INDICATORS OF ACADEMIC SUCCESS IN HIGHER EDUCATION: ANALYSIS IN FUNCTION OF COURSES NATURE

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ABSTRACT

Academic success in Higher Education is a multidimensional construct, influenced by different variables in the student trajectory. Thus, we assessed the academic performance (CRE) of incoming Higher Education students, taking personal/social, adaptive, and learning-related variables, differentiating the analysis according to the nature of the courses. In this way, 715 students participated (age: M = 22.10 years, SD = 6.92), from 26 Higher Education courses at a Federal Institute of Paraíba (Brazil), whose data were collected in a documentary form and using an online questionnaire. The results indicate that the set of variables in the study explain 89% of the CRE of bachelor students, 85% of undergraduate students, and 84% of the performance of technological courses, with the following variables: emphasis on family income, option in choosing the course, extra-class contact with teacher and extracurricular activities, absences and discipline approvals versus completed disciplines. Implications of these results are highlighted for future interventions focusing on academic success and course completion.

Keywords: academic success; students; higher education; entrants

Indicadores del éxito académico en la educación universitaria: análisis en función de la naturaleza de los cursos

RESUMEN

El éxito académico en la Educación Universitaria es un constructo multidimensional, influenciado por distintas variables de la trayectoria estudiantil. Así, analizamos el rendimiento académico (CRE) de estudiantes ingresantes de la ES, tomando variables personales/sociales, adaptativas y relacionadas al aprendizaje, diferenciando los análisis de acuerdo con la naturaleza de los cursos. Participaron 715 estudiantes (edad: *M* = 22.10 años, *DP* = 6.92), provenientes de 26 cursos universitarios del Instituto Federal de Paraíba (Brasil), cuyos datos se recolectaron de forma documental y utilizando un cuestionario aplicado *online*. Los resultados apuntan que el conjunto de las variables del estudio explica el 89% del CRE de estudiantes de bachillerato, el 85% da licenciatura y el 84% del rendimiento de cursos tecnológicos, con destaque para las variables renta familiar, opción en la escoja del curso, contacto extra-aula con profesor y actividades extracurriculares, faltas y asignaturas aprobadas *versus* asignaturas cursadas. Se apuntan implicaciones de estos resultados para futuras intervenciones con enfoque en el éxito académico y conclusión de los cursos.

Palabras clave: éxito académico; estudiantes; enseñanza universitaria, ingresantes

Indicadores do sucesso acadêmico na educação superior: análise segundo natureza dos cursos

RESUMO

O sucesso acadêmico na Educação Superior é um construto multidimensional, influenciado por diferentes variáveis da trajetória estudantil. Assim, analisamos o rendimento acadêmico (CRE) de estudantes ingressantes da ES, tomando variáveis pessoais/sociais, adaptativas e relacionadas à aprendizagem, diferenciando as análises de acordo com a natureza dos cursos. Participaram 715 estudantes (idade: *M* = 22.10 anos, *DP* = 6.92), oriundos de 26 cursos superiores do Instituto Federal da Paraíba (Brasil), cujos dados foram coletados de forma documental e usando um questionário aplicado *online*. Os resultados apontam que o conjunto das variáveis do estudo explicam 89% do CRE de estudantes

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do bacharelado, 85% da licenciatura e 84% do rendimento de cursos tecnológicos, com destaque para as variáveis renda familiar, opção na escolha do curso, contato extraclasse com professor e atividades extracurriculares, faltas e disciplinas aprovadas *versus* disciplinas cursadas. Apontam-se implicações desses resultados para futuras intervenções com foco no sucesso acadêmico e conclusão dos cursos.

Palavras-chave: sucesso acadêmico; estudantes; ensino superior; ingressantes

INTRODUCTION

Changes in higher education (HE), which have become increasingly intense in the past few decades, led to a clear expansion and amplification of competitive formation institutions. In Brazil, for example, some legislations were approved for the amplification of the number of enrollments, opening, and extension of courses in public institutions, for example by means of the "Programa de Apoio a Planos de Reestruturação e Expansão das Universidades Federais", or "Program for Support and Plans for Restructuring and Expansion of Federal Universities" (Reuni) (Decreto 6.096, 2007) , and of the unified access to vacancies in the SISU selection system in 2010, granted by the ENEM examination after 1998 and by the Affirmative Action Law for higher education, Law number 12.711/2012 of the Ministry of Education-MEC (1998, 2010). Likewise, there was also government financing for private institutions by means of refundable student scholarships, such as the "Fundo de Financiamento ao Estudante do Ensino Superior" – FIES – or, "Financing Fund for Higher Education Students", and non-refundable ones such as the "Programa Universidade para Todos" – PROUNI, or University for All Program (Law 13.530, 2017; Law 11.096, 2005). This set of political measures was fundamental for mass, plural entrance at university by different ethnicities, genders, social classes, first generation students, and working students. This phenomenon of student heterogenization took also place in other countries, and it was associated with the development and expansion of the HE (Ferrão & Almeida, 2019; Lemos, 2017; Marques, 2018; Oliveira & Melo-Silva, 2010).

The increase in the number of students and their greater diversity introduce various challenges to higher education institutions (HEI), with a focus on providing support for newcomers and the creation of favorable conditions for permanence and academic success. Such challenges are recognized by part of the university environment that is historically focused on minorities and with distinctions for career projects for diverse social classes, as well as for men and women (Almeida et al., 2019; Araújo, 2017; Heringer, 2018). In this context, the HEI had to internally restructure themselves and reconsider principles and missions, in addition to reviewing curricula and assuming strategies for the promotion of students´ permanence, success, and courses conclusion (Almeida et al., 2019; Brites-ferreira et al., 2011; Morais, Souza, & Cassoni, 2019).

In the Brazilian reality, having in mind its continental dimension, the university student registrations have reached higher numbers in the Southeast (42,1%), followed by the Northeast (21,3%), the South (14,3%), the North (8,8%) and the Midwest (7,8%) (Instituto SEMESP, 2020; Lobo & Filho, 2017). Nowadays, according to the higher education census by the MEC (2018), there are 2407 IES; out of that total number, 87,7% are private, while 64.1% have their headquarters in the countryside. Concerning the mode of course, we also observed a discrepancy between the types of courses provided because the great majority of the courses were of the bachelor type (61%), followed by the licensing courses (20%) and, finally, technological courses (19%), in addition to the fact that 67% were onsite courses and 33% were distance courses.

In addition to the universities in Brazil, other federal institutions emerged such as the Federal Institutes (IF), aiming at providing for half of the demand for this level of education, democratizing its availability and benefitting greater expansion of HE in the country (Brasil, 2008; Fernandes & Tabosa, 2018). According to Law number 11.892 of 2008, the IFs expanded the number of registrations with a professional and technological focus, and led to new strategies of intervention based on the verticalization of Basic Education for HE and for post-graduation. Based on the aforementioned Law, it is possible to observe that the most important feature of the IFs regarding traditional universities is the availability of diverse modes of education leading to experience in the same environment and with the same group of teachers who also work with students who are still in high school (Pacheco, 2010). The fact is that, no matter what the learning institution is, there is the evident need for pedagogical and institutional support towards success among students who enter HE and along their academic trajectory (Ambiel, Santos, & Dalbosco, 2016; Araújo, 2017; Moreno & Soares, 2014).

The transition from High School to HE implies difficulties regarding the challenges of the new academic context. The first year of the HE presents itself as a critical moment for facing these changes and the consequent permanence in HE. The students who are entering the institution are expected to have a diverse set of adaptative skills in order to face the demands of autonomy, the new interpersonal relations, and the need of new learning competences (Araújo, 2017; Teixeira et al., 2008; Tinto, 2017). In this context of change, the academic environment might become for some students a facilitator or an obstacle to adaptation

and, consequently, of academic success in the first year in HE (Almeida, Marinho-Araujo, Amaral, & Dias, 2012; Pather, Norodien-Fataa, Cupido, & Mkonto, 2017; Tinto, 2012). Depending on these initial experiences in HE, the academic experiences can be significant for the students' psychosocial development, or felt in a negative way, affecting the adjustment to new demands and leading to non-adaptation factors and, sometimes, dropping out of the course and/or the institution. Thus, it is possible to notice the need for studies on the profile of students who enter HE, which includes knowledge on their previous education background, their social support network, their career projects, and their initial expectations (Ambiel et al., 2016; Fagundes, Luce, & Rodriguez-Espinar, 2014; Soares et al., 2014). Such expectations must be associated with their realization, or not, regarding the period of adaptation to university life and to all the changes connected to such adaptation (Almeida et al., 2019; Álvarez-Pérez, 2021; Soares et al., 2014).

Thinking over initial experiences of transition from high school to HE in a gradual, continuous, and individualized way, involving psycho-pedagogical, systematic, and welfare support, is necessary institutional politics of support for the students' integration and academic success. It is easy to anticipate that the involvement of students in institutional, curricular and extracurricular experiences will benefit their implication in the activities and their academic performance, which allows creating favorable conditions to the students' permanence and success (Almeida et al., 2012; Barroso et al., 2022; Fior & Mercuri, 2018; Gomes, Almeida, & Núñez, 2017; Tinto, 2017).

In this context, academic success can be understood from the quantitative and the qualitative point of view. It is a multidimensional, complex, and specific construct and there are different ways of defining and assessing it. Traditionally, the more objective, quantitative branch assumes academic performance (classifications, number of years to finish the course) as a primordial element in this investigation, and for a long time it was observed as a synonym for success (Araújo, 2017; Ferrão & Almeida, 2019; Gasparotto, Bichels, Szeremeta, Vagetti, & Oliveira, 2020; Soares & Almeida, 2019). It is important to emphasize that its assessment is made by means of classifications in each curricular component and together they make up an average score of grades per term or academic year, which will serve the purpose of reference for approval or failure of students. Another objective element, which was also decisive for approval, is the number of absences of the students during the months of class, which has a relation that is inversely proportional to success. Thus, the fewer absences, the greater the possibility of success. In addition, it is also possible to assess success based on institutional documents that are connected to the course and to the institution,

such as Projects of Institutional Development (PDI) and the Political Pedagogical Projects of the Courses (PPC) (Álvarez-Pérez & López-Aguilar, 2020; Araújo, 2017; Figueiredo, Biscaia, Rocha, & Teixeira, 2015; Haas, 2010; Soares & Almeida, 2019).

It is important to highlight the fact that the concept of academic success has been changed with time, and at the present moment it is assuming a preoccupation with the full psychosocial development of students (Araújo, 2017; Tomás, Ferreira, Araújo, & Almeida, 2014). In this perspective, it was possible to observe a more globalized, profound assessment on the students, there are academic trajectories, there are psychosocial development, and the appropriation of a large set of complementary competences beyond curricular acquisitions.

On the other hand, based on a more subjective qualitative point of view, we see success as an element that depends on personal, social context, and the family variables of satisfaction and student well-being, critical thinking, development, adaptation, expectations, and anxieties regarding the course and the institution. Levels and strategies for learning, coping or self-efficacy are also understood in this more amplified vision of success. It emphasizes institutional responsibility to provide academic formation for the development of competences content and learning processes and that are associated to competences that are connected to interpersonal relations among peers and between students and teachers and other staff workers in the institution. All these large competencies are relevant for the job market and for professional practice (Bean & Eaton, 2002; Borracci et al., 2014; Boruchovitch, 2014; Fior & Mercuri, 2018; Gomes & Soares, 2013; Morais, Souza, & Cassoni, 2019; Osti & Martinelli, 2014; Rivas, Saiz, & Almeida., 2020).

In this study, following a more objective and quantitative approach, we decided to analyze academic success by means of the School Performance Coefficient (CRE), associated to personal, social, and academic trajectory variables that our previous the entrance at the university (entrance variables), as well as variables of the academic context, including adaptation variables, and variables of institutional involvement and social support. This extended set of personal and context variables appears to be connected with the students´ academic success, permanence and conclusion of the courses (Ambiel et al., 2016; Casanova, 2018; Costa & Gouveia, 2018; Soares & Almeida, 2019; Soares et al., 2014).

According to the interactionist model by Vicent Tinto (2012; 2017), used for explaining university dropouts, in this article we also consider a model taking the convergence of personal and context variables to explain students´ academic success in HE. Thus, we will pay special attention to the students´ variables related to transition, entrance, and adaptation to HE, and

we believe that when these processes are positively experienced the product is students´ commitment, satisfaction, and academic success during first year. On the other hand, once the relevant variables in such processes are identified, it is possible to elaborate programs for intervention by the HEI towards benefiting the integration of students who are at greater risk of failure or evasion. In synthesis, our objective in this research was to analyze the academic performance of first-year students of "Paraíba Federal Institute of Education, Science, and Technology" or "Instituto Federal de Educação, Ciência e Tecnologia da Paraíba-IFPB", taking three groups of variables (personal variables and previous academic background variables; variables associated to adaptative experiences to the academic environment; and variables related to studying and learning).

METHOD

Participants

715 first-year students participated in this study (447 men and 268 women). They were in the first academic year of the Federal Institute of Paraíba-IFPB, Brazil. These students come from 26 university courses, six of the courses are Bachelors' Degrees (Administration, Civil Engineering, Computer Engineering, Control and Automation Engineering, Electrical Engineering, and Veterinary), six licensing courses (Biological Sciences, Physical Education, Physics, Languages with Portuguese Training, Math, and Chemistry) and 14 technological courses (Agroecology, Foods, Analysis and Development of Systems, Industrial Automation, Edifications, Interior Design, Graphic Design, Environmental Management, Computer Networks, Labor Safety, Internet Systems, and Commercial Management). This set of courses, was distributed around 10 *campi* of the IFPB, with the entrance in the academic year of 2019. The ages of the students ranged from 16 to 59 years, and the average age was 22,10 years ($SD = 6,92$).

Instruments and Procedures

The source was the academic system of the SUAP institution for all data related to academic performance, personal variables, and academic antecedents. After approval of the study by the Research Ethics Committee of the IFPB (CAAE number 05473219.3.0000.5185), the students were informed of the objectives, procedures, risks and benefits of the investigation and confidentiality of the gathered data. Thus, after the signing of a Free, Informed Consent Term, researchers proceeded with the application of instruments, divided into four moments along the first academic year. The instruments aimed at information on personal, social, and family aspects as well as academic and institutional experiences by the voluntary participants. Questionnaire application occurs during the classes based in online support. In addition, the academic performance and the number of finished disciplines versus the number of approved disciplines, both used as variables of success and achievement, were obtained based on SUAP system.

Data Analysis

The data analysis took place by means of descriptive and inferential statistics, and the researchers used the *Statistical Package for the Social Sciences* – SPSS/IBM program, version 27.0 for *Windows*. For analysis of the impact of an enlarged set in the CRE, researchers use the hierarchical regression analysis assuming the CRE as criterion variable and three packs formed by four variables related to academic success. Thus, at a first moment, Model 1 (M1) integrated personal variables and previous academic background variables (marital status, first option of course, family income, and the demographic location of the course/campus); in Model 2 (M2), there was the integration of variables associated with adaptation experiences in the academic environment (number for outside the classroom contact with teachers, participation of the students in extracurricular activities such as research, extension, monitoring, internship, student movements, artistic/ cultural activities, sports activities, and the participation in scientific events in the area, the use of bars and cafeterias, or study environments, use of the library or computer laboratory during the second semester). Finally, model 3 (M3) took variables that were more related to the academic experiences and outcomes that were more intrinsic to the students, such as levels of education and learning (number of disciplines with approval *versus* the number of disciplines taken in the first semester, number of disciplines with approval *versus* number of disciplines taken in the second semester, number of classes absences in the first semester and number of classes absences in the second semester). Finally, the analyses of regression were realized separately in accordance with the type of course that the students were taking: bachelor's degree, licensed degree, or a technological degree.

RESULTS

In order to assess the predictive value of the personal variables and of the previous academic background variables, of the variables associated to adaptation to the academic environment, and of the more intrinsic academic variables, related to the performance of students in the first year, we initially used the asymmetry analysis, kurtosis, and the elimination of outliers. In addition to that, researchers observed the prerequisites for regression tests, including an assessment on the independence of the residue of the independent variables. According to the Durbin-Watson test, the acceptable values of the independent residue might range from 1.5 to 2.5, a result that was found in the bachelor degree courses (2.48), license degree courses (1.66), and technology courses (2.31). Another

prerequisite that was observed during the test was the one of absence of multicollinearity, in which the values of tolerance must be above the reference value of .01, ranging from .15 to .98 in the study, while the values of the factors of variance inflation (VIF) must be below 10, while researchers found in the study the variation between 1.02 and 6.48. Regarding the observed prerequisites, we realized multiple linear regression taking the three sets of variables predicting the CRE (Table 1).

Table 2 presents the regression coefficients that are relevant to the academic performance of the first-year

Table 1 - *Summary of the Model of hierarchical linear regression for academic performance .*

Courses	Model	R	R²	R²adjusted	F	Sig.
Bachalor	M1	.55	.31	.21	3.10	.049*
	M2	.73	.53	.37	3.35	.021*
	M3	.94	.89	.81	11.01	.000***
Licensing	M1	.59	.35	.28	4.72	.004**
	M2	.68	.46	.35	3.96	.003**
	M3	.92	.85	.79	14.40	.000***
Technologic	M1	.32	.10	.06	2.56	.044*
	M2	.45	.21	.14	3.16	.005**
	M3	.92	.84	.82	39.67	.000***

Note. M1 = Model 1 (personal variables and previous academic background variables); M2 = Model 2 (experiences of adaptation to the university environment); M3 = Model 3 (variables related to the experiences of adaptation that were more intrinsic to the students, such as levels of education and learning).
*p < .05; ** p < .01; *** p < .001

Table 2 - *Regression Coefficients for Academic Performance, based on the type of course.*

Courses	Model/Variable	B	Beta	T	Sig
Bachelor	family income	-10.67	-.47	-2.52	.020*
	family income	-8.01	-.35	-2.77	.015*
	number for out-of-the-classroom contact with teachers	2.97	.36	3.21	.006**
	Extra-class participation	2.22	.29	2.36	.034*
	number of absences first semester	.41	.47	2.69	.017*
	NANC second semester	29.04	.63	4.62	.000***
Licensing	first option course	8.23	.34	2.48	.018*
	family income	16.95	.36	2.54	.016*
	family income	14.96	.31	2.33	.026*
	Extra class participation	2.74	.36	2.47	.019*
	Family income	8.30	.17	2.18	.038*
	Number for extra-class contact with teachers	.87	.20	2.17	.038*
	NANC first semester	73.50	.64	5.39	.000***
	NANC second semester	15.87	.28	3.14	.004**
	Number of absences second semester	-.17	-.30	-3.32	.003**
Technologic	Number for extra contact with teachers	2.63	.26	2.29	.024*
	Family income	4.49	.13	2.44	.017*
	Use of bars, cafeteria and study environment 2nd semester	2.66	.10	1.82	.070
	NANC 1st semester	31.33	.27	4.75	.000***
	NANC 2nd semester	35.45	.64	9.84	.000***

Note. NANC = number of disciplines approved divided by the number of taken disciplines.
*p < .05; ** p < .01; *** p < .001

students, including B, Beta, t and p values, according to the type of course.

DISCUSSION

The results permit a better understanding of the relation between personal/family variables and contextual variables on academic success among HE first-year students. Confirming the heterogeneity of students´ characteristics from different areas of knowledge in their academic trajectory, we have identified distinct impacts from personal/social variables. Family income, which can be as little as a minimum wage, is a variable that is determinant of success, while the most economically vulnerable students (up to three minimum wages) more susceptible to evasion, independently of the nature of the attended courses. In three groups of courses it was observed a reverse proportional relation between academic success and family socioeconomic situation, what is also present in literature (Carvalho, Almeida, & Cavalcanti, 2018; Rodríguez-Hernández, Cascalla, & Kyndt, 2020). In Brazilian society, with the increase in the number of quotas for access to HE based on Laws number 12.711/2012 and later number 13.409/2016, brought an increasing number of students from low-income families, especially black students who have complete high school at public institutions (Cantorani, Pilatti, Helmann, & Silva, 2020; Heringer, 2018; Oliveira & Melo-Silva, 2010). On the other hand, students with high family incomes are less likely to have unsatisfactory academic performances or to fail in HE disciplines. Maybe not only for the provision of opportunities for better social and academic conditions for studying, but family support also reduces the need for obtaining extra income in order to guarantee a student's permanence in an HEI (Borracci et al., 2014; Torres-Zapata, Acuña-Lara, Acevedo-Olvera, & Villanueva-Echavarria, 2019; Zago, 2006). Students who can dedicate their full time to their courses without the need to divide their time for professional activities have better opportunities for relating to teachers and colleagues or to be connected to their courses and institutions. This higher level of involvement increases their vocational identities and their professional and projects in their area of graduation, which represents better conditions of success, permanence and course conclusion.

Just like the family income, studying in a course of the first vocational option leads to greater identification with the studies and better academic adaptative experiences. Adaptation to the university environment implies, also, handling frustrations and bureaucratic or academic demands, whether in relation to the curricular content or even to the difficulty in handling the demands of this level of education. Those challenges increase their impact when the attended course does not correspond to the first vocational option the students had in mind (Ferrão & Almeida, 2019; Polydoro, 2000; Teixeira et al., 2008). As we observe the increase in the number higher

education courses in the federal institutions in the areas of Bachelor degrees, Licensing degrees, and Technology degrees, especially in these two last areas based on public policies of HEI expansion, we come across dilemmas that are institutional as well as vocational (Law 11.892, 2008; Cantorani et al., 2020; Porto & Gonçalves, 2017). In the present study, especially in the Licensing courses, we observed a positive relation between the first option of course and academic performance. We must consider that there are many municipalities that lack licensed professionals in areas such as Math, History, Languages, or Chemistry etc., professions that possess less social status and less financial remuneration in the country, whereas there a growing number of students attending HE in courses that were their 2nd and 3rd options among the courses desired in the selection process due to the minimum score (INEP, 2018; Lobo & Filho, 2017; Paula, Costa, & Lima, 2019). Thus, attending courses that were not the initial choices might lead to low motivation and less investment by the students in the academic activities of their courses, resulting in lack of interest and less participation in academic life, less perception of efficacy in the curricular disciplines of the course, less vocational identity with the course, and also in higher rates of failure and evasion (Almeida, Guisande, Soares, & Saavedra, 2006; Carvalho et al., 2018; Casanova, Cervero, Nuñez-Pérez, Bernardo-Gutiérrez, & Almeida, 2018; Ferrão & Almeida, 2019; Tinto, 2017).

The personal/social characteristics related to institutional experiences influence the academic adaptation and the trajectories of students in HE, positively as well as negatively, with an impact in their permanence and success (Araújo, 2017; Castro & Teixeira, 2014). Generality of studies suggests an interaction between the students' characteristics and context variables in the explanation of their levels of engagement and academic satisfaction, which compromises the affective performance that students obtain by means of the opportunities for psycho-social development and academic success that HE tends to present, and that, after all, are the original decisions to enter university (Casanova, 2018; Castro & Teixeira, 2014; Costa & Gouveia, 2018; Tomás et al., 2014).

It became evident in this study that academic achievement is impacted by the experiences of the students in their initial phase of college life adjustment, especially the quality of the profile of the relation developed between the teachers and the students, as well as the students' participation in extra-class activities offered by the institution and their educational community. The closer the extra-class contact, the better the institutional environment and practices that lead to engagement and autonomy, facilitating the opportunities for students' full development and their learning processes. The greater the interaction between students and teachers, classmates and the service and

infrastructure of the institution, the more students dedicate their energy to their academic trajectory and the greater will be their commitment to the course and to the HEI. In this sense, it becomes evident that the greater the integration of the academic and social systems of the HEI, the fewer chances of failure and evasion from HE (Brites-Ferreira et al., 2011; Fior & Mercuri, 2018; Pascarella & Terenzini, 2005; Tinto, 2017). While the extra-class contact with teacher variable presents relevance for the academic performance of students in different scientific areas, there is also evidence of the role played by teachers on the academic trajectories of students by taking into consideration their interactions in the classroom, namely the ones that promote opportunities for initiative, the confrontation of points of view and the cooperative learning of students (Costa, 2003). Likewise, providing students with diverse university experiences, as well as curricular organization and the psychosocial development that are necessary to guarantee academic success, permanence and conclusion of graduation (Ambiel et al., 2016; Casanova et al., 2018; Fior & Mercuri, 2018; Oliveira, Santos, & Inácio, 2018). In the institutional reality of the Federal Institute, such experiences are enriched by the particularity that they possess institutional practices, teachers, physical infrastructure and curricular and extracurricular activities that embrace students from different levels of education. Thus, it is important to emphasize that the students in bachelor and licensing courses, being courses with a duration of 4 or 5 years, lead to more time for the availability of extracurricular activities regarding technologic courses with an average duration of 3 years (Lei 11.892, 2008; Pacheco, 2010).

Thus, it is necessary to reflect on the impact of variables that are more intrinsic to students in their formative processes, for example self-regulation, critical thinking, vocational projects and academic satisfaction (Boruchovitch, 2014; Osti & Martinelli, 2014; Rivas et al., 2020; Soares & Almeida, 2019). By investigating the influence of the number of absences in the curricular components and the relation between the approved disciplines versus the taken disciplines during the semester it was possible to observe that such variables present high predictive value on academic performance by IFPB students. Naturally, the greater the number of absences, the lesser achievement, as well as the more coincidences between the taken and approved disciplines, the better the academic performance. Attending classes and having a commitment to the scheduled activities of the disciplines lead to a resignification of the way to look at the students and their academic demands, as well as more students´ engagement in the curricular tasks, autonomy, and responsibility. Such elements highlight the relevance of pedagogical plans, including study plans, the methodologies of teaching and assessment or the learning approaches (Almeida et al., 2012; Costa, 2003;

Fagundes et al., 2014; Soares & Dias, 2017).

FINAL CONSIDERATIONS

The mission of the HEI cannot be limited to the opening of courses and vacancies to provide for greater demand by students and families for higher education. By means of their characteristics and demands, the HEI must provide solutions for the diversity of students and have policies for assistance and support. In addition to promoting access, it is also important to provide real conditions for students to develop good levels of academic learning and achievement, as well as autonomy and competence in order to face successfully the demands of HE, and be able to stay and finish their courses.

Such measures by the HEI must lead to results for the investigation on the explanatory factors for academic success and permanence. The results of the present research point at the fact that personal variables and the variables of previous academic trajectory, when associated to the academic adaptation variables at the institution and course, are able to explain in a very satisfactory way the students´ academic performance in the bachelor courses, in the licensing courses and in the technology courses. We believe that with this more global view on the students and their academic trajectories, we will be able to identify the policies that might reduce evasion and guaranteed permanence and academic success for students in HE, that is, policies that are able to establish a commitment of the HEI not only with diversity in the access of students, but also with their success after entering university.

Although we were able to contemplate the objectives of the present study, the research has a few limitations that should be considered. One of them refers to the fact that the sample is exclusively from a single HEI, and does not contemplate other social and academic contexts of Brazilian reality. Another point that should be emphasized is that there is no use of other variables of the academic trajectory that are pivotal for academic success, such as expectations, social support, self-efficacy, and so on. Thus, we suggest studies that aim at the amplification of the considered psychosocial and curricular variables and of the representativeness of the sample, contemplating the diversity of the students and of experiences in the comparative analyses by means of different points of view such as the ones of students, teachers, family members, and the administrations of the HEI.

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