

# PIBIC as a bottleneck for working students' access to graduate education in Brazil

O PIBIC como obstáculo ao acesso de estudantes trabalhadores à pós-graduação no Brasil

El PIBIC como obstáculo al acceso de estudiantes trabajadores al posgrado en Brasil

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## Highlights

Interpersonal Relationships work as a Key in Graduate Program Selection.

For many working students, PIBIC represents an insurmountable barrier to graduate education.

It is necessary to reevaluate the criteria for awarding scientific initiation scholarships during undergraduate studies.

## Abstract

Rooted in elitist and professionally oriented models, the historical trajectory of Brazilian higher education has fostered structural barriers to the integration between undergraduate and graduate levels, particularly in scientific research. The Institutional Scientific Initiation Scholarship Program (PIBIC) was conceived to bridge this gap by promoting early research training aligned with graduate program demands. However, the program may operate under an exclusionary logic: its unregulated scholarship distribution and disregard for socioeconomic constraints hinder access for working students. As a theoretical essay grounded in documentary analysis and conceptual synthesis, this paper argues that interpersonal relationships serve as one of the pivotal mechanisms in graduate selection processes, suggesting that PIBIC may prove to be an impractical gateway for many working students. The analysis indicates that, while PIBIC plays a significant role in shaping graduate program trajectories, it simultaneously reinforces inequities and curtails the diversification of academic staff in Brazilian higher education.

[Resumo](#) | [Resumen](#)

## Keywords

Graduate education. Research Opportunities. Educational inequality.

Received: 03.07.2024

Accepted: 05.22.2025

Published: 06.02.2025

DOI: <https://doi.org/10.26512/lc31202553035>

## | Introduction

A long-standing difficulty in articulating undergraduate education with skills development for graduate studies has strongly marked the Brazilian higher education landscape. This is partly due to the way higher education was established in the country. Brazil created its universities late (only in the 20th century), and these institutions were historically elitist, modeled primarily around professional training (Schwartzman, 1984). Scientific research was treated as an almost extracurricular activity for faculty members. It was only with the University Reform of 1968 that graduate programs were structured into their current form. Just over 50 years ago, Brazilian universities began, in an organized manner, to adopt a model integrating the Teaching-Research-Extension tripod as the foundation of their institutional mission (Massi & Queiroz, 2015).

Scientific initiation scholarships—later institutionalized through the Institutional Scientific Initiation Scholarship Program (PIBIC, in Portuguese, *Programa Institucional de Bolsas de Iniciação Científica*)—were conceived as a public policy to mitigate the historical disconnection between undergraduate and graduate education, while simultaneously fostering the training of new researchers. Beyond promoting early research engagement at the undergraduate level, PIBIC was also designed to stimulate demand for graduate programs that were still in the process of institutional consolidation. In this sense, it was conceived as a potential gateway to *stricto sensu*<sup>1</sup> graduate programs (CGEE, in Portuguese, *Centro de Gestão e Estudos Estratégicos*, 2017). Scientific Initiation<sup>2</sup> thus serves a dual purpose: introducing undergraduate students to scientific inquiry and cultivating a prospective pool of candidates for graduate education (CNPq, 2016).

It is also important to point out that another characteristic present in the bases of the formation of Brazilian Higher Education is the idea of the field as a locus of formation of the Brazilian national elites. However, at the undergraduate level, such a view has decreased with the recognition of its inequalities. The approval of Law nº 12,711 of August 29th, 2012 (Quota Law) (Brasil, 2012), a remarkable milestone in transforming the profile of federal Higher Education, materialized this. In short, this Law reserved 50% of the undergraduate vacancies at these institutions for students who completed high school in public schools. It also contemplates the spot reservation for other groups (through sub-quota) by establishing criteria for race, income, ethnicity, and disability.

This legislation acted as a tool to diversify the student profile and contributed to shifting the trajectories of social classes historically excluded from higher education

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1 In Brazil's graduate education, two distinct tracks exist: *Stricto Sensu*, offering Master's and Doctoral research programs, and *Lato Sensu*, comprising specialization courses with at least 360 class hours for degree holders. (Medeiros et al., 2017).

2 Brazil presents two definitions for Scientific Initiation: 1) a global experience that includes several experiences with scientific research and may even be before the undergraduate level; 2) participation in a research project developed with college teachers (Massi & Queiroz, 2015).

(Senkevics & Mello, 2019). Over the past eleven years of the law's implementation, there has been clear success in changing the profile of undergraduate students, which has required institutions to take various measures to ensure the retention of this new demographic. However, the exact change in the undergraduate level has not been mirrored at the Graduate Level. Although discussions around affirmative action are now firmly established on the academic agenda, elitist characteristics remain deeply embedded in the system—as reflected in the composition of research staff, which is still predominantly white and from privileged backgrounds (Medeiros et al., 2017; Venturini, 2019).

In the articulation between the levels of Brazilian higher education—marked by elitist foundations and unequal access—there arises the question of which students are able to overcome such barriers and gain entry into graduate studies under current conditions. The path to master's and doctoral degrees precedes the formal selection process and encompasses an entire life trajectory (Bourdieu & Passeron, 1964), especially shaped by experiences during undergraduate studies. Thus, understanding initial as a decisive moment for shaping students' future paths, this article focuses specifically on scientific initiation—as a mechanism whose unregulated scholarship distribution poses a barrier for young working students to access *stricto sensu* graduate programs. Consequently, it is presented as a problematic factor for diversifying the faculty field in higher education.

The central argument developed here is that interpersonal relationships constitute the foundation of the graduate selection process. Except in specific areas with national selection systems, there is rarely any real distance between selectors and candidates—they are almost always (former) students and professors. Because of its exclusionary structure, PIBIC may represent an (im)possible gateway for many working students, particularly when structural inequalities remain unaddressed.

To examine this issue, the article adopts a theoretical-analytical approach rooted in critical documentary analysis and conceptual synthesis. Structured along three interrelated axes—document analysis, narrative literature review, and theoretical essay writing—it treats institutional documents and public policies as discursive artifacts, engages with Bourdieu's conceptual tools, and embraces essayistic reflection as a legitimate academic practice. Rather than testing hypotheses or generating empirical data, the study aims to construct a critical narrative capable of interrogating the exclusionary logic embedded in Brazil's scientific initiation system—particularly as it impacts working students' access to graduate education. With a specific focus on working students, this inquiry is guided by the following questions: To what extent does the structure of PIBIC reproduce mechanisms of exclusion already present in Brazilian higher education? How do interpersonal relationships function as informal selection devices in graduate admissions? And more broadly, what are the limits and potentials of scientific initiation as a pathway for diversifying access to academic careers?

## **| Methodological approach**

This paper adopts a theoretical-analytical approach grounded in a critical reading of documents and a conceptual reinterpretation of the field. Although initially envisioned as a reflective essay, the work embraces methodological rigor by explicitly outlining its analytical strategies and epistemological commitments. The approach is organized around three interdependent axes:

1. **Documentary analysis:** The study engages with public policies and institutional documents linked to the Institutional Scientific Initiation Scholarship Program (PIBIC), including resolutions by CNPq, the Brazilian Quota Law (Law No. 12,711/2012), and institutional reports such as those produced by CGEE (2017) and Andifes (2019). These documents are not treated merely as administrative records, but as discursive artifacts that express and reinforce normative frameworks and exclusionary rationalities present in the organization of Brazilian higher education.

2. **Narrative literature review:** The theoretical framework emerges from a critical dialogue with both foundational and contemporary literature. The analysis is particularly informed by Pierre Bourdieu's conceptual arsenal — especially the notions of field, habitus, social capital, and symbolic violence — and by studies that investigate the historical reproduction of inequalities in higher education in Brazil (e.g., Massi & Queiroz, 2010; Venturini, 2019; Carvalho, 2003, 2004). The literature review is selective and interpretative, privileging works that allow for a rearticulation between scientific training, structural exclusion, and the architecture of graduate education.

3. **Theoretical essay as method:** Aligned with Meneghetti's (2011) understanding of theoretical essays, this paper does not seek to test hypotheses or present original empirical data. Instead, it positions itself as a contribution to critical thought — seeking to reinterpret practices, uncover silenced tensions, and offer conceptual tools to rethink the institutional arrangements and meritocratic discourses that govern research initiation pathways in Brazil.

While the study does not rely on empirical fieldwork, it is anchored in a dense and systematic analytical effort. Its objective is to construct a critical narrative capable of interrogating naturalized assumptions about merit and access, especially those operating through the structuring logic of programs like PIBIC.

As a limitation, the absence of empirical data — such as interviews with students or comparative institutional analyses — narrows the empirical density of the arguments. Nonetheless, such limitations open fruitful avenues for future research that might deepen the debates introduced here.

## **| Scientific Initiation: the target audience**

Scientific initiation at the undergraduate level emerged in Brazilian universities around the same time universities were established in the country, during the

1930s. These institutions were created autonomously, without a unified regulatory policy. However, it was only after the establishment of the National Council for Scientific and Technological Development (CNPq, in Portuguese, Conselho Nacional de Desenvolvimento Científico e Tecnológico) in 1951 that this modality began receiving official funding (Pires, 2012).

Initially, grants for scientific initiation were offered based on spontaneous demand — that is, scholarships were awarded according to the direct request of the lead researcher (advisor). Later, in 1988, during the 197th meeting of the CNPq Deliberative Council, PIBIC was created, marking the beginning of a national policy for the program. This shift also gradually expanded the number of grants awarded, brought scientific initiation to greater institutional visibility, and ensured a fixed amount of funding (Pires, 2012). The regulation of PIBIC (Normative Resolution [RN] 005/1993) (Brasil, 1993), first implemented in the 1990s, introduced a quota-based scholarship allocation model. It delegated to participating universities the responsibility for selecting projects eligible for funding. The resolution also encouraged institutions to increase their own investments in the program and to organize scientific dissemination events, and a local scientific training policy with a respective apparatus for project as well as to establish local policies for scientific training with appropriate internal and external selection committees. *Since then, CNPq has been the main promoter of this modality, expanding both the number of fellowships and the institutions served. In addition to PIBIC, CNPq has also created other programs to promote research* (Massi & Queiroz, 2010; 2015).

Such initiatives occur in public educational institutions, with public universities being the primary beneficiaries. It is crucial to highlight this because, with few exceptions among elite institutions, private higher education institutions in Brazil do not host this or similar programs. Thus, from this point onward, this paper will focus on issues related to public higher education institutions in Brazil. This does not imply that private institutions are irrelevant or should not be studied. In fact, they offer more undergraduate seats than public institutions (Inep, 2024a). However, scientific training at both the undergraduate and graduate levels is almost exclusively concentrated within public institutions (Inep, 2022, 2024b, 2024c).

According to the current legislation governing PIBIC (Brasil, 2006), its purpose is “the development of scientific thinking and initiation into research by higher education undergraduate students” (Brasil, 2005, p. 5 – translated by the authors). Its general objectives include: “contributing to the training of human resources for research; contributing to the scientific training of human resources who will dedicate themselves to any professional activity; and contributing to reducing the average length of stay of students in graduate courses” (Brasil, 2006, p. 5 – translated by the authors). In addition to those general goals, it also includes specific objectives directly aligned with the focus of this study: “to enable greater interaction between undergraduate and graduate levels; qualify students for graduate programs” (Brasil, 2006, p. 5 – translated by the authors).

Regarding the objective selection criteria that define the profile of scholarship holders, the regulation (Brasil, 2006) stipulates that advisors must select students

who are enrolled in undergraduate programs (even at other institutions), who have no formal employment ties, and who do not receive any other type of scholarship (except student aid). This design requires selecting only students who can dedicate themselves exclusively to academic activities—something clearly misaligned with the current university profile, which includes a large number of working students. Approximately 29.9% of students enrolled in federal public institutions work during their undergraduate studies (Associação Nacional dos Dirigentes das Instituições Federais de Ensino Superior [Andifes], 2019, p. 47). These students are predominantly Black and enrolled in evening courses—groups historically impacted by structural and social barriers that continue to reproduce exclusion within higher education (Andifes, 2019).

The unlikely candidacy of a working student for a PIBIC scholarship involves relying solely on the amount paid by the funding agency and relinquishing the employment relationship that disqualifies them from receiving the scholarship. For students without financial support from family members or student aid — which does not cover all cases — holding a scholarship cannot be genuinely considered a viable option. The PIBIC legislation becomes exclusionary when it fails to account for the fact that low-income students cannot survive solely on the scholarship amount, particularly given the modest monthly payment offered by CNPq. Recently, the amount was adjusted to BRL 700, but from 2012 to 2023, it remained at four hundred Reais per month (BRL 400.00) (Gov.Br, 2023). In April 2025, the updated amount is equivalent to approximately USD 118 per month.

The selection process is the final aspect of the regulation that defines the profile of those selected. This responsibility is placed in the hands of the advisor:

3.6.5 It is the advisor's responsibility to select and nominate a student as a scholarship recipient, based on a profile and academic performance compatible with the planned activities, while observing ethical principles and avoiding conflicts of interest. 3.6.6 The advisor may nominate a student from any public or private undergraduate program in the country, not necessarily affiliated with the institution distributing the scholarship. 3.6.7 – The advisor may, with justification, request the dismissal of a fellow and nominate a replacement, provided the institution's operational deadlines are respected. (Brasil, 2006, p. 7 – translated by the authors)

There are no defined objective criteria for selecting scholarship recipients; it is entirely up to the advisor to determine who should receive the award. On one hand, this lack of regulation grants the advisor broad autonomy to define the ideal candidate profile for their research project. On the other hand, it establishes a selection metric that does not consider socioeconomic conditions. While increasing participation of low-income students is not an explicit goal of the program, it is both possible and relevant to develop institutional strategies that support this aim. At present, PIBIC contains no mechanisms to mitigate the underrepresentation of economically disadvantaged students in scientific training. In the absence of such measures, selection processes often assume a discretionary character, shaped by the interpretations and practices of individual faculty advisors.

For program evaluation purposes, the regulation mandates the organization of scientific events (conferences or seminars) featuring paper presentations by scholarship recipients. These papers must be evaluated according to criteria established by the internal committee. In addition, the papers must be presented in the presence of the external committee and published as part of the event proceedings. These mechanisms naturally foster academic production and participation in relevant events. This structured training process also serves to enhance students' academic *résumés*. Such curriculum improvement strengthens scholarship recipients' performance in graduate program selection processes, particularly in programs that award master's and Ph.D. scholarships.

According to data from the Center for Strategic Studies and Management (CGEE, in Portuguese, Centro de Gestão e Estudos Estratégicos) (2017), PIBIC has a positive impact on its scholarship recipients: it teaches research techniques and methods, develops critical thinking, and stimulates engagement through inquiry. It also promotes participation in scientific dissemination events and exposure to foreign languages, sometimes including publications in those languages. Moreover, it encourages interest in pursuing graduate education. Still according to Massi and Queiroz (2015), other positive outcomes include improved academic performance among undergraduate students, reduced dropout rates, professional socialization, strengthened teacher–student relationships, and clearer career pathways.

The perspective of expanding social capital (Bourdieu, 1998) in the field of higher education is key to understanding the significance of these fellowships in students' academic trajectories. Scholarship recipients are more likely to transition to higher levels of schooling. The experiences and skills developed through scientific initiation not only build technical knowledge, but also a practical sense that helps students recognize the most advantageous strategies—and, conversely, the riskiest (Bourdieu, 2009; Canaan, 2012). This increases their chances of advancing in their academic journey.

The difference in time spent to enroll in the master's degree is significant if we compare those who received a scientific initiation scholarship and those who did not obtain a scholarship[...]. This conclusion is supported by the fact that 59% of PIBIC graduates enroll in a master's program within one year. Only 12% take longer than three years, while only 19% of non-scholarship students enroll within one year, and 63% enter only after three years of undergraduate studies." (Oliveira, 2010, p. 93 – *translated by the authors*)

In addition to the time of admission noted by Oliveira (2010), the CGEE study also reveals that, among former PIBIC students between 2001 and 2013, 28.8% completed a *stricto sensu* graduate program. By the observation of students with master's degrees, this study also shows that there is a strong correlation between the time spent on the *PIBIC* scholarship and the likelihood of completing graduate education. Among students who received a PIBIC scholarship for 19 to 24 months, 52% completed the first stage of *stricto sensu* graduate training. In contrast, among those who participated for up to one year, the completion rate was 36%. Furthermore, if we examine the case of São Paulo State University (UNESP, in Portuguese, *Universidade Estadual Paulista*), which was analyzed in the CGEE study: " It

appears from the results that graduates who received a PIBIC fellowship at the undergraduate level had a 120% greater chance of completing a master's degree and a 51% greater chance of completing a doctorate compared to students who did not receive a PIBIC fellowship during their undergraduate studies, who comprised the control group of the study" (CGEE, 2017, p. 36 – *translated by the authors*). In summary, the program significantly contributes to increasing the chances of access, and to reducing both the time to enroll in and to complete graduate programs.

## **| Barriers to the diversification of the graduate-level profile**

Central to the argument presented in this article, Medeiros et al. (2017) point out that the documents regulating graduate education are constructed based on the rules established within the academic field (Bourdieu, 2013) of Brazilian graduate studies. These rules emphasize Scientific Production and Researcher Training. From this perspective, even when considering higher education more broadly — including the undergraduate level — graduate education emerges as the core element in defining the rules of the game. It occupies the top of the formal education hierarchy, shaping what is valued in scientific research and, more importantly, training new teachers and scientists according to the norms of the graduate-level field (Lamont, 2009).

A World Bank report (2003) argued that knowledge should be the main driver of economic development and poverty reduction. From this standpoint, higher education becomes essential for promoting development and reducing inequality. Graduate programs and scientific initiation are thus pivotal in attracting and retaining talent capable of fostering innovation and national growth — and of preventing large-scale brain drain. In the Brazilian context, these two areas are closely interrelated: most research is conducted within graduate programs, which are primarily funded by public resources (Capes, 2023b).

As previously discussed, in terms of reducing inequality within the field of higher education in Brazil, affirmative action policies have played a central role in promoting opportunities for historically underrepresented groups. In this regard, the Brazilian government created two key affirmative action programs aimed at increasing participation in undergraduate education for Black, Brown, and Indigenous students (BBI), low-income youth, public school graduates, and persons with disabilities<sup>3</sup>. Law No. 12,711 of August 29th, 2012 (Brasil, 2012) focused on federal public institutions, established the Federal Universities Quota Program. Meanwhile, to finance access to private higher education for low-income students, Provisional Measure No. 213 of September 10, 2004 — later converted into Law No. 11,096 of January 13, 2005 (Brasil, 2005) — created the University for All Program (ProUni, in Portuguese, *Programa Universidade para Todos*).

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<sup>3</sup> Law number 13,409 of December 2016 (Brasil, 2016), changed Law number. 12,711 (Brasil, 2012) and included students with disabilities in the quota law.

Also, as previously mentioned, these programs have shown significant results in increasing diversity regarding the profile of students enrolled in undergraduate education. Since 2005, with a major shift in 2012 (the year the Quota Law was enacted), the two programs have contributed to transforming the structure of Brazilian higher education (Senkevics & Mello, 2019). However, despite expectations, the increase in diversity at the undergraduate level and the expansion of enrollment rates in graduate programs — as previously explained — may not have significantly diversified the social and educational backgrounds of those involved in scientific research.

Despite a policy to expand the number of graduate programs in Brazil — between 2005 and 2014, there was a 78.1% increase in master's programs and a 78.2% increase in doctoral programs — and despite the rise in the number of graduates (an 85.9% increase in annual doctoral graduates and a 63.6% increase in master's graduates) (CGEE, 2017), no structurally equivalent initiatives were implemented to broaden access for historically marginalized groups within graduate education. For instance, between 2006 and 2014, analyzing active professionals in the labor market (Medeiros et al., 2017), there was only a 4.8 percentage point increase in Black, Brown, and Indigenous (BBI) individuals with a master's degree and a mere 4.3 percentage point increase at the Ph.D. level. Brazil expanded its research institutions without addressing the structural bottlenecks preventing underrepresented youth from accessing graduate education. The underlying structural logic — which historically prevented low-income, non-white students from advancing in higher education — remained unchallenged.

As a result, persistent historical inequalities became even more entrenched at the graduate level, keeping students from non-dominant groups confined to the undergraduate level. While the federal government objectively invested in increasing diversity in undergraduate programs, the graduate level remains largely untouched — mirroring the pre-affirmative-action landscape. Affirmative action in graduate education is currently limited to isolated initiatives, dependent on criteria established individually by each program or institution. Target populations and corrective measures vary widely, reflecting local interpretations rather than a national directive.

Anna Venturini (2019), in her thesis on affirmative action in graduate education, observes that despite some isolated legislative proposals, the issue remains absent from the federal legislative agenda. Today, the discussion exists primarily within academic and scientific circles — and more specifically, within a few graduate programs and universities. According to Venturini, affirmative action tends to be incorporated into the agendas of select programs due to the engagement of faculty and researchers with ethnic-racial issues, particularly Indigenous ones. In most cases, the expansion of these policies stems directly from the actions of individuals within programs who, through public calls, have sought to extend their reach to all graduate courses within their institutions.

## **| Graduate school, faculty training, and the graduate selection process**

In addition to the traditional obstacles to accessing higher education at the undergraduate level, graduate education faces structural limitations shaped by the hegemonic ideology of science, which privileges a teleological understanding of reason (Habermas, 1987; Medeiros et al., 2017), grounded in assumptions of social neutrality, knowledge accumulation, objectivity, and so forth. The training of scientists is organized around notions such as excellence, authority, and paradigmatic regulation (Hochman, 1994).

Also, in the specific case of Brazil, Scientific training almost entirely excludes the possibility of concurrent employment while they are scholarship holders. Scholarships at the three levels (undergraduate, master's, and Ph.D.) require exclusive dedication<sup>45</sup> and prohibit any form of employment. Moreover, each subsequent stage tends to reward individuals who received scholarships in the previous one. That is, someone who held a PIBIC scholarship is likely to receive extra points in the selection for a master's scholarship, and so on. As a result, those who pursue graduate studies are often individuals with little engagement in teaching-oriented training and practice.

Considering the graduate faculty level in Brazil, it is important to note that nearly all graduate programs have selection processes for faculty members. These faculty are typically evaluated based on their scientific output and prior experience as undergraduate advisors (PIBIC or undergraduate thesis supervision). Sometimes, only after many years of working at the undergraduate level that a faculty member gains access to graduate programs. Those with a strong record of scholarship supervision and grant acquisition tend to be highly valued by their peers. In this context, being a (good) teacher is not essential to securing a position at the graduate level. It is common for faculty accredited in graduate programs to have little—if any—practical experience in teacher training. These individuals are shaped and rewarded by a contradictory logic: trained as non-teaching researchers, they are later employed as professors in both undergraduate and graduate programs. Despite their limited pedagogical background, many assume a triple role: teaching in graduate programs, advising undergraduates, and conducting research and advising at the graduate level. Institutions hire them as faculty, but their academic formation has often encouraged detachment from classroom practices. It is worth noting that these same individuals are also responsible for selecting and mentoring future graduate students—many of whom will, in turn, become researchers and professors. This dynamic poses challenges to the implementation of policies aimed at diversifying graduate education in Brazil, as institutional structures—rooted in

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4 Until 2010, CNPq scholarships excluded paid employment. CAPES-CNPq Ordinance No. 01/2010 (Capes-CNPq, 2010) partially relaxed this rule, allowing teaching-related income with prior approval, though still subject to advisor and program discretion.

5 CAPES Ordinance 133/2023 (Capes, 2023a) and CNPq Ordinance 1,863/2024 (CNPq, 2024) broaden permissions, allowing paid work if previously approved by advisor and program, and if academic activities remain unaffected.

historical precedent—intersect with individual values that shape professional trajectories and notions of academic merit.

It is also relevant to point out that, in the case of Brazilian graduate education, both the formulation and evaluation processes are overseen by a regulatory agency: the Coordination for the Improvement of Higher Education Personnel (*Fundação Coordenação de Aperfeiçoamento de Pessoal de Nível Superior*) (CAPES). Through an extensive and rigid evaluation system, CAPES guides the priorities and objectives of the field—even determining the allocation of public funding that sustains the system as a whole (Medeiros et al., 2017). In this sense, it is CAPES that evaluates and defines the parameters for the success or failure of a graduate program. Programs that do not comply with the criteria upheld by CAPES risk losing accreditation, having their grants cut, and seeing their operational resources redistributed. Conversely, programs that perform well receive a larger share of funding and fellowships and, more importantly, are granted greater autonomy to make decisions regarding their own governance. Therefore, the graduate selection process operates under dual logic. On one side, it is shaped by external evaluation and funding agencies that, in the name of the program continuity, exert pressure on students to conform to institutional expectations and disciplinary norms. On the other side, and following Carvalho (2003; 2004), a "system of preferences" emerges—structured around the academic trajectories, thematic interests, and expectations of individual advisors. The selection steps—such as interviews, project presentations, and recommendation letters—often serve, under the discourse of meritocracy, as mechanisms to legitimize a guided recruitment process. Rather than identifying the most academically prepared candidates, this process tends to favor those whose profiles align with the research agendas and institutional positions of specific faculty members.

In practical terms, the rules that govern the selection process are usually defined by program-level faculty councils—or, in some cases, by broader university governing bodies. Within these arenas, such rules are frequently the product of ongoing disputes among internal factions competing for influence over the program's direction. In this context, key decisions—such as the definition of valued academic capital, the scope and design of affirmative action policies, the selection criteria, and the procedures for assigning advisors to students admitted through these policies—become central elements in the struggle to shape the program's profile and boundaries.

The path that leads a student to graduate education involves not only the formal criteria defined by programs but, perhaps more crucially, the types of capital valued by the faculty members who construct the rules of access. In the case of affirmative action in graduate admissions, procedural adjustments alone are insufficient—what is required is a structural reconfiguration of the field itself. This implies redefining what counts as objective merit, reevaluating which forms of capital are legitimized or ignored, and directly confronting the implicit rules of the game. Such a transformation is neither simple nor readily accepted, especially considering that many faculty members—who act as gatekeepers—were themselves trained within a tradition that reproduces exclusionary standards. Still, with the implementation of

affirmative action policies, new candidates would begin to enter the field, and the socioeconomic composition of graduate cohorts would inevitably shift. These changes would have downstream effects: altering access logic at the graduate level would reshape the strategies of undergraduate students—particularly those admitted through affirmative action—who would now need to construct academic trajectories aligned with the new configurations of value. For many of them, as we will explore below, and in the absence of targeted policies, such adaptation remains structurally unfeasible.

## **| Final considerations**

Under the quota policy for Federal Universities at the undergraduate level (Law No. 12,711) (Brasil, 2012), the combined condition of low income and completion of high school in the public education system functions as an effective selection tool (Senkevics & Mello, 2019). In addition to these criteria, the selection process considers academic performance, which is assessed through the National High School Exam (*ENEM*, in Portuguese, *Exame Nacional do Ensino Médio*) a standardized national exam applied to high school students. Final classification is based on the student's average score on the exam, followed by their choice of institution and program<sup>6</sup>. In this way, the transition from high school to higher education (at the undergraduate level) is mediated by a national test, without the direct involvement of future instructors, and thus, without the influence of personal experiences or interpersonal relationships in the evaluation process.

Thus, unlike the undergraduate admissions process for Federal Higher Education Institutions (*ENEM* and *SISU*, in Portuguese, *Sistema de Seleção Unificada*), where there is a separation between selectors and applicants, interpersonal relationships become a valuable asset in graduate admissions. Even in graduate programs that have implemented quota policies, interpersonal connections inevitably play a role in the selection process. As a result, even when objective criteria are formally established, structural barriers and relational dynamics may continue to hinder the inclusion of students from non-dominant profiles. Their background in the same institution and, more importantly, their relationship with those faculties responsible for the selection process became obstacles to them. Students with academic experience and who are embedded in spaces of social capital accumulation (Bourdieu, 1998) valued within the academic field tend to hold a competitive advantage in the race for graduate placements. This advantage is primarily—if not entirely—acquired through participation in scientific initiation programs. As previously demonstrated, these programs lack objective selection mechanisms and do not offer an equitable entry point to ensure the participation of a diverse student body. Undergraduate students from low-socioeconomic backgrounds, particularly those who must work while studying, are frequently excluded from these environments and are therefore at a disadvantage in graduate admissions processes (Barros, 2022; Barros & Mello Neto, 2022).

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<sup>6</sup> The candidate must select a course and an institution in the *SISU* (Unified Selection System). The *SISU* is a platform to guide almost all selective processes to Federal Higher Education Institutions in Brazil.

This creates a twofold process of non-objective interpersonal valuation. First, it allows faculty advisors<sup>7</sup> to arbitrarily select those who will access *PIBIC* scholarship, only students whom they subjectively deem qualified are awarded. Even worse, due to the full-time dedication required by the *PIBIC* fellowship, such arbitrary criteria tend to favor students who, not being breadwinners, can afford to commit to academic work for a meager stipend. Second, the cultural and social capital accumulated through early scientific initiation (Bourdieu, 1979; 1998) grants these students a competitive edge in graduate admissions. Once again, advisors tend to favor those already familiar with academic environments cultivated during their undergraduate years. This dynamic reinforces a cycle of academic reproduction, restricting access to candidates outside of established networks and constituting yet another barrier to graduate education diversification.

Therefore, if there is any real interest in diversifying graduate programs, it becomes essential to revisit the criteria for awarding scientific initiation scholarships at the undergraduate level. It is necessary to define more objective standards regarding the program's target audience and, just as importantly, to reevaluate both the scholarship amount and the (im)possibility of including working students among its beneficiaries. Without such structural adjustments, much of the debate around diversity policies in graduate education risks becoming ineffective. As emphasized throughout this text: there can be no diverse graduate programs without diverse graduate candidates—and the path through which these candidates are trained is scientific initiation.

Finally, it is critical to stress that, in addition to the impact on graduate programs, this issue also concerns the diversification of academic careers in higher education—at both undergraduate and graduate levels. In Brazil, holding a graduate degree is a requirement to become a faculty member in higher education. Therefore, this is a matter that permeates graduate training and also affects the broader configuration of the higher education field. In other words, the limited diversity within graduate programs contributes to maintaining the homogeneous profile of faculty members in Brazilian higher education. Without targeted efforts to diversify scientific initiation programs, structural transformation in this field remains a significant challenge.

It is important to highlight that this paper does not aim to disqualify *PIBIC* as a public policy. On the contrary, it seeks to expand the debate on its limits and potential, particularly regarding how scientific initiation intersects with access to graduate education for working students. The reflections and propositions presented here should not be understood as definitive solutions, but rather as critical provocations that illuminate structural tensions and invite broader institutional engagement. It is also worth acknowledging that CNPq has introduced initiatives such as *PIBIC-AF* (CNPq, 2025) (see more in Prado, 2017; Lessa et al., 2023), which incorporate affirmative action criteria into the distribution of fellowships. While this represents an important institutional step, it still requires greater visibility, more robust evaluation, and stronger integration with broader

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<sup>7</sup> This is not a critique of individual advisors or faculty, but of a broader system structured by pressures such as academic productivity, institutional retention goals, and performance metrics.

inclusion policies. It is important to emphasize, however, that the logic underpinning PIBIC-AF<sup>8</sup> remains aligned with the same regulatory framework that governs the general PIBIC program (RN 017/2006). As such, the reflections developed throughout this study are equally applicable to the affirmative action modality, given that the selection criteria, the requirement for exclusive dedication, and the broader academic field are shared across both versions of the program. Moreover, the debate on access cannot be restricted to the admission phase alone: academic permanence, success, and long-term professional trajectories are also shaped by structural inequalities—inequalities that programs like PIBIC may inadvertently reproduce if not critically examined and restructured.

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8 The PIBIC-AF (Scientific Initiation Scholarship Program – Affirmative Action) represents an attempt to incorporate affirmative action principles into research training. It targets students from public schools, low-income backgrounds, Black, Indigenous, and disabled students. While symbolically relevant, the program still lacks capillarity, structural articulation, and sustained visibility.

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Contribuição na elaboração do texto: autora 1 – Conceitualização, Curadoria de dados, Análise formal, Investigação, Metodologia, Visualização, Escrita – rascunho original; autor 2 – Conceitualização, Curadoria de dados, Análise formal, Investigação, Metodologia, Administração de projetos, Supervisão, Escrita – rascunho original, Escrita – revisão e edição.

### **Resumo**

Ancorada em modelos elitistas e voltados à formação profissional, a trajetória histórica da educação superior brasileira fomentou barreiras estruturais à integração entre os níveis de graduação e pós-graduação, especialmente no campo da pesquisa científica. O Programa Institucional de Bolsas de Iniciação Científica (PIBIC) foi concebido para reduzir esse abismo, promovendo uma formação antecipada em pesquisa alinhada às exigências da pós-graduação. No entanto, o programa pode operar sob uma lógica excludente: sua distribuição de bolsas não regulada e o desrespeito às condições socioeconômicas dificultam o acesso de estudantes que trabalham. Como ensaio teórico fundamentado em análise documental e síntese conceitual, este artigo argumenta que as relações interpessoais atuam como um dos mecanismos centrais nos processos seletivos da pós-graduação, sugerindo que o PIBIC pode se revelar uma via de acesso inviável para muitos estudantes trabalhadores. A análise indica que, embora o PIBIC desempenhe um papel significativo na trajetória de pós-graduação, ao mesmo tempo reforça desigualdades e limita a diversificação do corpo docente na educação superior brasileira.

**Palavras-chave:** Pós-graduação. Oportunidades de pesquisa. Desigualdade educacional.

### **Resumen**

Arrraigada en modelos elitistas y orientados a la formación profesional, la trayectoria histórica de la educación superior brasileña ha promovido barreras estructurales para la integración entre los niveles de grado y posgrado, especialmente en el ámbito de la investigación científica. El Programa Institucional de Becas de Iniciación Científica (PIBIC) fue concebido para reducir esta brecha mediante la promoción de una formación temprana en investigación alineada con las demandas de los programas de posgrado. Sin embargo, el programa puede operar bajo una lógica excluyente: la distribución no regulada de becas y el desinterés por las condiciones socioeconómicas obstaculizan el acceso de los estudiantes que trabajan. Como ensayo teórico basado en el análisis documental y

la síntesis conceptual, este artículo sostiene que las relaciones interpersonales constituyen uno de los mecanismos clave en los procesos de selección de posgrado, lo que sugiere que el PIBIC puede resultar una vía de acceso inviable para muchos estudiantes trabajadores. El análisis indica que, aunque el PIBIC desempeña un papel importante en la configuración de las trayectorias de los programas de posgrado, al mismo tiempo refuerza las inequidades y limita la diversificación del cuerpo docente en la educación superior brasileña.

**Palabras clave:** Estudios de posgrado. Oportunidades de investigación. Desigualdad educativa.

**Linhas Críticas** | Journal edited by the Faculty of Education at the University of Brasília, Brazil  
e-ISSN: 1981-0431 | ISSN: 1516-4896  
<http://periodicos.unb.br/index.php/linhascriticas>

**Full reference (APA):** Barros, Y. da S., & Mello Neto, R. de D. e (2025). PIBIC as a bottleneck for working students' access to graduate education in Brazil. *Linhas Críticas*, 31, e53035.  
<https://doi.org/10.26512/lc31202553035>

**Full reference (ABNT):** BARROS, Y. DA S.; MELLO NETO, R. de D. e. PIBIC as a bottleneck for working students' access to graduate education in Brazil. *Linhas Críticas*, 31, e53035, 2025. DOI:  
<https://doi.org/10.26512/lc31202553035>

**Alternative link:** <https://periodicos.unb.br/index.php/linhascriticas/article/view/53035>

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