

Research Articles

Student profile and academic performance: contributions to educational policy and practices

Perfil dos estudantes e desempenho acadêmico: contributos para a política e práticas educacionais

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Abstract

This article analyzes the profile of undergraduate students at an Instituto Federal (IF) located in the southeast region of Brazil, covering sociodemographic, economic, and academic variables. Furthermore, it evaluates the Performance Coefficient (CR), in relation to the characteristics identified in the sample. The data were provided by the institution's academic records sector, which, in 2023, had 4,679 active enrollments, including students enrolled in licentiate and bachelor's degree programs from different sub-areas of Engineering, Human Sciences, and Mathematics. The results highlight a remarkable diversity, particularly with regard to the participation of sociocultural groups that have traditionally been underrepresented, as well as different age groups and geographic backgrounds. On the other hand, they reveal disparities in the performance of students from public schools, self-declared Black or Brown, with disabilities, low-income, first-generation students, and those who need to balance studies with personal and family commitments. These findings reinforce the understanding that the democratization of higher education should not be limited to access, making it essential to provide conditions for student permanence and success. In this sense, the present article presents implications for the improvement of educational policies and practices.

keywords: higher education; quota policy; democratization; student profile; professional and technological education.

Resumo

Este artigo analisa o perfil dos estudantes de graduação de um Instituto Federal (IF) localizado na região sudeste do Brasil, abrangendo variáveis sociodemográficas, econômicas e acadêmicas. Além disso, avalia o Coeficiente de Rendimento (CR), em relação às características identificadas na amostra. Os dados foram fornecidos pelo setor de registros acadêmicos da instituição, que, no ano de 2023, apresentava 4.679 matrículas ativas, incluindo estudantes de licenciatura e bacharelado de diferentes subáreas da Engenharia, das Ciências Humanas e da Matemática. Os resultados destacam uma diversidade notável, especialmente no que se refere à participação de grupos socioculturais tradicionalmente sub-representados, bem como de diferentes faixas etárias e origens geográficas. Por outro lado, revelam disparidades no desempenho de estudantes oriundos de escolas públicas, autodeclarados pretos ou pardos, com deficiência, de baixa renda, de primeira geração e daqueles que precisam conciliar os estudos com compromissos pessoais e familiares. Esses achados reforçam a compreensão de que a democratização da educação superior não deve se limitar ao ingresso, sendo fundamental proporcionar condições para a permanência e o sucesso dos estudantes. Nesse sentido, o presente artigo traz implicações para o aprimoramento das políticas e práticas educacionais.

Palavras-chave: ensino superior; política de cotas; democratização; perfil dos estudantes; educação profissional e tecnológica.

INTRODUCTION

The Instituto Federal (IF), integrated into the Rede Federal de Educação Profissional, Científica e Tecnológica (RFEPT), is an institution of higher, basic, and professional education,

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pluricurricular and multicampus, specialized in offering courses in Professional and Technological Education (EPT) (Brasil, 2008). The IF aims to provide EPT at different levels and modalities of education, aiming at professional practice and qualification in various sectors of the economy, and seeks to promote the comprehensive development of students, assuming a commitment to the definition and implementation of education and labor policies, articulating socioeducational and economic actors (Cara; Cruz; Manhães, 2023). In addition to contributing to the training of qualified professionals to meet labor market demands, the institution, due to its extensive presence in rural areas, also assumes a crucial role in promoting social inclusion and reducing regional and social disparities (Pacheco, 2011).

The IF was established through the integration of 31 Centros Federais de Educação Tecnológica (Cefets), 75 Unidades de Ensino Descentralizadas (Uneds), 39 agricultural technical schools, seven federal technical schools, and eight schools affiliated with universities, all part of the federal network existing since 1909. By 2022, 38 institutes had been implemented, distributed across 602 units, offering 11,096 courses. In the same year, 1,437,395 enrollments were recorded, of which 324,921 corresponded to undergraduate courses, serving all states of the Federation and the Federal District (Brasil, 2023a). As a public education institution, the IF carries out its activities in accordance with the policies issued by the Ministério da Educação (MEC), through the Secretaria de Educação Profissional e Tecnológica (Setec) (Cara; Cruz; Manhães, 2023).

Among the current policies governing admission to undergraduate courses, in particular, the Exame Nacional do Ensino Médio (Enem) and the Sistema de Seleção Unificada (Sisu) stand out (Brasil, 1998, 2010). When registering in Sisu, candidates may choose up to two course options, in order of preference, among the places offered by participating institutions. After registration, the system automatically selects the candidates with the highest ranking in the chosen course, according to their Enem scores and any applicable weightings. After the regular admission round, the system provides participating campuses with a waiting list, primarily intended to fill places that may not have been occupied. In addition, the IFs offer the option of a selection process through their own institutional entrance examination (vestibular), as an additional pathway to admission. This scenario reflects the prerogative of these institutions to develop and improve alternative selection and admission methods, considering their specific characteristics and aiming to better serve applicants (Brasil, 1999).

It is important to mention that such access mechanisms are integrated into the quota policy, as established by Law No. 12,711 (Brasil, 2012, 2016, 2023b). Currently, this policy reserves 50% of the places in federal universities and institutes for students who have completed all their secondary education in public institutions. Within this percentage, half of the places are allocated to students with a gross family income equal to or lower than one and a half minimum wages per capita, while the other half is allocated to students from families with higher incomes (Brasil, 2012, 2016, 2023b). In addition, the law establishes reserved places for self-declared Black, Brown, Indigenous, and quilombola students, as well as Persons with Disabilities (PwD), based on the proportion of these groups in the population of the state where the institution is located. The selection criteria include the results obtained in qualifying examinations.

It is known that the diversity of admission mechanisms is essential to ensuring the democratization of access to higher education and subsequent social inclusion, as it allows students from different backgrounds and profiles to have the opportunity to obtain knowledge and contribute to the country's social and economic development (Almeida et al., 2024). On the other hand, it is important to recognize that affirmative action policies are not immune to adversities and, by themselves, do not correspond to the demands of the public to which they are intended. Some concerns include the possible stigmatization of students in situations of vulnerability and the development of complementary measures that address other barriers to access to education, such as the lack of an educational design adequate to meet differentiated needs of an increasingly diverse student population (Marinho-Araújo, 2015; Heringer, 2018; Almeida et al., 2024).

Thus, as the representation of groups in different situations of vulnerability expands within institutions, greater efforts must be made by administrators and faculty members in order to align educational policies and practices with the actual demands of students (Farias; Gouveia; Almeida, 2022; Pereira-Neto et al., 2022). Support strategies, such as academic advising, mentoring programs, and integration activities, for example, are crucial to help students face the

challenges of transition and adaptation to higher education (Araújo et al., 2016; Casanova et al., 2021, 2022; Osti; Almeida, 2022). Other curricular and non-curricular experiences, when well structured, may also favor the academic trajectory throughout the graduation (Kuh, 2008; Kuh; O'Donnell; Schneider, 2017; Zhang; Guo; Shi, 2017; Conefrey, 2021). This objective responds to the recurring need to analyze the profile of the population served, considering the impact of these characteristics on academic choices and trajectories (Almeida et al., 2024).

In this context, based on an exploratory and quantitative documentary analysis, this article presents the profile of undergraduate students at a federal institute located in the Southeast region of Brazil, considering sociodemographic, economic, and academic dimensions. In particular, it analyzes the relationship between these characteristics and academic performance, measured by the Academic Performance Coefficient (CR), through the comparison of different groups of students. In light of affirmative action policies implemented in recent decades, the study seeks to examine to what extent the expansion of access to higher education has translated into conditions of retention and academic success, offering empirical evidence on patterns of differentiation and inequality observed in the institutional context analyzed.

To facilitate the reader's understanding, the methodology applied in the research is presented first, followed by the results obtained and the discussions. At the end, the final considerations and the references used are presented. It is expected that the article will contribute to a reflection on institutional policies and pedagogical practices, especially in the context of Professional and Technological Education (EPT), aiming to promote fair and equitable education.

METHODOLOGY

This article describes the profile of undergraduate students at an Instituto Federal (IF) located in the Southeast region of Brazil, considering sociodemographic, economic, and academic variables. For the research, an exploratory and quantitative approach was adopted, using data obtained from the academic system of the participating institution. The choice and emphasis on the analysis of an IF are justified by contextual and institutional aspects, as well as by its significant participation of underrepresented groups and its integration into programs aimed at student retention (Fior; Almeida, 2023). The choice of the Academic Performance Coefficient (CR) as the dependent variable is justified by the fact that, at the institution where the study was conducted, this indicator is not restricted to the grades obtained in assessments but also incorporates other aspects, such as students' attendance in classes.

The elements that supported this study were obtained in 2023 through a request to the Academic Records Office, with the consent of the directors of the respective units, formalized through the signing of a co-participation agreement. The data include information on 4,679 students enrolled in the 22 licentiate and bachelor's degree courses offered across different subfields of Engineering, Human Sciences, and Mathematics (Chart 1). They include enrollment number; nationality; sex; race/ethnicity (self-declared); age; disability; marital status; number of children; professional activity; per capita family income; parents' or guardians' level of education; place of residence; institution; course; class schedule; year of admission; academic term; form and modality of access; school of origin and its location; and CR.

The data were organized in a spreadsheet and subsequently analyzed using the Statistical Package for the Social Sciences (IBM/SPSS), version 28. The analyses led to the creation of tables that synthesized the collected information, allowing the verification of frequency and percentage rates to identify the predominant characteristics of the sample examined. In addition, statistical tests of correlation and differences between groups were applied, allowing the identification of possible educational implications.

RESULTS

Initially, the presentation of the results explores the variables that most contribute to the democratization of access to higher education. The analysis focuses on the characteristics of the students, with emphasis on forms of access and quota categories, as well as on sociodemographic and economic aspects. Subsequently, the results of the statistical tests of

Chart 1. Undergraduate Courses Offered by the Institution.

PROGRAM	SCHEDULE
Bachelor's Degree in Business Administration	Evening
Bachelor's Degree in Architecture and Urban Planning	Full-time
Bachelor's Degree in Food Science and Technology	Evening
Bachelor's Degree in Graphic Design	Full-time
Bachelor's Degree in Environmental Engineering	Full-time
Bachelor's Degree in Computer Engineering	Evening
Bachelor's Degree in Control and Automation Engineering	Full-time
Bachelor's Degree in Electrical Engineering	Full-time
Bachelor's Degree in Mechanical Engineering	Full-time
Bachelor's Degree in Information Systems	Evening
Licentiate Degree in Biology	Full-time
Licentiate Degree in Natural Sciences	Afternoon/Evening
Licentiate Degree in Physical Education	Evening
Licentiate Degree in Physics	Full-time
Licentiate Degree in Geography	Morning/Evening
Licentiate Degree in History	Evening
Licentiate Degree in Portuguese Language and Literature	Morning/Evening
Licentiate Degree in Mathematics	Morning/Evening
Licentiate Degree in Music	Full-time
Licentiate Degree in Chemistry	Evening
Licentiate Degree in Theatre	Afternoon/Evening

Source: Research data (2023).

correlation and differences between groups are presented, offering an understanding of the relationship between these variables and the academic performance of the students.

Sample Characteristics

As previously mentioned, the sample consists of 4,679 students, of whom 12 were foreign students — eight from countries in South America, three from North America, and one from Europe. The majority of the sample is male, representing 55.4%, with ages ranging from 17 to 77 years ($M = 24.78$; $SD = 6.88$). There were 2,043 students (43.7%) enrolled in evening courses, 1,759 (37.6%) in full-time courses, 682 (14.6%) in morning courses, and 195 (4.2%) in afternoon courses. These students entered the institution through different forms of access, as presented in Table 1.

When observing the data presented in Table 1, it is noted that the quota system, whether through Sisu or through the institutional entrance examination, sustains equivalence in the number of enrollments with regard to the representativeness of different groups. Indeed, excluding those who did not declare their race/ethnicity (5.6%), there is a large presence of self-declared Black and Brown students, totaling 2,274 enrollments (48.6%), as can also be observed in Table 2. Regarding disabilities, in turn, a total of 54 students (1.2%) presented some type, namely, in order of quantity, hearing disability, behavioral conditions, physical disability, intellectual disability, multiple disability, unspecified disability, giftedness, and visual disability.

This set of variables denotes the marked heterogeneity in terms of race and ethnicity among the students in the present sample. This situation is also reflected in the fact that 67.2% of the students come from schools in the public education system and only 15.7% came from

Table 1. Enrollments by Form of Admission.

ADMISSION PATHWAY	FREQUENCY	PERCENTAGE
Institutional Entrance Examination (Open Competition)	1,534	32.8
Sisu (Open Competition)	844	18.0
Institutional Entrance Examination (Quota System for Black, Brown, and Indigenous Students from Public Schools)	726	15.5
Sisu (Quota System for Black, Brown, and Indigenous Students from Public Schools)	512	10.9
Institutional Entrance Examination (Quota System for Public School Graduates)	480	10.3
Sisu (Quota System for Public School Graduates)	255	5.4
Admission for Degree Holder	137	2.9
Internal Transfer	92	2.0
External Transfer	91	1.9
Institutional Entrance Examination (PwD and Black, Brown, and Indigenous Public School Graduates)	5	0.1
PARFOR (MEC/CAPEs)	1	0.0
Sisu (PwD and Black, Brown, and Indigenous Students from Public Schools)	1	0.0
Institutional Entrance Examination (PwD Students from Public Schools)	1	0.0
Total	4,679	100

Source: Research data (2023).

Table 2. Race/Ethnicity of the Sample.

	CATEGORY	FREQUENCY	PERCENTAGE
Valid	White	2,091	44.7
	Brown (Pardo)	1,545	33.0
	Black	729	15.6
	Asian	34	0.7
	Indigenous	17	0.4
	Total (Valid Responses)	4,416	94.4
Missing	Not reported	263	5.6
Total		4,679	100

Source: Research data (2023).

private institutions (the others did not report). However, the presence of students with special educational needs in the institution is still residual.

The per capita income of the studied population is also an indicator of the socioeconomic diversity of the student population in higher education, in the sense of greater democratization of access by less favored social groups. Subtracting the 755 students (16.1%) in the sample who did not report their income, income ranged from less than or equal to half of the minimum wage, totaling 1,038 students (22.2%), to income higher than three minimum wages, totaling 339 students (7.2%). The complete description of the per capita income of the sample is presented in Table 3. It should be added that 3,880 students (82.9%) performed a paid activity, among which only 151 (3.2%) were directly related to their field of study.

Table 3. Per Capita Income of the Sample.

	PER CAPITA INCOME	FREQUENCY	PERCENTAGE
Valid	≤ 0.5 MW	1,038	22.2
	0.5–1 MW	1,097	23.4
	1–1.5 MW	777	16.6
	1.5–2.5 MW	483	10.3
	2.5–3 MW	190	4.1
	> 3 MW	339	7.2
	Total	3,924	83.9
Missing	Not reported	755	16.1
Total		4,679	100

Note: MW = Brazilian minimum wage. Source: Research data (2023).

In line with the socioeconomic information, also at the level of the educational attainment of parents or guardians, a large majority of students from families with low levels of schooling is observed. A higher proportion corresponds to basic education — elementary or secondary education — totaling 2,782 (59.4%) among fathers or guardians and 2,552 (54.5%) among mothers or guardians. This is followed by undergraduate education, with 848 (18.1%) among mothers or guardians and 616 (13.2%) among fathers or guardians, and postgraduate education, including 403 (8.6%) mothers or guardians and 174 (3.7%) fathers or guardians. With technical education, 155 (3.3%) among fathers or guardians and 75 (1.6%) among mothers or guardians are observed. Although in smaller numbers, it should be noted that 26 fathers or guardians and 24 mothers or guardians had no schooling, totaling 50 (1.1%).

Combining the information, it can be inferred that the majority of the institution's student population comes from lower social strata; indeed, a large majority of students need to work in order to meet their personal and family needs. The survey of the wide age range of the students (ranging from young people to adults), marital status, and family responsibilities, such as the presence of children and professional activity, also indicates the multiplicity of situations among the students.

Academic Performance

For the calculation of the Academic Performance Coefficient (CR), the institution considers the courses taken by the student, taking into account the respective grades and the corresponding credits, with six being the minimum average required for approval. Thus, by excluding the students whose semester had not yet been completed (that is, those in the first term) and those whose grades referring to the COVID-19 pandemic period were not requested and, therefore, were not incorporated, the distribution presented in Table 4 is obtained.

Spearman's correlation showed a significant negative correlation, although weak magnitude coefficients, between CR and age ($p = -0.163$; $p < 0.001$) and between CR and number of children ($p = -0.072$; $p < 0.001$). In both cases, the negative correlation suggests that academic performance is higher among younger students and those with fewer children. The correlation was also negative in relation to race/ethnicity, in which self-declared Black and Brown students showed lower CR than White or Asian students ($p = -0.098$; $p < 0.001$), considering only these two groups of students. On the other hand, the data show a positive correlation between CR and course term ($p = 0.100$; $p < 0.001$), that is, the higher the course term, the higher the CR value. When comparing the values between men and women, it was possible to find a statistically significant difference through the t test for independent groups ($t(4058.34) = -10.652$; $p < 0.05$), with women presenting a higher mean than men (7.09 versus 6.43). In t-test calculation, the assumption of homogeneity of variances was tested using Levene's test, with a significance level of 0.05.

Table 4. CR Classification by Number of Enrollments.

	CR CLASSIFICATION	FREQUENCY	PERCENTAGE
Valid	Below 3.0	286	6.1
	Between 3.0 and 5.9	1,012	21.6
	Between 6.0 and 8.9	2,612	55.8
	Between 9.0 and 10.0	320	6.8
	Total	4,230	90.4
Missing	Term Not Completed	3	0.1
	Credit recognition not	79	1.7
	requested	367	7.8
	Academic semester not completed	449	9.6
	Total		
Total		4,679	100

Source: Research data (2023).

The difference is not statistically significant between students with and without disabilities ($t(4.228) = 1.358$; $p > 0.05$), being significant between those who engage in professional activity and those who do not ($t(933.663) = 5.96$; $p < 0.05$), whereas the difference is not significant when comparing students from rural and urban schools ($t(68.44) = 0.884$; $p > 0.05$). Students with disabilities, on average, present lower CR values ($M = 6.13$) in relation to those without disabilities ($M = 6.50$); students without professional activity present higher performance ($M = 6.66$) compared to those who work ($M = 6.11$); and students from urban schools have higher CR values ($M = 6.74$) when compared to those from rural schools ($M = 6.50$), but this discrepancy is not statistically significant.

After performing the ANOVA test, with Tukey's post hoc test, it was also possible to identify statistically significant differences between CR and admission category in the institution [$F(9, 4217) = 5.224$; $p < 0.001$], class schedule [$F(3, 4226) = 37.394$; $p < 0.001$], and school of origin [$F(3, 3518) = 10.725$; $p < 0.001$]. With regard to the admission category in the institute, omitting values lower than two for the admission category in the institution — PARFOR (MEC/CAPES), Sisu (PwD Public School Graduate/Black-Brown-Indigenous/Income ≤ 1.5 MW), and Institutional Entrance Examination (PwD Public School Graduate/Income > 1.5 MW) — it was found that students admitted through the institutional entrance examination in the open competition category presented a higher mean CR ($M = 6.77$; $SD = 2.03$) compared with the means of Black and Brown quota students from public schools admitted through Sisu ($M = 6.23$; $SD = 1.98$).

The mean of students enrolled in full-time courses ($M = 6.22$; $SD = 2.01$) is lower when compared with that of students in the afternoon ($M = 7.23$; $SD = 1.65$), morning ($M = 7.09$; $SD = 1.99$), and evening ($M = 6.63$; $SD = 2.04$) courses. A significant difference ($p < .001$) is also observed between students in evening ($M = 6.63$; $SD = 2.04$) and morning ($M = 7.09$; $SD = 1.99$) courses. Regarding school of origin, students from public schools present statistically lower CR ($M = 6.63$; $SD = 2.02$) compared with students from private schools ($M = 6.94$; $DP = 1.86$).

DISCUSSION

Affirmative action policies in Professional and Technological Education (EPT) in Brazil represent an essential commitment to the construction of a more just and equitable society. These policies have solid foundations and demonstrate positive results; however, the work is far from complete. When analyzing the results of the study, it is possible to observe how diversity in the institution translates into challenges and opportunities, prompting reflections on how inclusive strategies can be implemented, ensuring that all students have an enriching and equitable educational context. Indeed, it becomes crucial to understand how the variety of profiles directly influences

educational dynamics, enabling the development of environments that value and respect differences, favoring the retention and completion of courses by all admitted students.

The distribution of enrollments between public and private schools, with the majority coming from the public system and presenting lower CR values compared with students from private schools, invites for discussion about the implications of different educational backgrounds. The negative correlation between CR and race/ethnicity category also reveals disparities, with self-declared Black and Brown students presenting lower mean scores than those identified as White or Asian. These correlations point to the influence of social and demographic factors on academic performance. Above all, this represents an expression of structural racism that permeates the Brazilian educational system (Almeida, 2019), which manifests empirically in persistent inequalities in academic performance, as also evidenced in studies on Brazilian higher education (Nierotka; Bonamino, 2023).

Not coincidentally, the variation in per capita income, with 22.2% of students presenting an income equal to or below half of the minimum wage, reveals a wide presence of socioeconomic inequality. This disparity may have significant implications for the acquisition of educational resources and may directly influence academic performance and dedication to the course (Nierotka; Bonamino, 2023). Indeed, it is possible that these students encounter more barriers, less support, and experience a lower sense of belonging, motivation, and self-efficacy, leading them to dropout (Bandura; Adams; Beyer, 1977; Conefrey, 2021). Viewed from a broader perspective, this reality contributes to the perpetuation of inequality (Bourdieu, 1986; Machado; Oliveira; Freitas, 2020). This discussion may focus on strategies to offer, in addition to financial support, academic and emotional assistance to students who are more likely to face adversity due to their socioeconomic condition.

The presence of students with different types of disabilities also highlights the importance of accessibility and inclusion in higher education institutions (Conte; Ourique; Basegio, 2017). Adjustments may be expanded and improved in order to ensure that facilities, teaching materials, and pedagogical practices are organized in a way that effectively addresses specific educational needs (Belther, 2017; Oliveira; Nozu; Rebelo, 2023). In turn, pluriversal design should not be conceived as an organic component, but rather as one of the systemic solutions aimed at addressing structural problems (Escobar, 2018). Proposing the construction of educational institutions as inclusive ecosystems, Freitas (2023, p. 12) points out that “no one is slow in themselves, but only within a relational flow, in which someone becomes slow in relation to someone or something”. Understanding and appreciating diverse perspectives and differences, therefore, is for harmonious and inclusive coexistence (Conte; Ourique; Basegio, 2017).

Beyond the aspects more directly related to affirmative action policies, other results also require the attention of institutions. The presence of first-generation students, whose parents or guardians do not have higher education (Nguyen; Nguyen, 2018), highlights the specific need for support for this group. These students often differ in ethnic and sociodemographic terms; therefore, after overcoming the initial obstacles of the course, it is common for them to face challenges in completing it. Since the colleagues closest to these students do not have higher education experience, they may not be familiar with the norms typical of the university environment, making them less able to offer support throughout the academic trajectory (Furquim et al., 2017).

On the other hand, the presence of a progressive number of foreign students indicates a tendency to internationalized academic environments, increase cultural exchange and the sharing of experiences. This diversity can contribute to the enrichment of the learning environment, promoting intercultural understanding and broadening students' perspectives, generating opportunities for the sharing of different life experiences and worldviews. Experiences of this nature may have compensatory effects for those less academically prepared and belonging to underrepresented groups, especially through the cultural capital they provide (Conefrey, 2021; Kuh, 2008; Kuh; O'Donnell; Schneider, 2017; Zhang; Guo; Shi, 2017).

The distribution of male and female students reflects an academic environment in which efforts are made to promote equal opportunities for both groups. However, the unequal distribution of genders across different courses converges with findings from studies that address the relationship between gender and professional training, suggesting that some professions are perceived as more appropriate for women, while others are considered more appropriate for men, reflecting historically constituted hegemonic conceptions (Almeida et al., 2024; Carvalho;

Casagrande, 2011; Casagrande; Souza, 2016; Lopes; Leal, 2005; Souza et al., 2014, 2016). This observation raises questions about students' experiences and the possible implications for their academic lives. It becomes necessary to consider strategies to address the challenges faced by different gender groups, including programs to encourage participation according to the demands of certain courses (Brito; Pavani; Lima Junior, 2015; Almeida et al., 2024).

The positive correlation between CR and course term shows a tendency toward improvement in academic performance as students' progress through the semesters. This observation may be interpreted in light of students' adaptation to the university environment and their greater familiarity with study strategies over time. On the other hand, the multiplicity of situations among students also has implications for academic performance outcomes. Such conditions highlight the need for a holistic approach in planning support policies, considering family and personal commitments that impact the academic trajectory. Strategies such as psychosocial guidance programs, flexibility in the academic schedule to better reconcile work and study, and support for parenthood, for example, may contribute to addressing the diverse demands of non-traditional students.

Still regarding the relationship between work and study, the analysis of paid activities reveals that only a small proportion (3.2%) of students performs functions directly related to their fields of training. This implies a possible setback in the integration of professional experience with academic training, suggesting areas for improvement and the need to expand internship opportunities and learning practices. Internship experiences play a crucial role in complementing students' academic training, allowing them to apply in practice the knowledge acquired during the course. This provides students with a realistic view of professional practice, associated with better chances of employment and professional development (Lavall; Barden, 2014).

The diversified representation of students from different states and municipalities, in relation to the campuses, highlights the scope of the institution as an attractive educational hub. With the implementation of higher education access programs, such as Sisu, candidates not only have the opportunity to choose the location where they wish to study but also the course to be undertaken. However, the predominance of students from the same municipality where the campuses are located suggests that geographic proximity may influence the choice of institution and course. Discussions about geographic accessibility, commuting barriers, and strategies aimed at attracting students from other localities are possible and deserve to be explored.

On the other hand, the significant number of students coming from regions distant from the institution raises reflections about their experiences, especially with regard to psychosocial aspects. During entry into and permanence in higher education, these students face adversities resulting from unfamiliar social and intellectual situations, arising from the demands of the new educational environment and from the implications of this transition in different aspects of their lives (Chickering; Schlossberg, 2002; Deps; Cara, 2018; Farias; Gouveia; Almeida, 2022). In this process, students mobilize their resources in order to become familiar with the spaces, meet people, and establish or strengthen support networks. This challenge may be even more pronounced for those who move to another city in order to attend the course, as they must adapt not only to the institution but also to the local context (Casanova; Araújo; Almeida, 2020). Indeed, the setbacks faced by students are related to various external psychosocial conditions that can impact their academic development. Madzhie (2015) identifies those situations such as conflicts, life changes, and pressures are significant predictors of university students' quality of life. This dynamic, previously conceptualized by Tinto and Cullen (1973), describes such influences as external forces that interfere in academic daily life. Fior, Mercuri, and Silva (2013) highlight the capacity of the institution to promote a sense of belonging through activities that encourage students to be engaged and share their experiences.

In this context, Tinto (2017) emphasizes that non-mandatory experiences have great potential for the development of this sense of belonging, especially among first-year students. This occurs because, when students feel part of the academic community, they become more engaged in the learning process, which favors their persistence and development. Thus, as experiences may vary among groups and contexts, it is possible to explore pedagogical and support strategies that consider these diversities in order to support a more adequate transition to higher education, as well as students' permanence in the course (Finley; McNair; Clayton-Pedersen, 2022).

Thus, the analysis of the data not only reveals the socioeconomic and cultural diversity present, but also highlights the continuous need to improve and adapt educational policies and practices in order to meet the different demands of students. It is verified that ensuring access for students traditionally segregated from higher education is not sufficient, since without support for their adaptation, learning, and academic success, they are more likely to abandon the course before completion (Farias; Gouveia; Almeida, 2022; Fior; Almeida, 2023; Nierotka; Bonamino, 2023; Oliveira; Nozu; Rebelo, 2023). The commitment to equity requires regular evaluations and appropriate adjustments (McCormick; Kinzie; Gonyea, 2013; Tippelt, 2017), ensuring that the strategies adopted are aligned with the desired educational outcomes. In this process, it is not only important to detect students' limitations and vulnerabilities, but also to recognize and mobilize their potential resources.

FINAL CONSIDERATIONS

Affirmative action policies have demonstrated, over the years, a significant positive impact on Brazilian higher education democratization. For example, some studies reveal that the diversification of student profiles in higher education institutions enriches the academic environment and prepares broader and more heterogeneous segments of the population for a social life and a labor market that are equally diverse, but increasingly demanding in terms of cognitive skills, knowledge, and technical qualifications. With particular regard to Professional and Technological Education (EPT), these policies have contributed to greater representation of historically underrepresented groups in critical professional sectors, such as engineering, technology, and sciences.

The approximation in the number of enrollments among the different forms of admission to higher education highlights the effectiveness of affirmative action policies. In the present sample, the study reveals notable diversity among students, especially regarding the participation of groups that previously would not have had the opportunity to obtain high-quality public higher education, such as those from public schools of different socioeconomic contexts, self-declared Black and Brown students, and Persons with Disabilities (PwD), contributing to the democratization of access to higher education in the region served by the institution. Consequently, the quota system, whether through Sisu or through the institutional entrance examination, constitutes a crucial instrument for equity, contributing to the representation of different groups. Thus, the diversity of the student population in the institution may be considered a positive indicator of equal access to higher education, as it takes into account the different characteristics and realities of students, as well as their backgrounds.

Notwithstanding the expansion of the forms of admission, the effectiveness of the quota policy brings emerging challenges regarding students' academic success. The fact that self-declared Black and Brown students, who constitute the majority of the sample, present lower CR values than White students cannot be interpreted merely as a reflection of different educational trajectories or adverse socioeconomic conditions. For some authors, this represents an expression of structural racism that permeates society as well as the Brazilian educational system. It is important to acknowledge that the performance differences observed among racial groups cannot be understood as individual or biological attributes, but rather as the result of historical and structural processes that ultimately negatively impact the persistence and academic success of these students.

The participation of students who combine work and other responsibilities with their studies, from varied age groups and geographic origins, or who are first-generation students, also challenges institutions with regard to their policies, practices and pedagogical proposals. This diversity transcends strictly academic aspects and reinforces psychosocial demands, given its influence on academic development and permanence in the institution. Thus, recognizing the importance of combating disparities, equal opportunity cannot be achieved without specific strategies aimed at addressing discrimination and structural exclusion. In this sense, it is essential to maintain a continuous commitment to the improvement and expansion of these policies as society evolves and faces new challenges related to diversity and equality.

It is important to note that the present study is based on academic and administrative data available within the institution, which delimit the analytical possibilities developed here.

Nevertheless, the results obtained highlight the need to expand, in future research, the set of variables used in the analysis of academic performance, so that institutions may have access to more comprehensive evidence to reflect on the impacts of individual and contextual conditions on academic daily life. In this sense, more process-related information, such as access to scholarships and financial aid, housing conditions, commuting, family responsibilities, and participation in the labor market, may prove potentially relevant for deepening the understanding of the factors associated with students' retention and performance. In addition, the use of longitudinal procedures, such as survival analysis, may contribute to monitoring students' time of permanence in higher education and to investigating its relationship with individual, institutional, and contextual characteristics.

Future studies may also examine students' trajectories after completing their courses, considering, for example, the impact of these variables on the continuation of studies, particularly entry into postgraduate programs, and on their insertion into the labor market. Finally, qualitative or mixed-methods approaches may complement the quantitative analyses presented here, allowing the capture of subjective experiences, perceptions of discrimination and symbolic barriers experienced by different groups of students, especially those originating from affirmative action policies.

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