous variables.

Latent variables were defined according to their respective number of manifest indicators (i.e., items on relevant scales). A partially disaggregated approach was employed, whereby latent variables were defined using parcels (Coffman & MacCallum, 2005; Little et al., 2002). A parcel is an aggregate of several items measuring a specific construct (Coffman & MacCallum, 2005; Little et al., 2002). In the present analysis, two or three parcels were constructed for each latent variable, using the "item-to-construct" balance strategy (Little et al., 2002). In other words, parcels were defined by examining item-to-construct relationships, as represented by factor loadings in item-level factor analyses (for a detailed description of this procedure, see Little et al., 2002). Since academic integration and subsequent institutional commitment were assessed by a limited number of items, their corresponding latent variables were defined using items as manifest indicators. Therefore, in the final model, a combination of total and partial disaggregation approaches to measurement model specifications was employed (for verification and a detailed description of this approach, see Bagozzi & Heatherton, 1994). In addition to the perspective of a multifaceted model fit (Tanaka, 1993), several indices and criteria were considered. In fact, model goodness of fit was evaluated via χ^2 , root mean square error of approximation (RMSEA), standardized root mean square residual (SRMR), comparative fit index (CFI), and Tucker Lewis index (TLI). Conventionally, a model is deemed to achieve satisfactory goodness of fit when RMSEA and SRMR are lower than .08 and CFI and TLI are higher than .95 (Hu & Bentler, 1999). M-Plus 8.3 software was used to test the structural equation model with latent variables and a robust maximum likelihood estimator (MLR) was employed to compute all model parameters (Muthén & Muthén, 1998-2017).

Results

Correlations among Variables

Correlations, means, and standard deviations of all variables are reported in Table 1. All variables were significantly correlated with each other (see Table 1), except for external locus of control with subsequent institutional commitment and external locus of control with academic integration with other students.

Structural Equation Model Analysis

The model reported in Figure 1 showed good fit indexes, $\chi^2(131) = 254.10, p < .01, RMSEA = .05, CFI = .97, TLI = .96, SRMR = .04$, indicating that the model could not be rejected. All factor loadings were statistically significant. The model accounted for 33% of variance in intention to drop out of university and 34% of variance in dissatisfaction with university experience. Intention to drop out of university and dissatisfaction with university experience, as latent variables, were not significantly related, suggesting that these variables represent distinct aspects of academic experience.

With respect to structural parameters, intention to drop out of university was significantly related to self-efficacy for self-regulated learning, $\gamma = -.27, p < .01$, external locus of control, $\gamma = .15, p < .01$, subsequent institutional commitment, $\gamma = -.19, p < .01$, and academic integration with other students, $\gamma = -.19, p < .01$. On the other hand,

dissatisfaction with university experience was significantly related to self-efficacy for self-regulated learning, $\gamma = -.24, p < .01$, subsequent institutional commitment, $\gamma = -.14, p < .01$, and academic integration with other students, $\gamma = -.28, p < .01$.

Table 1. Correlations among Variables

	1	2	3	4	5	6	7	M	SD
1. ASE	1							3.48	0.58
2. LoC-I	.37**	1						4.11	0.53
3. LoC-E	-.20**	-.33**	1					1.98	0.61
4. SIC	.15**	.12**	-.05	1				3.92	1.14
5. AIS	.22**	.15**	-.03	.15**	1			3.54	1.06
6. DROP	-.36**	-.26**	.23**	-.35**	-.29**	1		1.58	0.76
7. DISSAT	-.38**	-.31**	.16**	-.22**	-.36**	.34**	1	7.05	1.59

Note. ASE = academic self-efficacy; LoC-I = internal locus of control; LoC-E = external locus of control; SIC = subsequent institutional commitment; AIS = academic integration with other students; DROP = intention to drop out of university; and DISSAT = dissatisfaction with university experience. ** $p < .01$.

Discussion

Reducing university dropout rates by increasing the number of students who are able to complete a tertiary education is important for students' well-being over the long term, given that a low level of education can become an obstacle to social and work inclusion and to

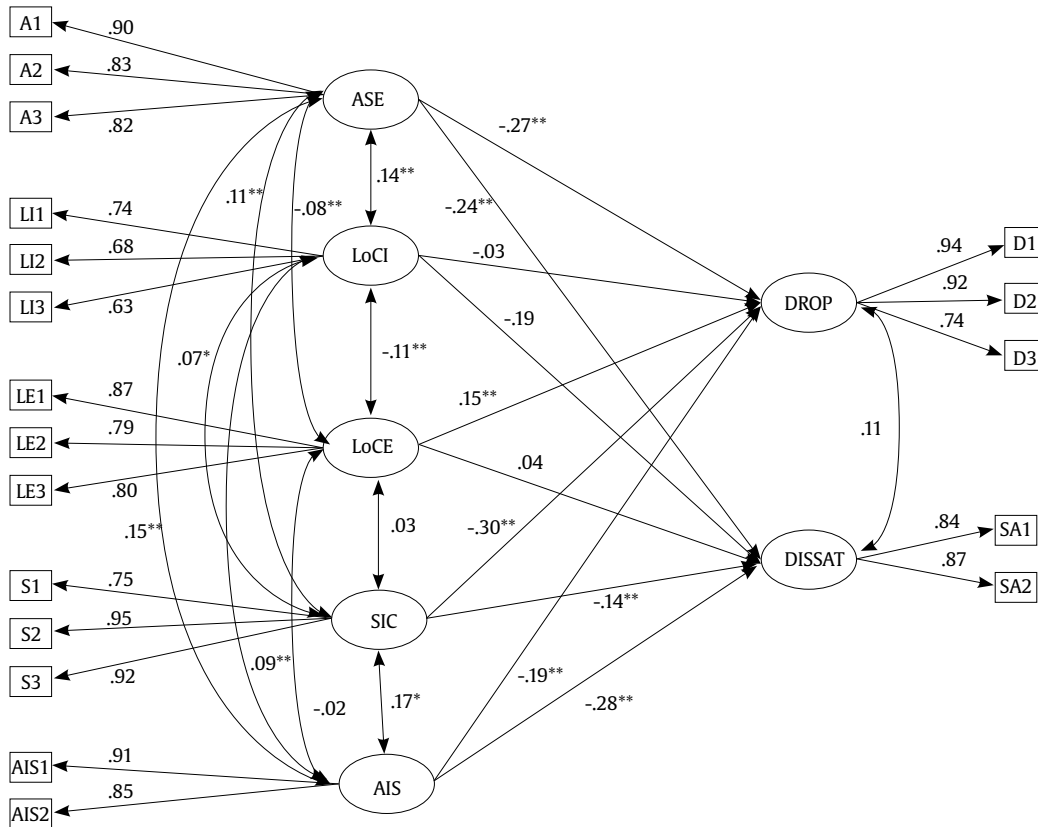


Figure 1. Full Structural Equation Model with Latent Variables

Note. RMSEA = .05; CFI = .97; TLI = .96; SRMR = .04; ASE = academic self-efficacy; LoCI = internal locus of control; LoCE = external locus of control; SIC = subsequent institutional commitment; AIS = academic integration with other students; DROP = intention to drop out of university; and DISSAT = dissatisfaction with university experience.

$\chi^2(131) = 254.10, p < .01$.

* $p < .05$, ** $p < .01$.

life satisfaction (Heublein & Wolter, 2011). Building on Mackie's (2001) life stress reduction model, the present study tested a structural equation model with latent variables to investigate how individual/psychological, organizational, and relational/social variables might predict two specific indicators of academic failure: intention to drop out of university and dissatisfaction with university experience. The model showed satisfactory fit indexes and accounted for a significant amount of variance in both intention to drop out of university and dissatisfaction with university experience. The results showed that intention to drop out of university was related to low self-efficacy for self-regulated learning, low subsequent institutional commitment, poor academic integration with other students, and a greater external locus of control; dissatisfaction with university experience was associated with less self-efficacy for self-regulated learning, less subsequent institutional commitment, and less academic integration with other students. A strength and unique contribution of the study was its analysis of academic failure through a multifactorial perspective, which provided insight into which variables are most effective in determining academic failure.

Correlations showed that intention to drop out of university and dissatisfaction with university experience were not significantly related, suggesting that these variables represent distinct aspects of academic experience. Thus, this result suggests the importance that future studies investigate both of these aspects when they investigate academic success.

The strongest exogenous variable related to intention to drop out of university was subsequent institutional commitment, followed by self-efficacy for self-regulated learning. These findings confirm previous studies in which these variables were also found to be important factors in academic retention (Davidson & Beck, 2019; Robbins et al., 2004). Robbins et al.'s (2004) meta-analysis found the strongest effect size between academic self-efficacy and university retention. The present findings suggest that students' perception of their ability to self-regulate their learning (i.e., to control and organize their study activities, ask for help when they are facing difficulty, and choose appropriate places for studying) is an important variable in academic retention. Nevertheless, students' subsequent institutional commitment (i.e., attachment to their university and belief that it is important to study at and graduate from that particular university) appears to be slightly more significant than self-efficacy for self-regulated learning in decreasing the likelihood of university dropout.

Self-efficacy emerged as one of the strongest exogenous variable negatively related to dissatisfaction with the university experience, alongside academic integration with other students. Students who perceived themselves as capable of managing university tasks also felt more satisfied with themselves, their activities, and their studies. In general, research has shown that students who are more satisfied with their university experience feel better about themselves and others, are more satisfied with their life in general, and make choices that are more in line with their interests (Chow, 2005). This may explain why, in the present study, students who perceived themselves as capable were less likely to intend to leave university. In the same vein, academic integration seems to have played a relevant role in determining satisfaction with university experience, as relationships with other students were found to positively influence personal and intellectual growth and increase satisfaction with the university experience. Students who perceived themselves as less academically integrated were also more likely to express an intention to drop out of university. These findings suggest that social factors and relationships are relevant protective factors for academic success, as they increase university retention and satisfaction. As suggested by previous studies (Davis et al., 2019; Hagenauer & Volet, 2014; Schneider & Preckel, 2017), positive academic relationships help students to develop a sense of belonging that protects them from feelings of loneliness that often occur in university – especially in the first year – and thereby

increase academic persistence and satisfaction. Relationships with other students are also useful during exam periods, as they enable students to freely compare themselves to others during their exam preparation, thereby diminishing the likelihood that they will postpone the exams.

The present findings also suggest that students who are attached to their university (i.e., students who demonstrate subsequent institutional commitment) are more satisfied with university experience; this result is aligned with studies demonstrating that individuals with an affective bond to a particular place develop a place attachment that increases their overall satisfaction (Altman & Low, 2012; Rioux et al., 2019). Students who report subsequent institutional commitment to their university are more satisfied because they believe that their university studies will provide value and be formative and enriching, both personally and professionally. Moreover, research on students' attachment to their university has shown that high-commitment human resources strategies are associated with desirable organizational outcomes (Fuller et al., 2006), such as lower intention to drop out of university and greater satisfaction with university experience. It has also been found that students often drop out of university for environmental and adjustment reasons, rather than intellectual difficulties (Pitkethly & Prosser, 2001).

Finally, the present study found that causal attribution strategies of academic success and failure also played an important role in increasing academic success, by reducing the intention to drop out of university. Specifically, students with an external locus of control were more likely to attribute the cause of their failure to others (e.g., teachers) or to bad luck. Moreover, they tended to report a greater intention to drop out because they perceived themselves as having less control over their academic performance and attributed less of their academic failure and success to their personal efforts or abilities.

The present study had some limitations. First, as participants were not representative of the general population of university students, generalizability of results may be limited. However, the size and direction of identified relationships were theoretically sound and empirically similar to those cited in the literature. Thus, the lack of sample representativeness is unlikely to have been a significant limitation of the study. However, sample size was small and mostly representative of a population of university students in humanities and economic/political studies. However, homogeneity of the study courses attended by participants can reduce, at least in part, the limit of the sample size. Furthermore, sample size was still large enough to have an adequate statistical power to detect a small effect size. Future studies should broaden the size of sample and study the effect of investigated variables even on students of more science-oriented courses, as we know that processes underlying academic success and persistence can vary depending on the type of attended university course. Future studies, which take into consideration larger samples, could also investigate any differences between course years: there are numerous studies on causes of first-year abandonment in different countries, while studies on causes of abandonment in subsequent years are still scarce; similarly, few studies take into consideration intention to drop out and, at the same time, dissatisfaction with academic experience. Moreover, data were cross-sectional and it was not possible to infer causal relationships; thus, future longitudinal studies should be conducted to improve our understanding of the developmental trends of protective and risk factors in academic success. Another limitation is that we used a snowball sampling procedure, that did not prevent us from collecting a random representing sample. Again, future studies should use objective dropout information and not only self-report measures, as we did. Anyway, we aimed to investigate the psychological aspects related to the intention to drop out that specifically refers to thinking about the idea to abandon the university; thus, since the variable is genuinely subjective, the best way to measure this aspect was to ask

participants to report their feelings and thoughts. Finally, academic integration was measured using only two items.

Despite these limitations, the findings are relevant for the development and implementation of effective preventive programs and interventions aimed at reducing academic failure and promoting academic well-being; such initiatives could, in turn, generate greater academic success. As relational and social variables seem to be relevant in decreasing intention to drop out of university and increasing satisfaction with university experience, universities should develop, sustain, and encourage academic integration and social relationships among students. To this end, universities could organize and improve social events and communal meeting places for students. For example, opening year ceremonies could include students beyond freshmen class; recreational sporting and cultural events during non-university hours could be promoted; and large common study areas could be created to decrease students' loneliness and "homesickness." Moreover, as suggested by Da Re and Riva (2018), some students in their second year and beyond could serve as peer tutors to students in their first year. These peer tutors could support freshman students in managing difficulties and provide suggestions and strategies for coping with exams. Students facing academic difficulties may be more comfortable asking for help from a peer tutor, rather than a teacher, due to a more symmetrical and balanced relationship. Such an intervention could also be useful in developing students' academic self-efficacy, because it could increase students' self-perceived ability to organize and manage common university challenges.

It is important that universities seek to improve students' academic self-efficacy. To this end, teachers could provide more precise indications of study material and course aims, in order to promote students' perception that they can control and monitor their learning progress (and thereby enhance their academic self-efficacy). Moreover, teachers could give regular feedback on learning and study strategies and accuracy of students' knowledge. Again, teachers might encourage formation of study groups among students, because self-efficacy and academic success can increase via comparison with and reinforcement from peers. In this way, students could develop a more accurate perception of their study skills and protect themselves from isolation and depression, which are commonly encountered during university.

Interventions aimed at improving subsequent institutional commitment among students should also be considered. By distributing university "gear" (e.g., sweatshirts, stationery, etc.) to students and increasing the external visibility of the university through advertising, universities could help students develop a sense of attachment and belonging to the institution, thereby increasing their motivation to persist in their studies.

Finally, other interventions should aim at modifying the style of students' causal attribution of their academic failure. Attribution retraining programs could help students re-examine the steps that led them to fail an exam, in order to enhance their perceived control over their academic performance (Perry et al., 2005). Students who attribute the causes of their academic successes and/or failures to external factors tend to feel that their studies are beyond their control and that they are the victims of unpredictable events (Blue & Cook, 2004); this consequently decreases their academic motivation (Cabus & De Witte, 2016) and leads them to develop feelings of inferiority and personal failure (Entwistle & Peterson, 2004). Over time, these conditions may lead students to develop intention to drop out. Therefore, enhancing students' perceived control over their university performance could help them to increase their feeling of being able to modify their behavior to increase academic success.

Summarizing, despite some limitations, the present study underlines the importance of at least three aspects: i) analyzing academic failure not only in terms of dropout, but also of dissatisfaction with the academic experience; ii) considering,

in addition to the dropout, the intention to dropout which often represents an important step in the process that leads to studies' abandonment; iii) considering intention to drop out and dissatisfaction with academic experience also for students enrolled in the years following the first. This study also highlights many areas of intervention and improvement strategies that can be adopted in the Italian context and in other contexts with a similar academic organization. These improvements can be useful not only for Italian students, but also for those who come from other countries to study in Italy, and are consistent with the indications of the European Higher Education Area.

Conflict of Interest

The authors of this article declare no conflict of interest.

References

- Abouserie, R. (1994). Sources and levels of stress in relation to locus of control and self-esteem in university students. *Educational Psychology, 14*(3), 323-330. <https://doi.org/10.1080/0144341940140306>
- Altman, I., & Low, S. M. (Eds.). (2012). *Place attachment* (Vol. 12). Springer Science & Business Media.
- Bagozzi, R. P., & Heatherton, T. F. (1994). A general approach to representing multifaceted personality constructs: Application to state self-esteem. *Structural Equation Modeling: A Multidisciplinary Journal, 1*(1), 35-67. <https://doi.org/10.1080/10705519409539961>
- Ballo, A., Mathies, C., & Weimer, L. (2019). Applying student development theories: Enhancing international student academic success and integration. *Journal of Comparative & International Higher Education, 11*, 18-24. <https://doi.org/10.32674/jciche.v11iWinter.1092>
- Bandura A. (1990). *Multidimensional scales of perceived academic efficacy*. Stanford University.
- Bandura A. (1997). *Self-efficacy: The exercise of control*. W. H. Freeman and Company.
- Bandura, A., Barbaranelli, C., Caprara, G. V., & Pastorelli, C. (1996). Multifaceted impact of self-efficacy beliefs on academic functioning. *Child Development, 67*(3), 1206-1222. <https://doi.org/10.1111/j.1467-8624.1996.tb01791.x>
- Bean, J. P., & Metzner, B. S. (1985). A conceptual model of nontraditional undergraduate student attrition. *Review of Educational Research, 55*(4), 485-540. <https://doi.org/10.3102/00346543055004485>
- Belloc, F., Maruotti, A., & Petrella, L. (2010). University drop-out: An Italian experience. *Higher Education, 60*(2), 127-138. <https://doi.org/10.1007/s10734-009-9290-1>
- Berger, J. B., & Milem, J. F. (1999). The role of student involvement and perceptions of integration in a causal model of student persistence. *Research in Higher Education, 40*(6), 641-664. <https://doi.org/10.1023/A:1018708813711>
- Blue, D., & Cook, J. E. (2004). High school dropouts: Can we reverse the stagnation in school graduation. *Study of High School Restructuring, 1*(2), 1-11.
- Bonino, S., Cattelino, E., & Ciairano, S. (2005). *Adolescents and risk: Behaviors, functions and protective factors*. Springer-Verlag.
- Cabus, S. J., & De Witte, K. (2016). Why do students leave education early? Theory and evidence on high school dropout rates. *Journal of Forecasting, 35*(8), 690-702. <https://doi.org/10.1002/for.2394>
- Cattelino E., Chirumbolo A., Baiocco R., Calandri E., & Morelli M. (2020). Depressive symptoms in adolescence: The role of self-efficacy and peer relationships at school. *Child Psychiatry & Human Development, 1*-8. <https://doi.org/10.1007/s10578-020-01043-z>
- Cattelino, E., Morelli, M., Baiocco, R., & Chirumbolo, A. (2019). From external regulation to school achievement: The mediation of self-efficacy at school. *Journal of Applied Developmental Psychology, 60*, 127-133. <https://doi.org/10.1016/j.appdev.2018.09.007>
- Chipchase, L., Davidson, M., Blackstock, F., Bye, R., Colthier, P., Krupp N., Dickson, W., Turner, D., & Williams, M. (2017). Conceptualising and measuring student disengagement in higher education: A synthesis of the literature. *International Journal of Higher Education, 6*(2), 31-42. <https://doi.org/10.5430/ijhe.v6n2p31>
- Chow, H. P. (2005). Life satisfaction among university students in a Canadian prairie city: A multivariate analysis. *Social Indicators Research, 70*(2), 139-150. <https://doi.org/10.1007/s11205-004-7526-0>
- Cingano, F., & Cipollone, P. (2007). *University drop-out: The case of Italy* (Vol. 626). Banca d'Italia. <https://core.ac.uk/download/pdf/7088580.pdf>
- Clerici, R., Giraldo, A., & Meggiolaro, S. (2015). The determinants of academic outcomes in a competing risks approach: Evidence from Italy. *Studies in Higher Education, 40*(9), 1535-1549. <https://doi.org/10.1080/03075079.2013.878835>

- Coetzee, S. A., Leith, K., & Schmulian, A. (2019). Accounting students access to social media related resources and the risk of tacit social exclusion. *Accounting Education*, 28(5), 465-483. <https://doi.org/10.1080/09639284.2019.1641116>
- Coffman, D. L., & MacCallum, R. C. (2005). Using parcels to convert path analysis models into latent variable models. *Multivariate Behavioral Research*, 40(2), 235-259. https://doi.org/10.1207/s15327906mbr4002_4
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Lawrence Erlbaum Associates Publishers.
- Contini, D., Cugnata, F., & Scagni, A. (2018). Social selection in higher education. Enrolment, dropout and timely degree attainment in Italy. *Higher Education*, 75(5), 785-808. <https://doi.org/10.1007/s10734-017-0170-9>
- Costabile, A., Cornoldi, C., De Beni, R., Manfredi, P., & Figliuzzi, S. (2013). Metacognitive components of students' difficulties in the first year of university. *International Journal of Higher Education*, 2(4), 165-171. <https://doi.org/10.5430/ijhe.v2n4p165>
- Da Re, L., Clerici, R., & Pérez, P. R. Á. (2017). The formative tutoring programme in preventing university drop-outs and improving students' academic performance. The case study of the University of Padova (Italy). *Italian Journal of Sociology of Education*, 9(3), 156-175. <https://doi.org/10.14658/pupj-ijse-2017-3-7>
- Da Re, L., & Riva, C. (2018). Favorire il successo accademico con il Tutorato Formativo. L'esperienza del Corso di Laurea in Scienze Sociologiche dell'Università di Padova [Encouraging academic success with the Training Tutorship. The experience of the degree course in Sociological Sciences at the University of Padua]. *Scuola Democratica*, 9(2), 271-290. <https://doi.org/10.12828/90562>
- Dante, A., Valoppi, G., Saiani, L., & Palese, A. (2011). Factors associated with nursing students' academic success or failure: A retrospective Italian multicenter study. *Nurse Education Today*, 31(1), 59-64. <https://doi.org/10.1016/j.nedt.2010.03.016>
- Davidson, W., & Beck, H. P. (2019). Analyzing the commitment of college students using a brief, contextualized measure of need satisfaction from the perspective of self-determination theory. *Psychological Reports*, 122(3), 1145-1166. <https://doi.org/10.1177/0033294118769452>
- Davis, G. M., Hanzsek-Brill, M. B., Petzold, M. C., & Robinson, D. H. (2019). Students' sense of belonging: The development of a predictive retention model. *Journal of the Scholarship of Teaching and Learning*, 19(1), 117-127. <https://doi.org/10.14434/josotl.v19i1.26787>
- De la Fuente, J., Sander, P., Kauffman, D. F., & Yilmaz Soylu, M. (2020). Differential effects of self- vs. external regulation on learning approaches, academic achievement, and satisfaction in undergraduate students. *Frontiers in Psychology*, 11, 543884. <https://doi.org/10.3389/fpsyg.2020.543884>
- De Witte, K., Cabus, S., Thyssen, G., Groot, W., & van den Brink, H. M. (2013). A critical review of the literature on school dropout. *Educational Research Review*, 10, 13-28. <https://doi.org/10.1016/j.edurev.2013.05.002>
- Di Pietro, G. (2004). The determinants of university dropout in Italy: A bivariate probability model with sample selection. *Applied Economics Letters*, 11(3), 187-191. <https://doi.org/10.1080/1350485042000203832>
- Di Pietro, G., & Cutillo, A. (2008). Degree flexibility and university dropout: The Italian experience. *Economics of Education Review*, 27(5), 546-555. <https://doi.org/10.1016/j.econedurev.2007.06.002>
- Duckworth, A. L., Taxer, J. L., Eskreis-Winkler, L., Galla, B. M., & Gross, J. J. (2019). Self-control and academic achievement. *Annual Review of Psychology*, 70, 373-399. <https://doi.org/10.1146/annurev-psych-010418-103230>
- Elsharnouby, T. H. (2015). Student co-creation behavior in higher education: The role of satisfaction with the university experience. *Journal of Marketing for Higher Education*, 25(2), 238-262. <https://doi.org/10.1080/08841241.2015.1059919>
- Entwistle, N. J., & Peterson, E. R. (2004). Conceptions of learning and knowledge in higher education: Relationships with study behaviour and influences of learning environments. *International Journal of Educational Research*, 41(6), 407-428. <https://doi.org/10.1016/j.ijer.2005.08.009>
- Eurostat. (2020). *Smarter, greener, more inclusive? Indicators to support the Europe 2020 strategy*. <https://ec.europa.eu/eurostat/documents/3217494/10155585/KS-04-19-559-EN-N.pdf/b8528d01-4f4f-9c1e-4cd4-86c2328559de>
- Fernández, M. F. P., Araújo, A. M., Vacas, C. T., Almeida L. S., & González, M. S. R. (2017). Predictores del ajuste de los estudiantes durante la transición a la universidad en España [Predictors of student adjustment during the transition to university in Spain]. *Psicothema*, 29(1), 67-72. <https://doi.org/10.7334/psicothema2016.40>
- Fuller, J. B., Hester, K., Barnett, T., & Relyea, L. F. C. (2006). Perceived organizational support and perceived external prestige: Predicting organizational attachment for university faculty, staff, and administrators. *Journal of Social Psychology*, 146(3), 327-347. <https://doi.org/10.3200/SOCP.146.3.327-347>
- Girelli, L., Alivernini, F., Lucidi, F., Cozzolino, M., Savarese, G., Sibilio, M., & Salvatore, S. (2018). Autonomy supportive contexts, autonomous motivation and self-efficacy predict academic adjustment of first-year university students. *Frontiers in Education*, 3(95), 1-11. <https://doi.org/10.3389/educ.2018.00095>
- Hagenauer, G., & Volet, S. E. (2014). Teacher-student relationship at university: An important yet under-researched field. *Oxford Review of Education*, 40(3), 370-388. <https://doi.org/10.1080/03054985.2014.921613>
- Han, C., Farruggia, S. P., & Solomon, B. J. (2020). Effects of high school students' noncognitive factors on their success at college. *Studies in Higher Education*, 1-15. <https://doi.org/10.1080/03075079.2020.1770715>
- Hatch, D. K., & Garcia, C. E. (2017). Academic advising and the persistence intentions of community college students in their first weeks in college. *The Review of Higher Education*, 40(3), 353-390. <https://doi.org/10.1353/rhe.2017.0012>
- Heublein, U., & Wolter, A. (2011). Studienabbruch in Deutschland: Definition, häufigkeit, ursachen, massnahmen [Dropout in Germany: Definition, frequency, cause, interventions]. *Zeitschrift für Pädagogik*, 57, 214-236.
- Hu, L., & Bentler, P. (1999). Cutoff criteria for fit indices in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6(1), 1-55.
- Istat. (2019). *Rapporto SDGS, Informazioni statistiche per l'agenda 2030 in Italia* [Statistical information for agenda 2030 in Italy]. https://www.istat.it/it/files/2019/04/SDGs_2019.pdf
- Jeno, L. M., Danielsen, A. G., & Raheim, A. (2018). A prospective investigation of students' academic achievement and dropout in higher education: A Self-Determination Theory approach. *Educational Psychology*, 38(9), 1163-1184. <https://doi.org/10.1080/01443410.2018.1502412>
- Jessor, R. (2016). *The origins and development of problem behavior theory*. Springer.
- Kehm, B. M., Larsen, M. R., & Sommersel, H. B. (2019). Student dropout from universities in Europe: A review of empirical literature. *Hungarian Educational Research Journal*, 9(2), 147-164. <https://doi.org/10.1556/063.9.2019.1.18>
- Krause, K. L., & Armitage, L. (2016). *Australian student engagement, belonging, retention and success: A synthesis of the literature*. The Higher Education Academy, 1-45. <https://www.heacademy.ac.uk>
- Levenson, H. (1981). Differentiating among internality, powerful others, and change. In H. M. Lefcourt (Ed.), *Research with the locus of control construct* (pp. 15-63). Academic Press.
- Little, T. D., Cunningham, W. A., Shahar, G., & Widaman, K. F. (2002). To parcel or not to parcel: Exploring the question, weighing the merits. *Structural Equation Modelling: A Multidisciplinary Journal*, 9(2), 151-173. https://doi.org/10.1207/S15328007SEM0902_1
- Mackie, S. (2001) Jumping the hurdles: Understanding student withdrawal behaviour. *Innovations in Education and Teaching International*, 38(3), 265-275. <https://doi.org/10.1080/14703290110056371>
- Marôco, J., Assunção, H., Harju-Luukkainen, H., Lin, S. W., Sit, P. S., Cheung, K. C., Maloa, B., Ilic, I. S., Smith, T. J., & Campos, J. A. (2020). Predictors of academic efficacy and dropout intention in university students: Can engagement suppress burnout? *PloS One*, 15(10). <https://doi.org/10.1371/journal.pone.0239816>
- Meggiolario, S., Giraldo, A., & Clerici, R. (2017). A multilevel competing risks model for analysis of university students' careers in Italy. *Studies in Higher Education*, 42(7), 12591-274. <https://doi.org/10.1080/03075079.2015.1087995>
- Monaci, M. G., Trentin, R., & Nunia, G. (2012). Donne all'università: Adattamento psicosociale e motivazione al risultato [Women at university: Psychosocial adjustment and motivation to goal]. *Psicologia Sociale*, 7(3), 395-418. <https://doi.org/10.1482/38443>
- Muthén, L. K., & Muthén, B. O. (1998-2017). *Mplus user's guide* (8th ed.). Muthén & Muthén.
- Nicoletti, M. do C. (2019). Revisiting the Tinto's theoretical dropout model. *Higher Education Studies*, 9(3), 52-64. <https://doi.org/10.5539/hes.v9n3p52>
- O'Gorman, C. E. (2020). *Addressing the overall dissatisfaction of the first-year student experience in university. The organizational improvement plan at Western University*. <https://ir.lib.uwo.ca/oip/157>
- O'Neill, L. D., Wallstedt, B., Eika, B., & Hartvigsen, J. (2011). Factors associated with dropout in medical education: A literature review. *Medical Education*, 45(5), 440-454. <https://doi.org/10.1111/j.1365-2923.2010.03898.x>
- Pascarella, E., & Terenzini, P. (1980). Predicting freshman persistence and voluntary dropout decisions from a theoretical model. *Journal of Higher Education*, 51(1), 60-75. <https://doi.org/10.1080/00221546.1980.11780030>
- Pascarella, E. T., & Terenzini, P. T. (2005). *How college affects students: A third decade of research* (Volume 2). Jossey-Bass.
- Pastorelli, C., & Picconi, L. (2001). Autoefficacia scolastica, sociale e regolatoria [School, social and regulated self-efficacy]. In G. V. Caprara (Ed.), *La valutazione dell'autoefficacia: Costrutti e strumenti* [The assessment of self-efficacy: Constructs and measures] (Collana di psicologia, pp. 87-104). Erickson.
- Pekrun, R., Elliot, A. J., & Maier, M. A. (2009). Achievement goals and achievement emotions: Testing a model of their joint relations with academic performance. *Journal of Educational Psychology*, 101(1), 115-135. <https://doi.org/10.1037/a0013383>

- Perry, R. P., Hall, N., & Ruthig, J. (2005). Perceived (academic) control and scholastic attainment in higher education. In J. Smart (Ed.), *Higher education: Handbook of theory and research* (vol. 22, pp. 363-436). Springer.
- Pitkethly, A., & Prosser, M. (2001). The first year experience project: A model for university-wide change. *Higher Education Research & Development, 20*(2), 185-198. <https://doi.org/10.1080/758483470>
- Respondek, L., Seufert, T., Stupnisky, R., & Nett, U. E. (2017). Perceived academic control and academic emotions predict undergraduate university student success: Examining effects on dropout intention and achievement. *Frontiers in Psychology, 8*(243), 1-18. <https://doi.org/10.3389/fpsyg.2017.00243>
- Rioux, L., Scrima, F., & Werner, C. M. (2017). Space appropriation and place attachment: University students create places. *Journal of Environmental Psychology, 50*, 60-68. <https://doi.org/10.1016/j.jenvp.2017.02.003>
- Robbins, S. B., Lauver, K., Le, H., Davis, D., Langley, R., & Carlstrom, A. (2004). Do psychosocial and study skill factors predict college outcomes? A meta-analysis. *Psychological Bulletin, 130*(2), 261-288. <https://doi.org/10.1037/0033-2909.130.2.261>
- Schertzer, C. B., & Schertzer, S. M. (2004). Student satisfaction and retention: A conceptual model. *Journal of Marketing for Higher Education, 14*(1), 79-91. https://doi.org/10.1300/J050v14n01_05
- Schneider, M., & Preckel, F. (2017). Variables associated with achievement in higher education: A systematic review of meta-analyses. *Psychological Bulletin, 143*(6), 565-600. <https://doi.org/10.1037/bul0000098>
- Sirin, S. R. (2005). Socioeconomic status and academic achievement: A meta-analytic review of research. *Review of Educational Research, 75*(3), 417-453. <https://doi.org/10.3102/00346543075003417>
- Tanaka, J. S. (1993). Multifaceted conceptions of fit in structural equation models. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp. 10-39). SAGE.
- Tarazona, M., & Rosenbusch, C. (2019). Refining measurements of social and academic integration: Lessons from a German University of Applied Sciences. *Tertiary Education and Management, 25*, 239-253. <https://doi.org/10.1007/s11233-019-09025-0>
- Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research, 45*(1), 89-125. <https://doi.org/10.3102/00346543045001089>
- Tinto, V. (2015). Tinto, V. (2017). Through the eyes of students. *Journal of College Student Retention: Research, Theory & Practice, 19*(3), 254-269. <https://doi.org/10.1177/1521025115621917>
- Tras, Z., Öztemel, K., & Kagnici, E. (2019). A review on university students' resilience and levels of social exclusion and forgiveness. *International Education Studies, 12*(10), 50-59. <https://doi.org/10.5539/ies.v12n10p50>
- Valentine, J. C., DuBois, D. L., & Cooper, H. (2004). The relation between self-beliefs and academic achievement: A meta-analytic review. *Educational Psychologist, 39*(2), 111-133. https://doi.org/10.1207/s15326985ep3902_3
- Vossensteyn, J. J., Kottmann, A., Jongbloed, B. W. A., Kaiser, F., Cremonini, L., Stensaker, B., Hovdhaugen, E., & Wollscheid, S. (2015). *Dropout and completion in higher education in Europe: Main report*. European Union. <https://doi.org/10.2766/826962>