

# The Brazilian Higher Education and Research System



BRAZILIAN ASSOCIATION FOR  
INTERNATIONAL EDUCATION

# The Brazilian **Higher Education** and **Research** System

**2025**



BRAZILIAN ASSOCIATION FOR  
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# GLOSSARY

**Brazilian Association for International Education**

Associação Brasileira de Educação Internacional | FAUBAI

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**Brazilian Federal Agency for Support and Evaluation of Graduate Education**

Coordenação de Aperfeiçoamento de Pessoal de Nível Superior | CAPES

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**Brazilian Institute of Geography and Statistics**

Instituto Brasileiro de Geografia e Estatística | IBGE

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**Brazilian National Council of State Funding Agencies**

Conselho Nacional das Fundações Estaduais de Amparo à Pesquisa | CONFAP

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**Brazilian National Development Bank**

Banco Nacional de Desenvolvimento Econômico e Social | BNDES

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**Brazilian Program for Exchange Students - Graduate Level**

Programa Estudante-Convênio de Pós-Graduação | PEC-PG

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**Brazilian Program for Exchange Students - Portuguese as a Foreign Language**

Programa Estudante-Convênio de Português como Língua Estrangeira | PEC-PLE

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**Brazilian Program for Exchange Students – Undergraduate Level**

Programa Estudante-Convênio de Graduação | PEC-G

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**Brazilian Portuguese Proficiency Exam**

Certificado de Proficiência em Língua Portuguesa para Estrangeiros | CELPE-Bras

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**Federal Centers for Technological Education**

Centro Federal de Educação Tecnológica | CEFET

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**Financing Agency for Studies and Projects**

Financiadora de Estudos e Projetos | FINEP

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**Future Teacher Scholarship Program**

Programa Pé-de-Meia Licenciaturas

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**High School National Exam**

Exame Nacional do Ensino Médio | ENEM

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**Languages without Borders**

Idiomas sem Fronteiras | IsF

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**Mercosul's Regional Accreditation System**

Sistema de Acreditação Regional de Cursos de Graduação do Mercosul e Estados Associados | ARCU-SUL

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**National Council for Scientific and Technological Development**

Conselho Nacional de Desenvolvimento Científico e Tecnológico | CNPq

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**National Higher Education Evaluation System**

Sistema Nacional de Avaliação da Educação Superior | SINAES

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**National Institute for Educational Studies and Research Anísio Teixeira**

Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira | INEP

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**New Growth Acceleration Program**

Novo Programa de Aceleração do Crescimento | Novo PAC

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**Regional Academic Mobility Program for Accredited Courses**

Programa de Mobilidade Acadêmica Regional para Cursos Acreditados no Sistema ArcuSul | MARCA

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**Rio de Janeiro Research Support Foundation**

Fundação de Apoio à Pesquisa do Estado do Rio de Janeiro | FAPERJ

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**São Paulo Research Foundation**

Fundação de Amparo à Pesquisa do Estado de São Paulo | FAPESP

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**Science without Borders – SwB**

Ciência sem Fronteiras | CsF

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**State Research Support Foundations**

Fundações de Apoio a Pesquisa Estaduais | FAPs

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**Student Financing Fund**

Fundo de Financiamento Estudantil | FIES

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**Unified Selection System**

Sistema de Seleção Unificada | SISU

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**University for All Program**

Programa Universidade para Todos | ProUni

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# Higher Education in Brazil: **An Overview**

Brazil, a major global and regional economic player, has significantly improved access to education. Primary school enrolment is now widespread and mandatory, and nearly all children attend elementary school. Adult literacy rates have improved, with a focus on reducing disparities between urban and rural areas. Enrolment in secondary schools and universities has grown significantly, with government programs increasing access for low-income students.

However, challenges remain in ensuring equitable access to quality education at all

levels, especially in secondary and higher education, which, while rising, still lags behind the OECD average. Access to quality education remains uneven, influenced by location, socioeconomic status, and ethnicity.

According to the 2023 Higher Education Census by the National Institute for Educational Studies and Research Anísio Teixeira – INEP, an agency under Brazil's Ministry of Education, enrolments are nearing 10 million. In a nation of more than 220 million people, with youth aged 18 to 24 slightly above 22.5 million, 75.7% do not

attend higher education. In other words, three out of four youngsters do not access tertiary education.

Despite these discouraging numbers, in recent years Brazil has implemented a range of policies aimed at increasing access, inclusion, and diversity in its higher education institutions. These initiatives include affirmative action programs, expansion

of federal universities and institutes into underserved regions, and financial aid schemes such as scholarships and student loan programs, all designed to reduce social, racial, and regional disparities in higher education. These efforts, along with broader aspects of the Brazilian higher education and research, will be further explored throughout this document.

## **Brazilian Higher Education Structure**

The Brazilian Constitution guarantees education as a public good and a state duty. Compulsory schooling lasts from age 4 to 17. Since 2010, primary and secondary education have been extended to 12 years, with nine years allocated to elementary school and three to secondary school. It is worth mentioning that at the secondary level, schools can also offer technical courses in counter-shift periods, which are after-school periods for their students. The duration varies from 1 to 3 years.

The next milestone after secondary school is higher education, which typically begins with undergraduate courses. During this phase, students concentrate on a particular area of knowledge, and upon graduation, they are equipped to pursue careers in their chosen profession.

Undergraduate programs offer three types of degrees: Bachelor's degrees, which are designed to prepare professionals for the workforce (4-5 years); teacher education degrees, which are aimed at training teachers for primary and secondary education (4 years); and technological degrees, which are shorter (2-3 years) and focus on specialized professional fields.

At the graduate level, the academic master's (2 years) prepares future researchers

to eventually pursue a doctoral degree. The professional master's, on the other hand, emphasizes studies and techniques directly aimed at achieving a high level of professional qualification.

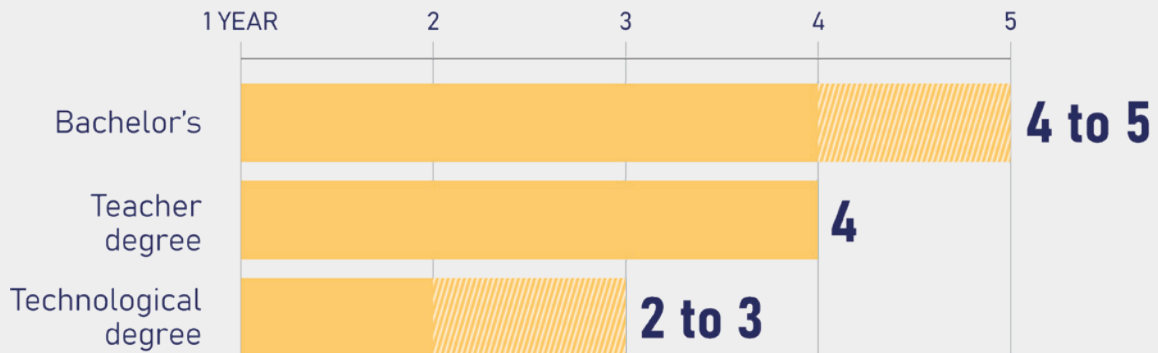
Most doctoral programs typically span four years and often require a master's degree; educational institutions have the autonomy to establish their entrance criteria. Professional master's degrees are generally accepted for doctoral programs as well. Furthermore, since 2017, studies have been increasingly promoted by the Brazilian Federal Agency for Support and Evaluation of Graduate Education – CAPES.

In Brazil, the federal, state, and municipal governments share the responsibility for education. Through the Ministry of Education, the federal government is primarily responsible for regulating and overseeing higher education, including federal universities and national education policies. State governments are mainly responsible for secondary education and also operate state universities. Municipal governments are chiefly in charge of early childhood and primary education. The Brazilian Constitution defines this decentralized structure and aims to promote broad access and efficient management across different educational levels.



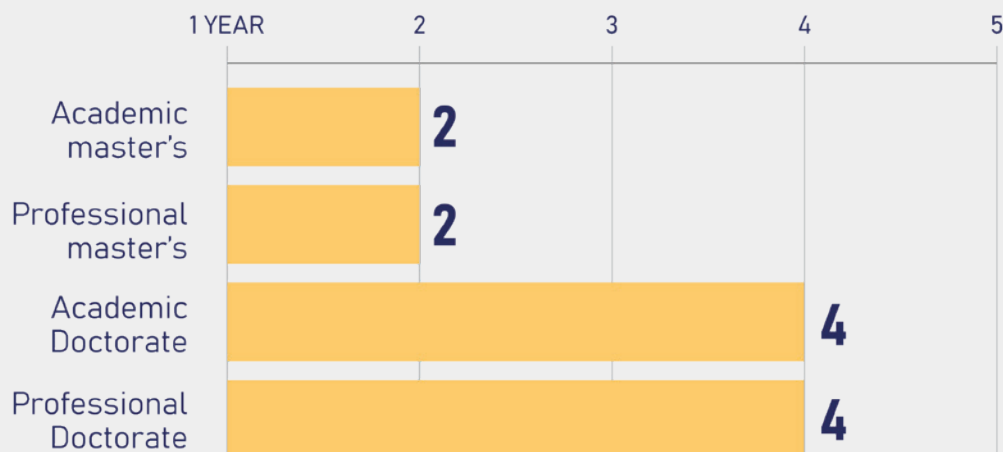
## UNDERGRADUATE

Programs offer three types of degrees



## GRADUATE

Programs offer three types of degrees



## Brazilian Higher Education Institutions

The country has six main types of institutions providing higher education: Universities, University Centers, Colleges, Federal Institutes (FIs), Federal Technological Education Centers (CEFETs), and Colleges

of Technology (FATECs). The Federal Constitution of 1988 guarantees the autonomy of universities and university centers. They can also create and offer new undergraduate courses without prior

approval from the Ministry of Education as long as they meet infrastructure and faculty qualifications and align with national educational policies. However, these institutions must notify the Ministry of Education about new courses for supervision, evaluation, and eventual recognition, which is crucial for the validity of the degrees issued. All other higher education institutions (HEIs) must obtain prior authorization from the Ministry of Education to offer new undergraduate programs. This process involves an evaluation of infrastructure, faculty qualifications, and alignment with national educational policies. Besides, only public universities can register diplomas issued by private HEIs.

Concerning the recognition of foreign degrees, public universities are exclusively responsible for the revalidation of undergraduate diplomas obtained abroad, ensuring that the qualification is equivalent to a similar program offered in Brazil. In the case of graduate degrees (master's and doctoral), both public and private universities are authorized to carry out the recognition.

## **Universities**

Universities mandatorily integrate teaching, research, and community engagement activities (extension in Brazil). They serve as multidisciplinary institutions to train higher-level professionals, advance research, extend knowledge, and foster intellectual growth. Key features include:

- Exploration of significant scientific, cultural, regional, and national issues.
- At least one-third of faculty members must hold master's or doctoral degrees.
- A mandate that one-third of faculty members work full-time to ensure dedication to academic pursuits.

## **University Centers**

Accredited university centers are characterized by excellence in teaching across multiple fields of knowledge. This is demonstrated through the qualifications of their faculty and the favorable academic conditions provided to their community. These institutions can independently establish, organize, and terminate higher education courses and programs at their main campus without needing authorization from the Ministry of Education. The difference between university centers and universities is that the former has no duty to serve the community or produce research or extension activities.

## **Colleges**

Colleges are educational institutions focused on specific fields of knowledge without necessarily including research and extension programs. Unlike universities, colleges have limited autonomy and must obtain additional authorization from the Ministry of Education to introduce new programs.

## **Federal Technological Institutes**

Federal Institutes are multi-campus, multi-curricular institutions that integrate Brazil's Federal Network of Professional, Scientific, and Technological Education. They offer secondary, technical, and higher education, including technological, bachelor's, and teacher education degrees, especially in science and professional fields. Graduate programs range from specialization to doctoral levels. Brazil has 38 Federal Institutes (FIs) and two Federal Technological Education Centers (CEFETS).

## **State Technological Colleges**

Some Brazilian states offer institutions similar to Federal Institutes, with São Paulo hosting the largest system. The FATECs

(State Colleges of Technology), managed by the Paula Souza Center (CEETEPS), focus on three-year technological degrees aimed at specific professional fields. There are 79 FATECs across 72 municipalities in

São Paulo. Similar institutions exist in other states, though on a smaller scale, with a shared emphasis on industry ties and meeting labor market demands.

## Brazilian Higher Education in Numbers

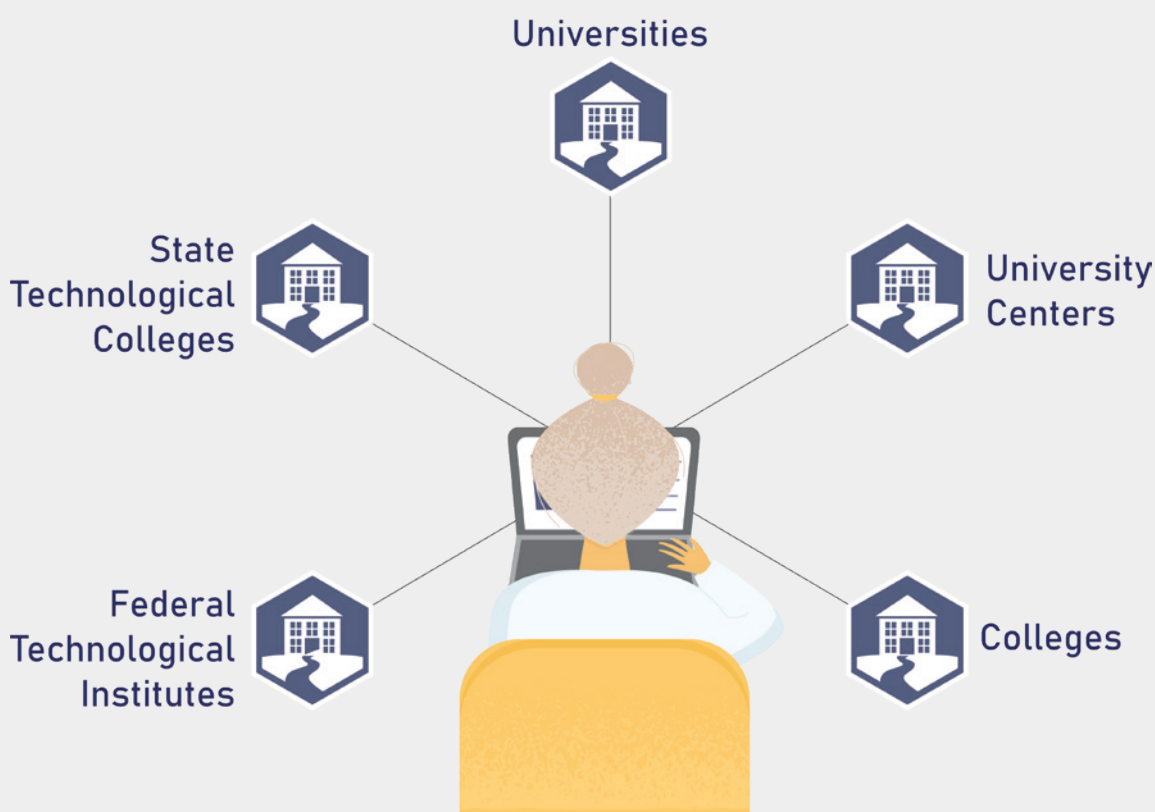
In 2023, Brazil registered 2,580 HEIs: 1,473 private for-profit, 791 private non-profit, and 316 public institutions, including 138 state, 121 federal, and 57 municipal. The distribution of new students is as follows: 74.0% enrolled in private for-profit institutions, 14.6% in private non-profit institutions, 67.1% in federal public

institutions, 3.7% in state public institutions, and 0.5% in municipal public institutions.

Regarding academic organization, 52.5% of the admissions were to universities, 36.3% to university centers, 9.6% to colleges, and 1.5% to Federal Institutes and CEFETs.

## TYPES OF HEIS

Six main types of institutions



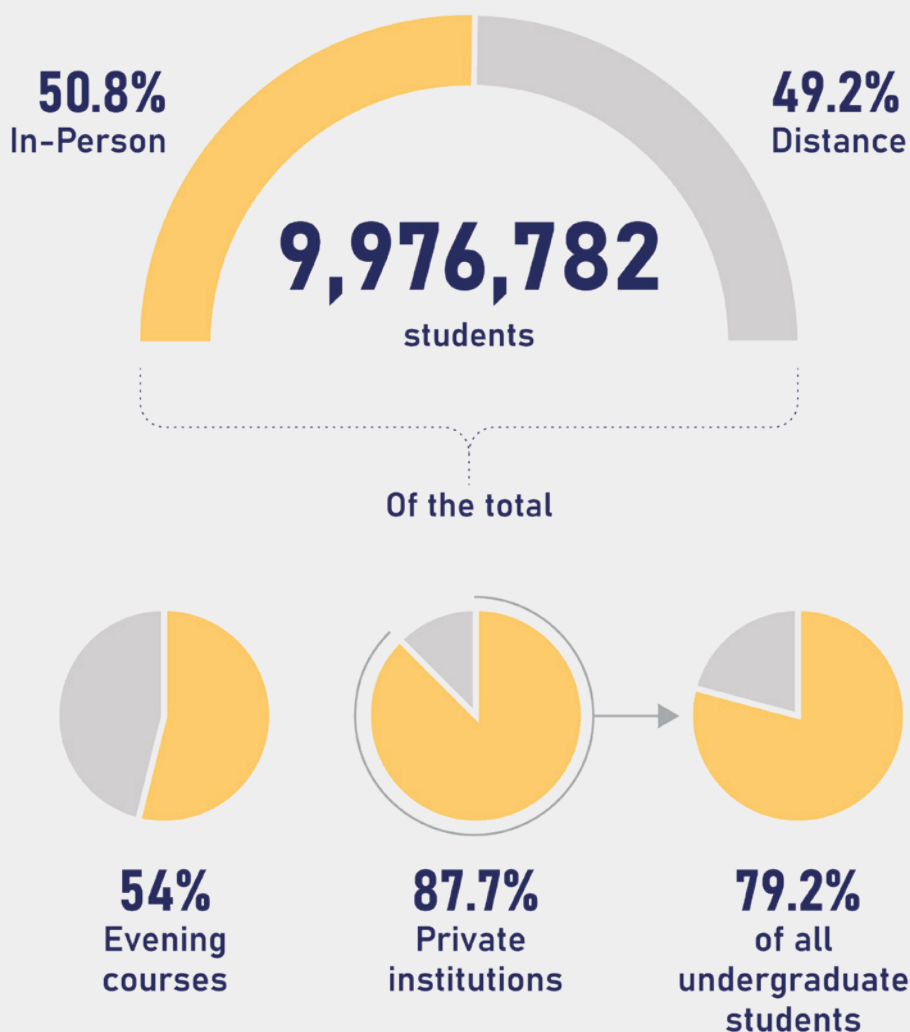
## Enrolment Numbers

According to the recent Higher Education Census by the Ministry of Education (2023), there are 9,976,782 undergraduate students enrolled nationwide, the highest number recorded in nine years. Among them, 50.8% are in in-person programs, while 49.2% are in distance education courses, reflecting the growing trend toward online learning.

Additionally, 54.0% of undergraduates attend evening courses, demonstrating the system's accommodation for working students. Private institutions dominate the higher education landscape: 87.7% of all HEIs in Brazil are privately owned, and they enroll 79.2% of all undergraduate students. These private institutions include both for-profit and nonprofit organizations.

## ENROLLMENT

Undergraduate students enrolled nationwide



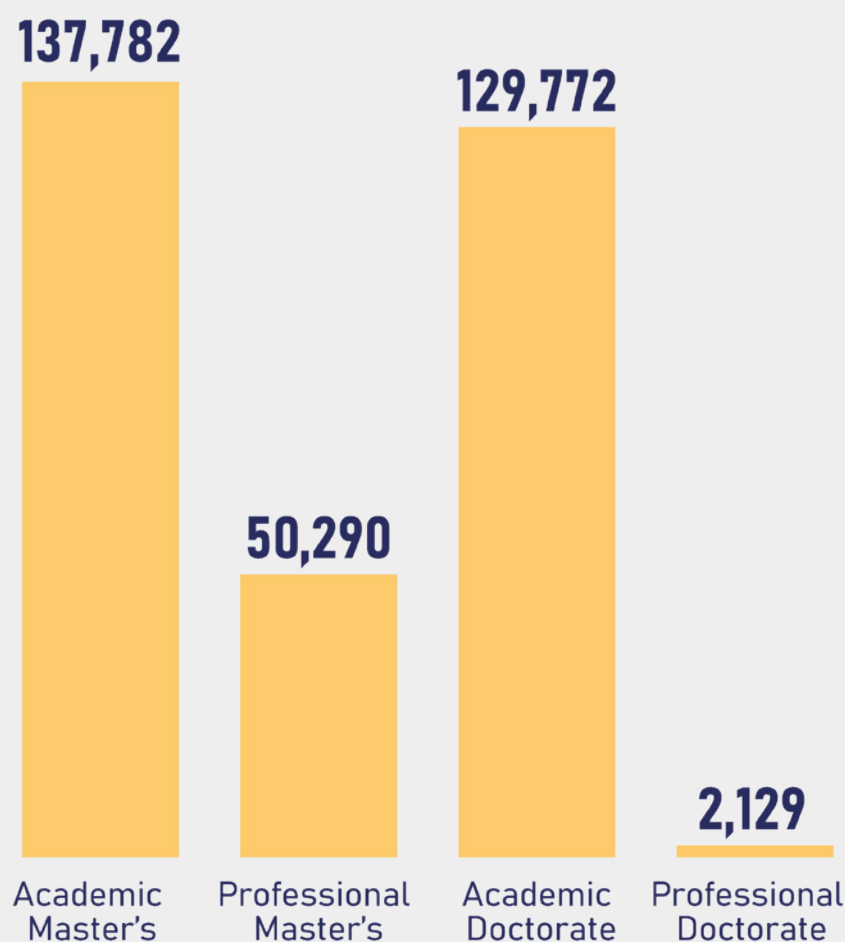
SOURCE: HIGHER EDUCATION CENSUS BY THE MINISTRY OF EDUCATION (2023)

Recent data shows Brazil has over 4,600 graduate programs offered by more than 400 institutions, most of which are public universities. The number of graduate students has grown by 34.2% in the past decade. According to the CAPES Sucupira Platform<sup>1</sup>, which offers the best-connected data on Brazilian graduate studies, in 2023, 137,782 students were enrolled in academic

master's programs: 50,290 in professional master's programs; 129,772 in academic doctoral programs; and 2,129 in professional ones. Public institutions play a central role, accounting for most enrollments and nearly all doctoral training. CAPES evaluates graduate programs every four years, using a quality scale from 1 to 7 for PhD programs, with scores of 6 and 7 indicating international-level excellence.

## GRADUATE STUDENTS IN BRAZIL

The number of graduate students has grown by 34.2% over the past decade, as of 2023



<sup>1</sup> The largest connected platform for Brazilian graduate education. <https://sucupira.capes.gov.br/>.



A study by the National Association of Federal Higher Education Institutions Presidents (Andifes)<sup>2</sup> reveals that 70.2% of students at federal universities come from low-income families, with just over 52%

earning up to one minimum wage. Over the past two years, the percentage of Black, multiracial, and Indigenous students in the public sector has remained steady at 44.1%.

## Access Higher Education in Brazil

Currently, students have two main ways to access undergraduate programs:

- The Unified Selection System – SISU is a system that public HEIs use to admit students. Admissions are based on the institution's specific criteria and are determined by the results of the High School National Exam – ENEM. Some private institutions also use the ENEM for admission, but in this case, they are independent from SISU. Being administered by INEP, it is a nationwide standard that evaluates high school students' knowledge and skills. Additionally, the exam serves as a key tool for the Brazilian government to assess the quality of the country's education system.
- The Entrance exam (*Vestibular*), the oldest and most widely used university entrance method, is primarily utilized by private institutions. However, more than 20 public universities nationwide also conduct their own *vestibular* for specific courses or general undergraduate programs as an alternative option for applicants.

Each institution oversees its selection process, including issuing a public notice

detailing application deadlines and all relevant regulations<sup>3</sup>.

Educational inequalities remain a significant challenge within Brazil's higher education system, reflecting broader social and economic disparities. Despite substantial progress in expanding access to higher education, gaps persist in socioeconomic background, race, and regional distribution of opportunities. Students from underprivileged communities often face barriers to entry and completion, including financial constraints, limited access to quality primary and secondary education, and geographical disparities. Brazilian HEIs and government initiatives have implemented policies such as affirmative action, scholarship programs, and student support services to address these challenges. Below are some of the initiatives developed to respond to these challenges.

### Future Teacher Program

Launched in January 2025, the Future Teacher Program is a federal initiative designed to attract high-performing students to teaching careers in Brazil. Managed by CAPES and aimed at students enrolled in public secondary school, it offers financial incentives to students pursuing teacher

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2 V Pesquisa Nacional de Perfil Socioeconômico e Cultural dos(as) Graduandos(as) das IFES 2018. Mariana Tokarnia, Agência Brasil, 16/05/2019: <https://agenciabrasil.ebc.com.br/educacao/noticia/2019-05/maior-parte-dos-estudantes-de-universidades-federais-e-de-baixa-renda>

3 Source: <https://guiadoestudante.abril.com.br/coluna/redacao-para-o-enem-e-vestibular/nao-e-so-pelo-enem-40-universidades-publicas-ainda-tem-vestibular-com-redacao>

education programs, contributing to new teachers training for basic education.

To be eligible, students must achieve an average score of at least 650 (out of 1000) points in the ENEM and enroll in a teacher education program through SISU, ProUni, or FIES. Once selected, participants receive a scholarship partially granted during their studies and partially made available after they begin working as teachers in public schools.

The scholarship is distributed in two phases: 50% during the course and the remaining 50% after one and two years of teaching in a public education institution, respectively. To maintain eligibility, students must demonstrate academic progress, complete required coursework, and begin teaching within five years of graduation.

The program is part of the broader *More Teachers to Brazil* policy and addresses a critical national challenge: the shortage of qualified teachers. Through financial incentives and a well-defined professional path, the Future Teacher Program aims to elevate the teaching profession and strengthen public education nationwide.

## **The Quota Law – A Transformation in Brazilian Higher Education**

Enacted in August 2012, the Quota Law mandated that 50% of all course seats at the 69 federal universities and 38 federal institutes of education, science, and technology be reserved for students who completed their entire high school education in public schools, either through regular courses or adult education programs. The remaining 50% of seats were available for open competition.

The places reserved for quota students are subdivided: Half for those who have studied in public schools with a gross family income

equal to or less than one and a half minimum wages per capita and half for students from public schools with a family income higher than one and a half minimum wages. In both cases, the minimum percentage corresponding to the sum of Black, multiracial, and Indigenous people per state will also be considered, according to the latest demographic census by the Brazilian Institute of Geography and Statistics – IBGE.

At state universities, internal regulations govern affirmative action, while state laws define the quota system in other institutions. In addition, when universities adopt the ENEM for selection, each may have its own quota system or bonus aimed at a specific group of candidates.

When registering with SISU, the system pulls the data that the candidate provided in their ENEM registration. If the student has informed the system that they attended a public school, they can compete for the SISU quotas.

In November 2023, President Luiz Inácio Lula da Silva signed a new law reforming and expanding the federal education quota system. The revision lowers the maximum family income for quota eligibility to one minimum wage per person. Quilombolas<sup>4</sup> are now included as beneficiaries, and reserved seats will be allocated based on data from the IBGE, reflecting the proportion of Indigenous, Black, multiracial, Quilombola, and individuals with disabilities in each state.

The law also explains that candidates will only be considered for the reserved quota seats (50% of total vacancies) if they do not meet the grade requirements for general competition seats. The measure increases the chances of quota students entering universities and institutes.

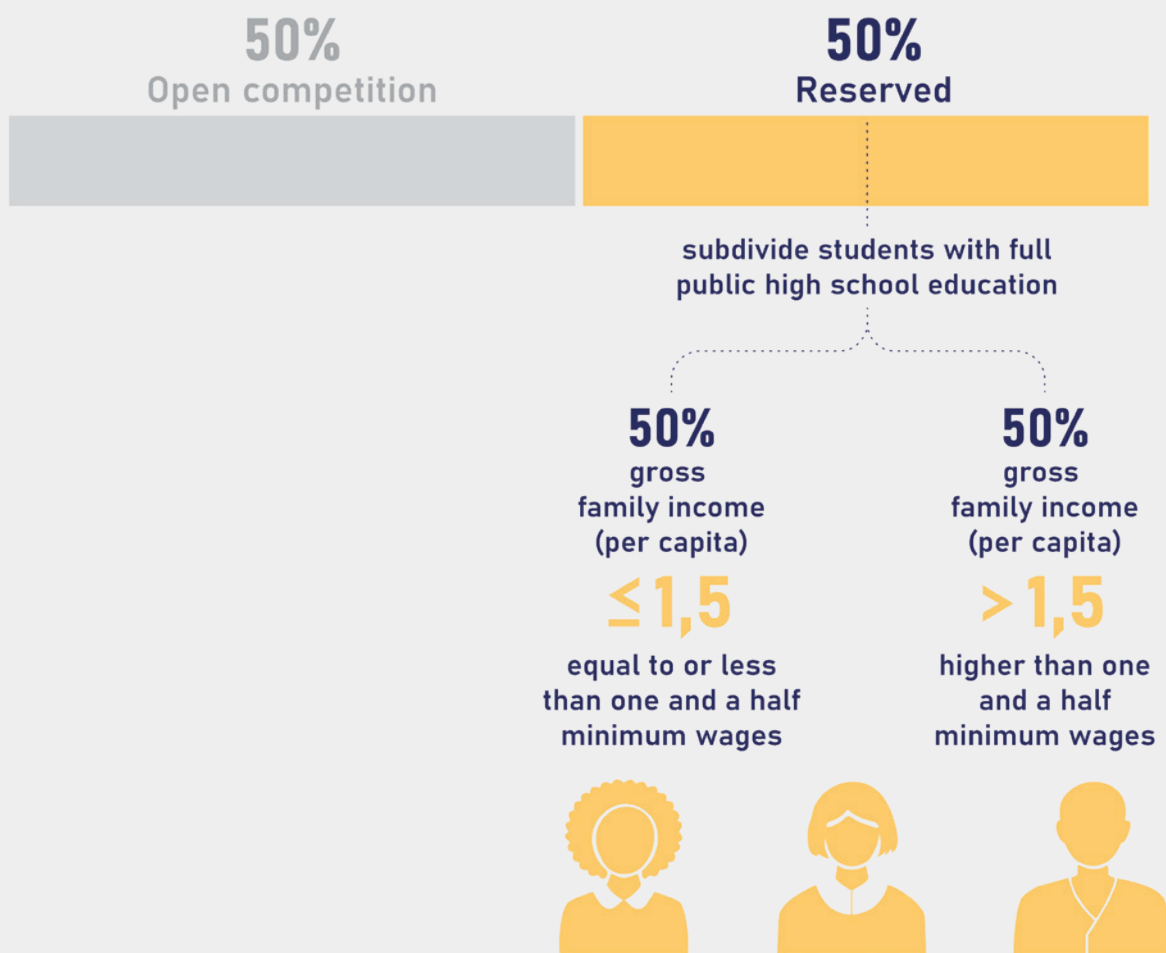
With the policy implementation, the number of Black, multiracial, and Indigenous students entering public higher education (federal and state) through affirmative actions increased

by 167% in the past ten years, mainly due to the 2012 Quota Law. In that year, 40,661 students enrolled in undergraduate courses nationwide. According to the 2023 Higher Education Census, 108,616 students benefited from the year's quotas. Moreover, through quotas, 6.8 thousand people with disabilities entered federal educational institutions.

According to the INEP, students admitted through the quota system have academic performance comparable to or even better than those who enter the general competition. The retention and course completion rates among quota students can be up to 10% higher than in the general competition system.

## THE QUOTA LAW

Enacted in August 2012

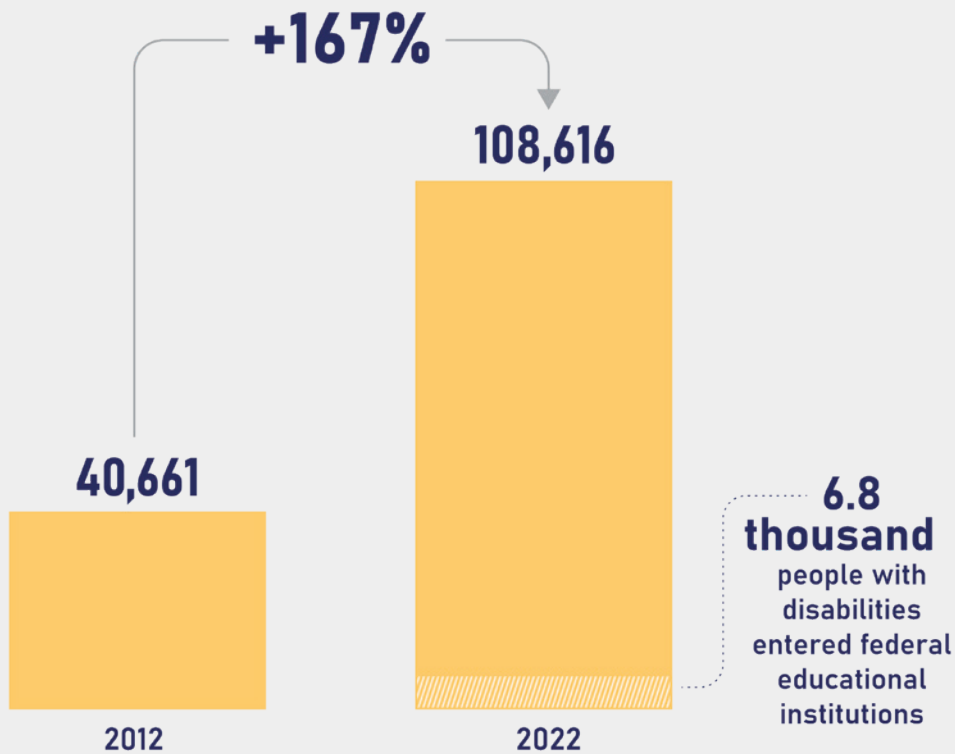


IN BOTH CASES, THE MINIMUM PERCENTAGE CORRESPONDING TO THE SUM OF BLACK, MUTLIRACIAL, AND INDIGENOUS PEOPLE PER STATE WILL ALSO BE CONSIDERED.

4 A Quilombola refers to a descendant of the quilombos, settlements founded by escaped African enslaved people during the colonial period.

## ENROLLMENT

With the policy implementation, the number of Black, multiracial, and Indigenous students entering public higher education (federal and state) through affirmative actions increased exponentially in the past ten years



### Student Financing Fund – FIES

The FIES, established in July 2001, is a Ministry of Education initiative that provides funding for non-free higher education programs that have received a positive evaluation in the National Higher Education Evaluation System – SINAES.

To be eligible, applicants must have participated in the ENEM from the 2010 edition onwards, achieved an average score of 450/1,000 points or higher, and received a score greater than zero on the essay. Additionally, candidates must have a gross monthly family income of up to three minimum wages per person.

In 2023, the program supported 50,186 new students across Brazil, with 68.2% of the loans granted to women and 56.1% to Black or

multiracial individuals. Currently, approximately 144,000 students are benefiting from FIES nationwide. These figures underscore the program's role in promoting access to higher education for underrepresented and low-income populations.

### University for All Program - ProUni

The ProUNI, established by the federal government in 2004, provides full and partial (50%) scholarships for undergraduate and sequential courses at private higher education institutions.

The program targets Brazilian students without a higher education degree. ProUni also reserves scholarships for individuals with disabilities and self-declared Indigenous or Black students.

To access ProUni, students must have completed high school in a public school or as a private school student on a scholarship. In addition, only students who took part in at least one of the last two editions of the ENEM before applying for ProUni can enroll. They must also have scored at least 450/1,000 points on average in the exam, with a mark higher than zero in the essay.

As of 2025, ProUni has benefited over 3.4 million students since its inception in

2004. Currently, the program supports approximately 598,000 scholarship recipients enrolled in 1,862 private higher education institutions across Brazil. In 2023, ProUni awarded around 403,900 scholarships, encompassing both full and partial grants. This figure represents a 34% decrease compared to the program's peak in 2017, when over 610,000 scholarships were granted.

## **Academic Rules and Regulations**

The university credit system in Brazil varies by institution and course, but it generally follows a similar structure across most HEIs, particularly public ones. A full-time academic year typically involves around 800 to 1,200 hours of instruction. This estimate is based on a semester

course load of 20 to 30 credits, with each credit representing usually 50 minutes of instruction per week over a semester lasting approximately 18 weeks. Moreover, the grading system ranges from 1 to 10, with students needing a score equal to or higher than 5 to pass.





# Graduate System

Brazil's graduate education system has expanded significantly over the years, reflecting the country's commitment to higher education and research. The number of master's and doctoral degrees has grown steadily, driven by the increasing number of universities and research institutions, as well as substantial support from funding agencies such as the Brazilian Federal Agency for Support and Evaluation of Graduate Education – CAPES. These organizations play a central role in shaping graduate programs by

providing scholarships, research grants, and quality evaluation mechanisms. As a result, Brazil has developed a robust academic environment that fosters advanced research and professional qualifications across a wide range of disciplines. The graduate system is structured to accommodate different academic and professional needs, offering distinct programs catering to students pursuing careers in academia, industry, non-governmental organizations and the public sector.

## Master's Degrees

In Brazil, master's degree programs fall into two main categories: *Lato sensu* and *stricto sensu*. Each serves distinct academic and professional purposes. Additionally, specialization courses are often categorized under *lato sensu*, but they possess differing characteristics. *Lato sensu* programs primarily target professional development and advanced training in a specific field.

They include specialization courses and MBA (Master of Business Administration) programs tailored to professionals seeking to deepen their expertise and enhance their career prospects. These programs typically last between one and two years, requiring students to complete coursework and a final paper or project. Unlike *stricto sensu* degrees, *lato sensu* programs do not lead to

an academic title of “Master.” Instead, they confer a certification of completion.

Stricto sensu programs include academic master’s degrees (*Mestrado Acadêmico*) and professional master’s degrees (*Mestrado Profissional*), both recognized as complete master’s degrees. The *Mestrado Acadêmico* is research-oriented, preparing students for doctoral studies or academic careers. It typically takes two years to complete and involves coursework, research activities, and a thesis defense. On the other hand, the *Mestrado Profissional*, while also rigorous, emphasizes the application of research in industry or professional settings, making it more practice-oriented than the academic master’s program.

Finally, Specialization Programs are a subset of lato sensu programs and provide in-depth knowledge in a specific field without

incorporating research components. They are highly sought after in business, law, health, and education, where professionals benefit from updated training without following an academic research path. These courses must adhere to regulations established by the Brazilian Ministry of Education and require a minimum of 360 hours of study.

While all these programs contribute to advancing knowledge and professional qualifications, the key distinction lies in their purpose: Stricto sensu degrees focus on academic research and deep specialization, and lato sensu and specialization programs emphasize professional skill enhancement and applied knowledge. Recent data (2023) shows that Brazil awarded over 66,000 master’s degrees, including academic (*Mestrado Acadêmico*) and professional (*Mestrado Profissional*) degrees.

## Doctoral Degrees

Brazil awards over 25,000 doctoral degrees annually, reflecting the growth of graduate education and research output in the country, particularly in health sciences, engineering, and social sciences.

However, the number of PhD holders per 100,000 inhabitants in the country is 10, three times lower than the OECD average of 30. The gap is even wider for master’s degree holders, with the country having only 29 per 100,000, compared to 300 in OECD nations.

More recently, alongside academic doctoral degrees, professional PhD degrees have also been offered.

The professional doctorate degree aims to train professionals with a high capacity to generate and apply knowledge in their areas of expertise. Unlike academic doctorates, professional doctorates focus on solving practical problems and developing innovative solutions for the market.

In Brazil, there are 6,988 stricto sensu postgraduate programs, which include master and doctoral degrees, both academic and professional. Specifically, there are 4,559 doctoral programs, covering both academic and professional doctorates. In 2023, more than 350,000 enrolments were registered in stricto sensu graduate courses.

Reduced budgets for the Ministries of Education and of Science, Technology, and Innovation along with the decrease or stagnation of scholarship values for graduate studies over the past decade have caused qualified professionals to leave graduate programs.

Furthermore, the prolonged devaluation of universities and research institutes since 2019—driven by the misguided belief that training doctors was not strategically important — has severely hindered the country’s scientific progress, which flourished until 2015.

“Reconstruction efforts began in 2023, featuring a 40% increase in the value of graduate scholarships, a rise in the number of available scholarships, the implementation of policies to address disparities, and the revival of strategic programs,” affirms Denise Pires de Carvalho<sup>5</sup>, CAPES President. She also addresses the funding issue: “The budget

for CAPES was restored to R\$2.45 billion, approximately 50% more than in 2022. The number of institutional master’s and doctoral scholarships has reached a historic high, and the National Graduate System has surpassed 350,000 enrolments. Graduation rates have returned to their peak levels, while the dropout rate is at its lowest in the past decade.”<sup>6</sup>

## Comparison to Europe

The first cycle corresponds to the Brazilian undergraduate bachelor’s, teacher education, and technological degrees. The second cycle, which is 60 ECTS (European Credit Transfer and Accumulation System), can be compared to the Brazilian lato sensu<sup>7</sup> graduate degree, also called the specialization program (no

thesis), which usually takes one year to complete. The 120 ECTS master’s with a thesis corresponds to the Brazilian master’s programs called stricto sensu graduate degrees. The Third Cycle in the Bologna process would be equivalent to the Brazilian doctoral degree, but it lasts four years instead of three.

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5 Reconstruindo a pós-graduação brasileira, Denise Pires Carvalho. Folha de São Paulo, July 20, 2024. <https://www1.folha.uol.com.br/opiniaio/2024/07/reconstruindo-a-pos-graduacao-brasileira.shtml>

6 This amount corresponded to US\$ 457,9 million.

7 Lato sensu graduate courses are specialization courses that have a minimum duration of 360 hours. At the end of the course the student obtains a certificate. <https://www.gov.br/mre/en/subjects/culture-and-education/educational-themes/study-opportunities-for-international-applicants/higher-education-in-brazil>



# The Brazilian Research Landscape

According to Clarivate's report<sup>8</sup>, the Panorama of Changes in Research in Brazil, which analyzes recent transformations in the country's research landscape, while the Brazilian research base's overall performance is slightly below international averages, the country ranks 13th in the world in terms of publications.

Over the past decade, the percentage of Brazilian articles with international co-authors has increased from 28% in 2014 to 38% in 2023. The United States remains Brazil's primary international collaborator, accounting for 12.8% of Brazilian publications

co-authored with U.S. researchers. Collaborations with Spain, Germany, France, Italy, and Portugal comprise over 20% of co-authored publications. Other relevant partnerships include 5.7% with the United Kingdom, 3.6% with Canada, 2.8% with Australia, and 2.2% with China. Notably, while collaborations with Brazil account for a relatively small share of research output from other nations, 11.4% of publications from Portugal feature Brazilian co-authors. It is important to note that most of these articles with international co-authors are in English, increasing their dissemination and impact.

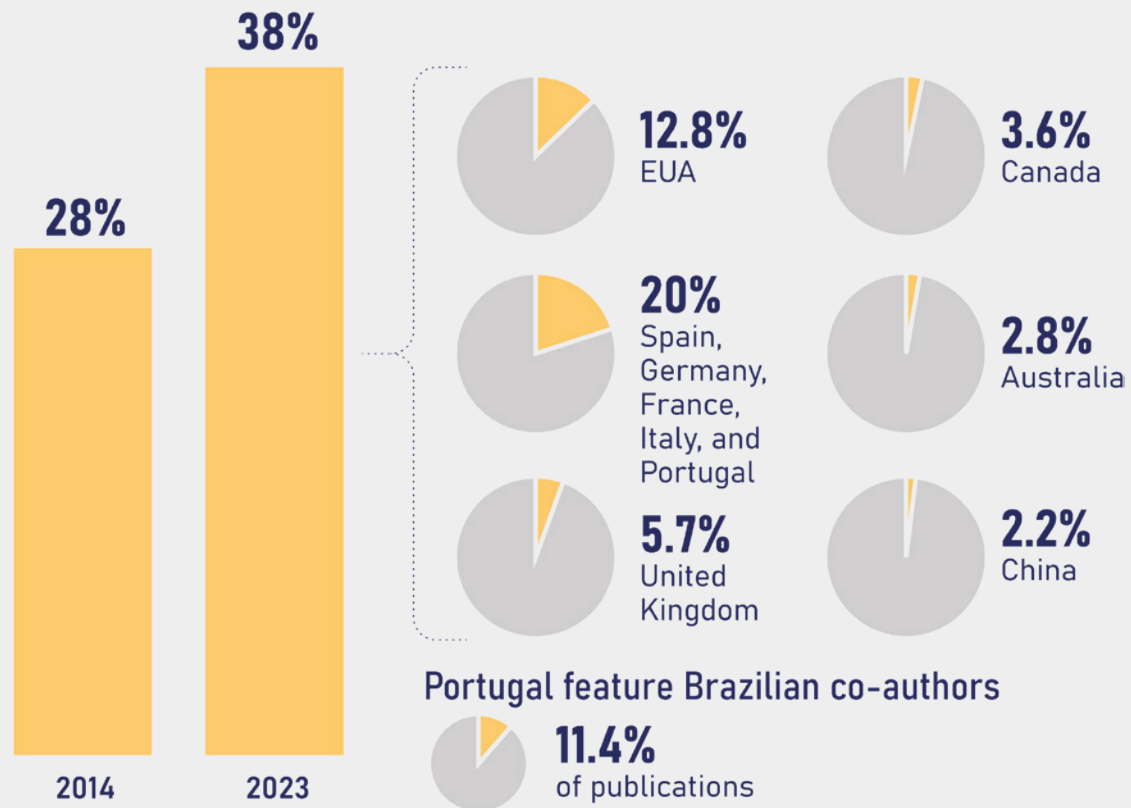
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<sup>8</sup> Relatório Clarivate: Panorama das Mudanças na Pesquisa no Brasil. August, 2024.  
[https://www.abcd.usp.br/wp-content/uploads/2024/08/Relatorio\\_panorama\\_da\\_pesquisa\\_brasil\\_clarivate-capes-agosto-2024.pdf](https://www.abcd.usp.br/wp-content/uploads/2024/08/Relatorio_panorama_da_pesquisa_brasil_clarivate-capes-agosto-2024.pdf)



## BRAZILIAN PUBLICATIONS WITH INTERNATIONAL CO-AUTHORS

Over the past decade, the percentage of Brazilian articles with international co-authors has increased



IT IS IMPORTANT TO NOTE THAT MOST OF THESE ARTICLES WITH INTERNATIONAL CO-AUTHORS ARE IN ENGLISH, INCREASING THEIR DISSEMINATION AND IMPACT.

Brazil collaborates extensively with the pharmaceutical industry, focusing on clinical trial research. Approximately 25% of all research articles in Brazil involving industry collaboration relate to clinical studies. The following are some interesting facts about Brazil's scientific research scenario.

- With 6,304 publications between 2019 and 2023, Brazil is among the top 20 countries researching Artificial Intelligence (AI).
- Compared to other BRICS countries, Brazil strongly prioritizes various United Nations SDGs, including Health and Well-being, Poverty Eradication, Zero Hunger, Quality Education, Gender Equality, Life Below Water, Life on Land, Peace, Justice, and Strong Institutions.
- Brazil produces significant cutting-edge research in environmental, medical, and biological sciences.
- São Paulo is the best-performing state in Brazil across several indicators, followed closely by Rio de Janeiro and Rio Grande do Sul.



## BRAZIL PRODUCES SIGNIFICANT CUTTING-EDGE RESEARCH

With 6,304 publications between 2019 and 2023, Brazil is among the top 20 countries researching Artificial Intelligence (AI)

Compared to other BRICS countries, Brazil strongly prioritizes various United Nations Sustainable Development Goals (SDGs)

Brazil produces significant cutting-edge research



COMPARED TO OTHER BRICS COUNTRIES, BRAZIL STRONGLY PRIORITIZES VARIOUS UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS (SDGs)



## Research Funding Agencies and Organizations

In Brazil, funding agencies are typically government entities that support research through grants that may be available continuously, allowing requests to be made year-round or through special calls for proposals issued at specific times. A few agencies are responsible for most of the calls. They are presented below.

### National Council for Scientific and Technological Development - CNPq

As an agency under the Ministry of Science, Technology, and Innovation, CNPq is

committed to promoting scientific and technological research. It plays a key role in supporting Brazilian researchers' academic and scientific training by funding projects at universities, research institutes, and technology centers in Brazil and abroad.

CNPq finances various research and innovation initiatives, focusing strongly on scientific excellence, technological development, and national priorities. It supports basic and applied research, interdisciplinary collaborations, scientific networks, and partnerships between academia and industry while fostering the

next generation of researchers through scholarships and fellowships linked to the agency's projects.

### **Brazilian Federal Agency for Support and Evaluation of Graduate Education - CAPES**

A foundation under the Ministry of Education, CAPES is committed to expanding and consolidating Brazil's graduate system (master's and doctoral programs). CAPES' activities are organized into several key areas, including evaluating graduate studies, accessing and disseminating scientific research, investing in developing high-level personnel domestically and internationally, promoting international scientific cooperation, and initiating and advancing initial training for basic education teachers (since 2007).

The evaluation of the graduate system is carried out using committees established by CAPES for different topics. These committees are made up of professors who work in specific areas. Every four years, an evaluation is carried out, to which all graduate programs are submitted. Programs can receive grades ranging from 1 to 7. Programs graded 1 or 2 are not allowed to issue a diploma and do not receive funding. Programs with a score of 5 are considered national excellence, and those with a score of 6 or 7 and PhD degrees are regarded as international excellence. Logically, the higher the grade a program receives, the more funding it receives from CAPES.

Above all, CAPES is the primary organization responsible for funding graduate scholarships in Brazil. It manages over 100,000 scholarships that support students across various fields of study. The types of scholarships on offer are described below.

### **Financing Agency for Studies and Projects - FINEP**

Established in 1967, FINEP is a public organization under the MCTI. FINEP is critical in advancing Brazil's innovation ecosystem by providing public support for science, technology, and innovation across companies, universities, technological institutes, and other public or private entities involved in research and development (R&D). It operates throughout the innovation chain, concentrating on strategic, foundational, and impactful initiatives to promote sustainable development in Brazil.

By financing R&D and supporting the commercialization of new technologies, FINEP contributes to Brazil's economic development and innovation capacity. As a key institution driving technological advancements and fostering science-based innovation, FINEP's core initiatives include:

- Funding innovation and R&D.
- Providing loans, often with favorable interest rates, and non-repayable grants aimed at public institutions or collaborative projects involving universities and industry.
- Supporting startups and small businesses.
- Funding projects in strategic sectors such as health, energy, agribusiness, aerospace, information technology, and environmental sustainability.
- Fostering partnerships and collaborations with other international and national agencies, such as the Brazilian National Development Bank and CNPq, to co-fund research and innovation projects.
- Funding infrastructure development in Universities and Research Centers.
- Promoting regional development by funding innovation in less economically developed areas of Brazil.

## Brazilian National Council of State Funding Agencies – CONFAP

At the state level, the Brazilian National Council of State Funding Agencies, founded in 2006, brings together 27 State Research Support Foundations – FAPs and plays a pivotal role in the National Science, Technology, and Innovation System. These foundations, affiliated with their respective state governments, are instrumental in strengthening workforce training and providing significant resources for national scientific endeavors. They are essential to the country's scientific and technological development. Although each FAP operates independently, with its criteria, focus areas, and funding programs, they all share the unified goal of advancing scientific progress.

The FAPs focus on four main areas: Funding research projects, training researchers (scholarships), implementing programs and calls for proposals that connect researchers with companies, and sharing research results with the public.

In the context of international collaboration with the European Union's research and innovation funding program, which aims to address significant global challenges and promote scientific advancement, FAP agencies may collaborate with European initiatives or offer funding opportunities that align with the goals of Horizon 2030, a successor to Horizon 2020.

These collaborations, which often call for proposals (*editais*, in Portuguese) to apply for funding for joint research efforts, enable Brazilian researchers and institutions to participate in European research networks and projects focused on areas like climate change, digital transformation, and health, among others. Some FAP agencies also work

with funding counterparts in other countries to co-finance calls.

## The Sao Paulo Research Foundation - FAPESP

Within the CONFAP network, the Sao Paulo Research Foundation stands out as one of Brazil's leading scientific and technological research funding agencies, primarily due to the significant financial resources it invests in. FAPESP supports research across all fields of knowledge by offering scholarships and grants while promoting projects with the potential to develop new technologies and practical applications.

Regarding the offer of scholarships, for example, throughout 2024, FAPESP granted nearly 10,000 research scholarships for master's, doctoral, postdoctoral, and scientific initiation<sup>9</sup> — the highest number recorded in the last ten years. The increase aims to attract and retain researchers in the country, particularly in Sao Paulo state. To achieve this, the agency also announced an adjustment of up to 45% in the amount paid for the scholarships.

In terms of research support, FAPESP runs programs such as the Research Grants - Visiting Researchers and the Research Grants Abroad. It also supports foreign researchers selected through a peer review process and funds researchers affiliated with higher education or research institutions in the State of São Paulo for one month to one year at esteemed research institutions abroad. Moreover, an initiative called Sao Paulo Researchers in International Collaboration<sup>10</sup> was created in 2014 to foster collaboration between researchers from institutions in the Sao Paulo state and their peers abroad.

FAPESP also maintains co-funding programs with international initiatives, such as the

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<sup>9</sup> Scientific initiation refers to an educational activity that provides undergraduate students with early-stage training in scientific research.

<sup>10</sup> <https://fapesp.br/sprint>

partnership with Horizon Europe to support international research collaborations jointly, enabling Brazilian researchers to work alongside their European counterparts on projects addressing pressing global issues. In addition to joint funding with European calls, FAPESP has established numerous agreements with funding agencies, research institutions, and foreign companies to select and co-finance collaborative research in countries such as France, Germany, and the UK, as well as with multinational organizations.

The partnership supports international research collaborations that help Brazilian researchers connect with European counterparts. It focuses on projects that contribute to global challenges. Key thematic areas include Climate Change and Environmental Sustainability, Health and Biotechnology, Digital and Industrial Technologies, Food Security and Agriculture, and Renewable Energy and Green Technologies.

### **Other State Funding Agencies**

In addition to FAPESP, other state-level research foundations have emerged as key

players within the Brazilian research and innovation ecosystem. Notably, the Rio de Janeiro Research Support Foundation – FAPERJ and the Araucária Foundation for the Support of Scientific and Technological Development of the State of Paraná have expanded their role in fostering high-quality research and international collaboration. FAPERJ has strengthened its strategic investments in scientific infrastructure and talent retention, particularly through initiatives targeting young researchers and applied research. Meanwhile, the Araucária Foundation has grown remarkably in recent years, emerging as a key driver of innovation and regional development in southern Brazil. It has launched a range of forward-looking programs focused on sustainability, digital transformation, and university-industry partnerships, while also increasing support for international mobility and collaborative research networks. These institutions, alongside Fapemig, Fapergs and others, exemplify how state-level research agencies actively contribute to Brazil's scientific and technological advancement across diverse regions.



# The Internationalization of the Brazilian Higher Education System

Although the international academic community played a pivotal role in establishing Brazil's first universities at the beginning of the 20th century, and agencies like CAPES and CNPq facilitated numerous generous scholarships for doctoral programs abroad in the 1980s and 1990s, the internationalization of Brazilian higher education institutions as a coordinated policy was not on the agenda for many years.

The modernization and expansion of the Brazilian higher education system have only become a priority for the government, academic leaders, major funding agencies, and representatives of public and private HEIs over the last 25 years. Support and investment in the internationalization of HEIs as an institutional project is relatively recent, emerging mainly in the past 15 years.

Development agencies such as CAPES, CNPq, and the Research Support Foundations simultaneously sustain funding programs for

academic cooperation. They seek to expand the inclusion of students, researchers, and professors from Brazilian HEIs in international networks and joint research projects. These efforts have mainly benefited research groups linked to graduate programs.

However, it should be noted that universities' conservative inertia is broken by external initiatives, usually by public policies that associate changes with regulatory requirements or targeted investments. The Student Exchange Programs, the Science without Borders Program, and the CAPES/PrInt Program exemplify external agency action.

## Student Exchange Programs

Brazilian HEIs actively engage in international collaboration through a wide range of mobility and exchange programs. These initiatives facilitate academic and research cooperation, allowing students, faculty, and



researchers to gain global experience, share knowledge, and strengthen institutional ties. Whether through government-funded scholarships, bilateral agreements, multilateral partnerships or their own programs, Brazilian HEIs offer diverse opportunities for international mobility at undergraduate, graduate, and postdoctoral levels. The following section highlights key programs that support these exchanges, reinforcing Brazil's commitment to academic internationalization and fostering a globally connected higher education ecosystem. Some of these programs are listed below<sup>11</sup>.

### **Science without Borders – SwB**

Launched in 2011, SwB aimed to broaden and internationalize science, technology, and innovation while enhancing Brazilian competitiveness through exchange programs.

Over its duration, the program awarded approximately 101,000 scholarships across various levels, including undergraduate sandwich courses, full PhDs, postdoctoral fellowships, and visiting researcher grants. The primary destinations for these scholarship recipients were countries with strong research infrastructure, notably the United States, the United Kingdom, Canada, Germany, France, Australia, and Portugal. Although SwB ended in 2017 due to budget constraints, it had a lasting impact on Brazilian education and research. It was vital for the internationalization process of several HEIs in the country and to put Brazil in the map of international education.

### **UNESCO/UNU Exchange Programs**

Brazil participates in various international programs promoted by the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the United

Nations University (UNU), which involve student exchanges for research, internships, and academic collaborations with universities nationally and internationally.

### **Brazilian Universities' Bilateral Agreements**

Many universities have established bilateral exchange agreements with institutions abroad. These agreements allow students to study overseas, participate in international research, and host international students in Brazil.

### **Erasmus+**

Through projects submitted by European higher education institutions, Brazilian students can apply to study in Europe through Erasmus+, and European students can come to Brazil for research, internships, or academic exchanges.

### **CAPES-PrInt - Institutional Internationalization Program**

From 2017 to 2024, this program supported the internationalization of 36 Brazilian institutions by funding scholarships for students and researchers to study and collaborate abroad and for international researchers to come to Brazilian HEIs.

PrInt helped Brazilian universities internationalize their research networks and PhD programs by providing funding to connect with foreign partners. Specifically, the program included the following mobility initiatives:

- Visiting Professor Abroad
- Fellowships for faculty to conduct research at partner institutions
- Visiting Professor from an International University
- Postdoc positions for PhD graduates
- Research Stay Abroad for PhD students

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<sup>11</sup> Source: <https://www.gov.br/capes/pt-br/aceso-a-informacao/transparencia-e-prestacao-de-contas/programas-projetos-e-acoas/internacionalizacao/programas-projetos-e-acoas/programas-projetos-e-acoas-2024>

## **CAPES GLOBAL**

Launched in July 2025, the program aims to continue increasing Brazil's participation in the international scientific arena. To achieve this goal, it proposes partnerships between CAPES and HEIs to:

- Create networks of cooperation between national and foreign HEIs.
- Promote interaction among HEIs from different regions.
- Select topics aligned with the Sustainable Development Goals (SDGs) and national priorities.
- Develop academic and scientific education, research, outreach, and innovation.

## **CAPES – Fulbright full PhD program in the U.S.**

Aims at candidates with excellent academic performance and research proposals that cannot, totally or in part, be executed in Brazil.

## **CAPES International Cooperation Programs**

CAPES coordinates several international exchange programs, including partnerships with universities worldwide at the doctoral and postdoctoral levels. These programs focus on research, academic exchange, and cooperation in various fields, including science, technology, and the humanities.

## **CAPES - Cofecub Program**

This program promotes academic cooperation between HEIs in Brazil and France. It includes implementing research projects, creating research networks, and allowing students, researchers, and professors to move freely.

## **CAPES - DAAD Program**

A bilateral cooperation initiative that supports academic exchange and joint research, offering scholarships for Brazilian students and researchers to study in Germany and vice versa.

## **CAPES - Fulbright English Programs**

It promotes the professional development of Brazilian English teachers in the United States.

## **CAPES - AUGM Mobility Program**

Scientific exchange and academic mobility between HEIs in Brazil, Argentina, Bolivia, Chile, Paraguay, and Uruguay.

## **MARCA Program - Faculty Mobility**

The Regional Academic Mobility Program for Accredited Courses (MARCA) is structured around academic association projects by forming an integrated network of accredited undergraduate courses by Mercosul's Regional Accreditation System (ARCU-SUL). Activities include a five-month mobility exchange in which students and faculty may engage, with guaranteed academic recognition by the university of origin of the activities developed at the host university. Fostering cooperation among the South America region, the cultural exchange has reached its 13th edition in bringing higher education institutions from Mercosul's member-states, Argentina, Brazil, Bolivia, Paraguay, and Uruguay, and associates, i.e., Colombia, together in efforts to increase the quality of assessment and accreditation systems and to consolidate regional integration.

## **Move La América Program - CAPES**

It promotes the internationalization of the National Graduate System in Brazil by offering scholarships for students from Latin America to undertake sandwich master's and doctoral programs at HEIs in Brazil.

## **Brazilian Program for Exchange Students - Undergraduate Level - PEC-G**

PEC-G is a Brazilian government initiative that offers students from more than 70 developing countries in all regions of the world the opportunity to pursue undergraduate degrees at Brazilian universities. Managed by the

Ministry of Foreign Affairs and the Ministry of Education, PEC-G fosters international cooperation by granting tuition-free education at public and some private institutions. Eligible candidates must demonstrate proficiency in Portuguese or apply to the PEC-PLE Program (see below) and meet academic requirements set by the annual call for applications. The program aims to strengthen educational and cultural ties between Brazil and partner nations while contributing to developing human resources in these countries.

### **Brazilian Program for Exchange Students - Graduate Level - PEC-PG**

PEC-PG is a Brazilian government initiative that offers students from over 70 developing countries across all regions of the world the opportunity to pursue master's and doctoral degrees at Brazilian universities. Jointly managed by the Ministry of Foreign Affairs, CNPq, and CAPES, PEC-PG offers scholarships covering tuition, living expenses, research support, and partial or total funding costs of returning PEC-PG graduates to their countries of origin. Candidates must meet academic requirements and demonstrate proficiency in Portuguese. The program aims to foster international cooperation, strengthen educational and scientific ties, and contribute to developing highly qualified professionals in partner nations.

### **Brazilian Program for Exchange Students - Portuguese as a Foreign Language - PEC-PLE**

PEC-PLE is a Brazilian government initiative that provides students from 69 developing

countries participating in PEC who are not native Portuguese speakers. It offers a free, one-year intensive Portuguese language and Brazilian culture course to prepare students for the Brazilian Portuguese Proficiency Exam (CELPE-Bras). If successful, students may enroll in an undergraduate program through PEC-G. Jointly managed by the Ministry of Foreign Affairs and the Ministry of Education, PEC-PLE aims to prepare PEC-G students for success in their studies in Brazil and, in doing so, foster international cooperation, strengthen educational and scientific ties, and contribute to developing highly qualified professionals in partner nations.

### **Languages without Borders - IsF**

Although not a specific exchange program, it is worth mentioning that this initiative was created as a complement to the SwB program. Launched initially as English without Borders, it aimed to provide English language training to Brazilian students, enabling them to participate in the mobility opportunities offered by the SwB. As soon as it established itself as the main language policy in Brazilian universities, the expansion and transformation of the now Languages Without Borders program occurred with the incorporation of new languages (English, French, German, Italian, Japanese, Spanish, Portuguese as a foreign language) and the promotion of training not only for students but also as teaching laboratory for future professionals in foreign language teaching. Currently, the program offers online classes to the whole community of the participating universities.



# The Brazilian Association for International Education FAUBAI<sup>12</sup>

Founded in 1988, the Brazilian Association for International Education - FAUBAI - is a non-profit association dedicated to improving the management of international cooperation and plays a fundamental role in the expansion of the internationalization process of higher education. It has over 220 members and represents the diversity of the Brazilian higher education system in terms of the type and nature of public and private HEIs present in all regions of the country.

FAUBAI's main objectives are to develop capacity-building initiatives for Brazilian HEIs in their international activities, to promote

the internationalization of higher education and research in Brazil, to encourage international collaboration at a global level, and to liaise with different actors in the federal government, international diplomacy, and organizations.

FAUBAI strengthens the Brazilian presence at major international education events and fairs, both abroad and in Brazil. Through its initiatives and organization, and with support from the Ministry of Education and Ministry of Foreign Affairs, Brazilian HEIs participate in the most important and largest world events in the field of international education,

<sup>12</sup> This text is based on the chapter by Renée Zicman, *Internationalization of Higher Education in Brazil*, published in the *Bloomsbury Handbook of the Internationalization of Higher Education in the Global South*, edited by Juliet Thondhlana, Evelyn Chiyevo Garwe, Hans de Wit, Jocelyne Gacel-Ávila, Futao Huang and Wondwosen Tamrat, December 2020.



such as NAFSA (Association of International Educators) and EAIE (European Association for International Education), among others.

FAUBAI also works to increase Brazil's participation in international programs and networks. In partnership with Brazilian Embassies abroad, FAUBAI organizes University Collaboration Seminars and Study in Brazilian Fairs, which are held in various European and Latin American countries. FAUBAI has been a significant global player in the field of international education, with substantial participation in international networks and initiatives, such as the NIEA (Network of International Education Associations) and the INILAT (Latin American Initiative for the Internationalization of Higher Education), among others.

Following a global trend observed over the last decades, FAUBAI organizes Foreign

Languages Subjects and Courses on the Brazilian Higher Education Institutions Platform and develops the FAUBAI-BRaVE Brazilian Virtual Exchange, which encourages the implementation of virtual academic exchanges in Brazilian HEIs.

In Brazil, FAUBAI's annual conferences attract around 700 participants from more than 30 countries. These events offer opportunities for networking, capacity building, partnership development, and discussions about the future of international education worldwide, clearly indicating a growing interest in expanding opportunities for mobility and collaboration with Brazilian HEIs.

FAUBAI not only facilitates efficient cooperation among government bodies and agencies involved in the internationalization of higher education, which is recognized in Brazil and abroad, but also aims to ensure strategic planning and long-term, sustainable actions.



# Final Remarks

The internationalization of higher education in Brazil has been a complex and dynamic process that has evolved over several decades, driven by national policies and global trends. The key factors influencing this internationalization include economic development, the need for global competitiveness, and Brazil's commitment to increasing access to higher education.

While there has been significant progress, ongoing challenges require careful attention to policy, funding, and sustainable international collaborations. As Brazil continues to strengthen its higher education system, it must navigate the complexities of globalization, balancing domestic needs with global aspirations.

In conclusion, Brazilian higher education and research system offers a dynamic

and diverse environment for international collaboration. With a strong network of high-quality universities, cutting-edge research institutes, and a commitment to innovation across various disciplines, Brazilian HEIs provide a fertile ground for impactful partnerships. Collaborating with Brazilian institutions grants access to a vast and diverse talent pool, unique biodiversity, renewable energy, digital transformation research opportunities, and funding possibilities through national and international agencies. Moreover, Brazil's strategic position in Latin America and its growing internationalization efforts make it an ideal partner for academic and scientific cooperation, fostering mutual growth and global impact.



**THE BRAZILIAN HIGHER EDUCATION  
AND RESEARCH SYSTEM**

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August 2025



BRAZILIAN ASSOCIATION FOR  
INTERNATIONAL EDUCATION

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