

HIGHER EDUCATION IN 21ST CENTURY BRAZIL: NEW POLITICS, NEW POSSIBILITIES, NEW ACHIEVEMENTS

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In this text, I intend briefly to discuss how Brazilian higher education is at this moment in time. I would like to mention its history and then focus on our higher education policies and innovations in courses and institutions. Moreover, I will explain the increase in higher education student numbers, the racial and social inclusion policies, and the experimental course of ProFis, which is an inclusion program and a general education course developed in an interdisciplinary way at the State University of Campinas, São Paulo, Brazil.

Brief Notes

Brazil is the largest country in South America and the fifth in the world. It is divided into 26 states and federal districts. According to the Brazilian Institute of Geography and Statistics (IBGE), in 2015 the population is 204 million (IBGE, 2015). It is the only country that speaks Portuguese in Latin America, the others mostly speaking Spanish. Brazil was the only one colonized by Portugal.

Brazilian society is made up of people from several different origins: native Indigenous, Portuguese colonizers, black Africans, Europeans, Arabs and Asians. This fact has contribute to the idea of Brazil being “a racial democracy.”

Structure of Education

The current structure of the education system comprises two levels: basic education consisting of twelve years (elementary education—9 years, and high school—3 years) and higher education. Education policies are planned by the Ministry of Education for all states. It defines the guiding principles for education programs that have to be followed by the state governments. They have autonomy to add content to that guideline.

Fundamental education is free for everyone (including adults), and mandatory for children between the ages of 6 and 14. Pre-school education is optional. Middle

school education (the second education level) is free in public schools, but it is not mandatory.

Public and private institutions develop higher education (including graduate degrees). Public institutions have no tuition. The private institutions can be for-profit or nonprofit. The nonprofit institutions are mainly religiously affiliated.

To get into our universities, students must pass a competitive entrance examination (known as the *vestibular*), particularly for the public institutions, and then they take a specific course of study (similar to a major in the US). There are still no general education courses. There is only one experimental course at the State University of Campinas, started in 2011, which is presented in this text.

According to the current educational legislation, Law Nº. 9294/96, municipalities are primarily responsible for elementary and early childhood education, states and the federal district are responsible for elementary plus high school. The federal government is responsible for organizing the higher education system, but state governments can also organize higher education, after having promoted all the high schools.

The Brazilian higher education system had a very late beginning compared to European countries and the US higher education system. It developed very slowly until the middle of the 1900s.

The higher education system was initiated in 1808, a time when the Portuguese Crown was moved to Rio de Janeiro because of the imminent invasion of Napoleon's French Army. Upon arrival, King João VI started to establish national institutions, among them, a Military Engineering Academy, a School of Law and another of Medicine. Higher education was based on the French model in which the students chose their majors prior to taking the entrance exam and after being accepted. The entrance requirement has not changed much from that time. Still now, the student, after being approved by an examination, takes a specific course, and it is almost impossible to change to another.

At the time of the monarchy, we had few institutions of higher education and none were universities. They were all faculties/schools for professional courses (majors) that the Portuguese Crown needed to establish there.

Only in 1934, the first university—University of São Paulo—was founded and it is still today the most important university in the country and in Latin America. It figures as one of the 200 best universities in the 2015–2016 QS Quacquarelli Symonds

ranking, published on September 16, 2015. Science and research were prominently present in its founding charter and remain so even now.

Our higher education history is allied to the political and economic environment and, over time, Brazil has had different periods of a centralized political system, which has affected the development of higher education, its curriculum and its autonomy.

Higher education institutions expanded after 1950. However, the students who had access to higher education came mainly from wealthier backgrounds.

The first major structural change in higher education occurred in 1968 when, through Law 5540/1969, the higher education system was reformed and the number of higher education institutions doubled. However, the reform opened the door for more private institutions, which grew without any regulations. At the end of the 1970s, the Brazilian government stopped authorizing new private institutions. At that time, Brazil was under military rule that ended only in the late 1980s. After 21 years of a military government, Brazil started a period of re-democratization and wrote a new constitution in 1988 that again affected Brazilian higher education. In 1988, a new educational law started to be planned and a new education policy, which is still in effect, was implemented in 1996. It is known as LDB—Foundations and Guidelines for National Education Law (LDB N° 9.394/ 1996).

The LDB allowed more autonomy for higher education institutions to plan their courses, curriculum and governance and so promoted the environment for another expansion. However, this second expansion was also mainly developed by private higher education. The private sector grew by 151.6% between 1996 and 2004 in Brazil. Now the private sector offers two-thirds of available places in higher education (INEP, 2013).

Under this present law, both private and public institutions are running our higher education. Federal, state or municipal governments can run their higher education public institutions. The private sector, managing 87.4% of the institutions, offer most of their courses at night and 66% of the courses belong to the area of Humanities (INEP, 2013).

Institutions of higher education are divided in three categories:

- *Universities* are institutions that conduct teaching and research and have to have at least one-third of the teaching staff with PhDs. They are mainly public, run by the federal and state governments, and have no tuition. Universities have didactic-scientific, administrative, financial and asset

management autonomy, and follow the principle of indivisibility of teaching, research and extension.

- *University Centers* are multi-course institutions that are not required to carry out research, but have autonomy to open new courses without seeking permission from the Ministry of Education. They are mainly private, both for-profit and nonprofit institutions.
- *Integrated Faculties* and *Schools of Higher Education* are smaller institutions with little autonomy and must obtain approval from the Ministry of Education when opening new courses, certificates, or degrees. They are for-profit institutions.

The majority of federal and state institutions are tuition-free universities while municipal governments tend to run smaller institutes, sometimes charging a small amount for tuition (about US \$100). Private higher education institutions fall primarily within the Universities Center, Integrated Faculties and Schools of Higher Education and charge wide-ranging fees, based on the degree programs offered.

According to the 2012 Census of Higher Education, Brazil has 2,416 higher education institutions: 304 (12.6%) are public institutions and 2,112 are private (87.4%, profit and nonprofit). 48.6% of all institutions are located in the Southeast region of Brazil, the most developed and heavily populated region.

Although *Universities* comprise only 8% of higher education institutions, they have 54% of all student enrollment. Most of them (80%) have more than 10,000 students. As the public universities have a better quality of education, the number of candidates per spot can be greater than 30 or 40 for the most popular courses. In some courses with more social status, such as medicine, this number can be higher than 200.

The *University Centers* represent 5.8% of the institutions. *Integrated Faculties* and *Schools of Higher Education* are 84.6%, but these institutions have only 28.8% of overall student enrollment and 98% of them have 1,000 students or fewer.

In Brazil, higher education is perceived as a means to social mobility. And so students from all economic classes look for a spot in a type of undergraduate course. Students can choose from three types of undergraduate courses: baccalaureate, graduate and technological education. The graduate courses are divided in *lato sensu* (Specializations and MBAs) and *strictu sensu* (Masters and Doctorates/PhD).

The Brazilian standard for the undergraduate degree, “baccalaureate” is awarded in most fields, normally requires four years of study to obtain a certificate. Students

who wish to qualify as secondary school teachers must complete a degree course, known as a Licence or a Licentiate, which has also a length of four years, but with a stronger emphasis on teaching methods and pedagogy. Licentiate is the title of a person who holds this academic degree. The term derives from Latin *licentia*, which is applied in the phrases *licentia docendi* meaning *permission to teach*.

Careers such as architecture, engineering, veterinary medicine, psychology and law are completed in five years. A degree in medicine requires six years of study, plus a two-year residency.

All higher education institutions must be accredited by the Ministry of Education. During this process, the curriculum and structure of education offered by the institutions are assessed, among other factors. After that, Faculties are allowed to operate for three years, University Centers and Universities for five years. After these periods, every higher education institution must apply for reaccreditation.

Since 2004, the Brazilian federal government has implemented a series of policies to quantitatively and qualitatively attend to demands for more higher education spots, particularly for less privileged students. Such initiatives constitute the third era for the sector. Higher education spots have again expanded, but mainly through private institutions.

For students from poor backgrounds, there are now in Brazil two main programs for funding tuition to private institutions: a program called PROUNI and another called FIES.

The PROUNI – University for All

The University for All Program—*Programa Universidade para Todos*, or PROUNI—is a Ministry of Education program created in 2005. Its main goal is expanding the number of higher education openings for students from disadvantaged backgrounds by promoting the exchange of scholarships for the exemption of federal taxes, normally payable by private institutions. Through this, economically disadvantaged students receive scholarships of 25%, 50% and 100% of tuition, and there is no need to pay the government back after completion. The participation of private institutions is voluntary, but between its creation in 2005 and 2012, the participation of private institutions increased each year. The program counts on the participation of approximately 70% of them. The PROUNI program has already offered more than 1.7 million scholarships (PROUNI/MEC, 2015).

In order to participate institutions must offer a number of scholarships corresponding to approximately 10% of its regular paying students. The total exemption of federal taxes for 2005 amounted to approximately R\$105.6 million (approximately US \$48 million).

The students can have two types of scholarships: full university fees (awarded to students whose family monthly earnings per capita amount to at most 1.5 times the minimum wage) and partial university fees (25% or 50% of the fees, awarded to students whose monthly earnings per capita amount to at most three times the minimum wage).

According to IBGE (2015) in ten years of the PROUNI program, the percentage of Afro-descendants aged 18 to 24 in higher education tripled. Currently they receive more than 60% of Prouni scholarships.

FIES

Financing Higher Education Student Fund (FIES) is also a Ministry of Education program to finance students enrolled in private higher education institutions. The financing percentage can reach up to 100% of the tuition. Students have their tuition financed until completion of the course and have a grace period of three times the regular duration of the course for repayment at a rate of 3.4% per year. FIES had 700,000 active financing contracts by the end of 2011 (FIES/MEC, 2015). Beginning with the second half of 2015, loans granted by FIES resources have an interest rate of 6.5% per year.

To apply for FIES, students must be regularly enrolled in tuition-based institutions that are registered in the FIES program and have received a positive assessment in the processes conducted by the Ministry of Education.

Since 2007, PROUNI and FIES have been working together and students who have a PROUNI partial scholarship (25% or 50%) may request FIES to finance the rest of their fees, ensuring their permanence in private higher education institutions.

Plan of Reorganization an Expanding of Federal Universities—REUNI

REUNI—Plan of Reorganization and Expansion of Federal Universities—is a program to expand the higher education system in federal universities. It was created in 2007 by the Ministry of Education. This program aims for economic and social development by expanding the number of undergraduate courses in public universities,

increasing the number of evening courses, and attending to student demands. The Ministry of Education ensures financial resources for innovative plans, university infrastructure restructuring, new equipment and all the necessary devices related to a new academic expansion.

The program supports universities in developing projects aimed at **extending the offer**, academic and curricular reorganization, pedagogical renewal, intra- and inter-institutional mobility, social inclusion and support from the postgraduate level for the development and qualitative improvement of undergraduate courses. Currently all federal universities have benefited from the program.

According to the general guidelines, REUNI aims also to create conditions for increased access and retention in higher education at the undergraduate level in federal universities.

REUNI is going into its second phase having reached only about 40% of its objectives (REUNI/MEC, 2015).

Affirmative Actions – The Quota Policy

Since 2001, Brazilian universities have been implementing affirmative action policies to correct the social, ethnic and racial disparities in university admissions.

In 2012, Brazil established a Law of Social Quotas aiming to reduce inequality and promote equity. Affirmative action has the primary aim of reversing the negative representation of socially and economically disadvantaged students and Brazilian African descendants in higher education. In Brazil, there is a strong understanding that higher education can give opportunities to poor students to overcome their disadvantaged backgrounds. Affirmative action hopes to overcome prejudice and racism.

The Law of Social Quotas demands that, until 2016, all public universities reserve 50% of their places for students coming from primary and secondary public schools and low-income families. This law has an economic inclusion and social justice intention (MEC/COTAS, 2012).

According to the law, among the 50% of reserved places a percentage must go to students who are self-declared Brazilian African descendants or indigenous (native Brazilian). The number of seats reserved for Brazilian African descendants and indigenous students will vary according to the racial population proportion of each

Brazilian state.¹ Affirmative action can be seen as a class quota containing a racial quota policy.

The majority of Brazilian universities with affirmative action programs cover more than one beneficiary group. No Brazilian university currently has adopted an affirmative action program exclusively for Brazilian African descendants.

For a long time, Brazil was known as a racial democracy with little discrimination, but the higher education Law of Social Quotas recognizes that Brazil has remained far from the ideal of a “racial democracy.” The quota policies intend to make access to public higher education, which is the best quality higher education, possible for sectors of society that have historically been excluded from it.

In 2003, before the quota law was introduced in Brazil, the State University of Rio de Janeiro (UERJ) was a pioneer of affirmative action and had succeeded with it. Following it, the University of Brasília, in 2004, also started a racial quota system, by requiring each department at the university to reserve 20 percent of its admission spots for students who self-identify as Afro-Brazilian. After that, several other higher education institutions adopted quota systems before the quota law was established.

It is possible to say that after a decade of affirmative action policies (2003–2014), none of the universities that adopted the measures has experienced a decline in the quality of education. The experience has shown that students from quotas succeed very well.

UNICAMP, the university I come from, established in May 2004 the Program for Affirmative Action and Social Inclusion (PAAIS) and since then it is the only affirmative action program that does not reserve quotas in Brazil. It adds 60 points to a standardized average of 500 points to candidates coming from public schools in their entrance examination results. If candidates are also Afro-Brazilian or indigenous, they receive 20 points. As the entrance examination has two phases, students from public schools that passed to the second phase of the examination add to their scores another 90 points in the writing examination, and the Afro-Brazilian or indigenous students add 120 points (PAAIS, 2015).

Internationalization

¹ Half of Brazil's population is of African descent.

Brazilian higher education had very little international engagement until 2000, when it started to make efforts towards internationalization.

Institutions and the government understand that internationalization is important not only for cultural enhancement but also for scientific and economic reasons. It is also an important path to quality higher education by exposing the Brazilian system to international standards, by learning from co-operative work and valuing innovation.

Much of the internationalization experience universities had was about student exchanges. This has been changing since 2000 and universities have established research agreements with foreign counterparts and participated in international networks.

Some Brazilian universities have already had a positive experience with programs as *Double or Joint Degree programs*. It is a program between six Brazilian universities and the French *Écoles Centrales* that has run for more than a decade.

Brazil is a global key player in areas of health science like tropical diseases and parasitology and is relevant in Physics, Space Science and Agricultural Sciences, in which some universities have world-class research laboratories and infrastructure. Brazil also hosts the only synchrotron accelerator light source in Latin America, part of the National Center for Research on Energy and Materials that also has centers for biotechnology, nanotechnology and bioethanol research.

International research projects can be funded by different agencies in Brazil. The federal government maintains the National Council for Scientific and Technological Development (CNPq), which has agreements with 46 foreign agencies.

Despite these projects and actions, according to the OECD (2013) Brazil has the lowest percentage (less than 0.5%) of foreign student enrolment of all OECD partner countries with available data. Of those, 27% come from countries with the same official language, which is not surprising considering that Brazil offers no programs in English at the tertiary level. The number of outgoing students, in general, surpasses that of incoming students. Although there is no tuition for foreigners in the best public universities, any foreign presence on Brazilian campuses is very limited and one of the reasons is Brazilian universities do not have adequate infrastructure (e.g., dormitories) to host foreign students.

At the end of 2011, the Brazilian Government announced the “Brazil Scientific Mobility Program” (BSMP, formerly called “Science without Borders”). The main purpose of the program is to provide Brazilian students, faculty and researchers an

opportunity to have access to up to date technology and innovation-based educational curricula abroad. The fields of interest are mostly STEM fields that enable Brazilian students to study science, technology, engineering, medicine at the world's best universities. The ambitious project had the aim of sending 101,000 Brazilian students abroad in a short period (CNPq, 2015).

Science without Borders has become the largest scale nationwide scholarship program. The Brazilian federal government through their agencies, CAPES and CNPq, is the primary funder of the program. Science without Borders also aims to attract young investigators and internationally recognized research leaders to Brazil. The period of the scholarship is up to 12 months. This is a one-year non-degree program, as students must return to complete their degrees in Brazil.

Since Science Without Borders started, the number of Brazilians studying on campuses across the United States has increased, making Brazil the 11th country for foreign students in the United States.

The first phase that was developed from 2011 to 2014 had a US\$1.36 billion budget (R\$3 billion) and has been supported by public funds, with approximately a quarter of the funding coming from the private sector.

Host institutions are found in 43 countries. However, according to CNPq (2015) five countries have received the largest share of Science without Borders students until 2014:

United States 32%

United Kingdom 18%;

Canada 8%;

France 8%;

Germany 7%.

In this period, 83,184 students had scholarships. In the student experience evaluation, 58% pointed out it was a very good experience. Only 5% evaluate it as “weak” experience (CNPq, 2015). According to the two financing agencies, CNPq and CAPES, the program has already had an extremely significant social return.

In 2015, Brazil announced a new phase for the Program that will remain focused on STEM (Science, Technology, Engineering, and Math) fields. Additional details on post-2014 program implementation are still to come.

International Universities

The Ministry of Education has created two international universities with the aim of contributing to the integration and reduction of social and regional inequalities, particularly in Latin America and the in Community of Portuguese Language Countries (CPLP): Federal University for Latin American Integration (UNILA) and University for Portuguese-Afro-Brazilian Integration (UNILAB).

The Federal University of Latin American Integration (UNILA) is a public university, created in 2010, connected to the network of federal universities in Brazil. UNILA is a bilingual university, where Portuguese and Spanish are used. It is located at the tri-national border shared by Brazil, Argentina and Paraguay. The university emphasizes natural resources, social studies, technical cooperation among universities, and integration in areas considered important for regional development. Its mission is to contribute to Latin American integration, with emphasis on Mercosur (Common Market of the South, integrated by Argentina, Brazil, Uruguay and five Associate Countries—Bolivia, Chile, Peru, Colombia, Ecuador). UNILA now runs 24 undergraduate courses, 12 of them for teacher training and 16 that run at night. Most students have scholarships. It is also developing two graduate courses: a Master's in Interdisciplinary Latin American Studies and a Master's in Contemporary Integration of Latin America.²

The second international university is The University for Portuguese-Afro-Brazilian Integration (UNILAB). Its mission is to develop research and promote university expansion with a vocation for solidarity exchange and cooperation with the other member states of the Community of Portuguese Language Countries (CPLP) and Latin America. Courses are offered mainly in areas of mutual interest for Brazil and the other member states of the CPLP, especially emphasizing issues involving teacher education, agricultural development, management, public health, engineering and other areas considered strategic.

These two international universities have as a common goal helping to reduce social and regional inequalities.

Quality of Higher Education

Although Brazil has a quite new system of higher education, some universities are classified among the best 200 in the world. The best known is the University of São

² Latin America includes 24 countries: Argentina, Belize, Bolívia, Brasil, Chile, Colômbia, Costa Rica, Cuba, Equador, El Salvador, Guatemala, Haiti, Honduras, México, Nicarágua, Panamá, Paraguai, Peru, República Dominicana, Uruguai e Venezuela.

Paulo (USP) that ranked 132 in the 2012–2013 British Quacquarelli Symonds and 143 in 2015–2016. USP is considered the best university in Latin America. Other rankings placed USP in good positions, too. The 2012 University Ranking by Academic Performance (URAP) ranked it 28th in the world, and the Times Higher Education report, “Top Universities by Reputation 2012,” ranked USP among the top 70 universities in the world.

The State of São Paulo finances three universities: University of São Paulo (USP), State University of Campinas (UNICAMP) and São Paulo State University (UNESP). The State University of Campinas (UNICAMP), the university I come from, can be considered a young institution. It was founded in 1966, but has already developed a strong tradition in education, research and service to society. It figures in the 195th position among the 200 best universities of the world, measured by 2015–2016 British Quacquarelli Symonds. UNICAMP is responsible today for about 15% of the national scientific production and 10% of all master’s/doctoral degrees conferred in the country. It is known as the third major hub of research and development in Brazil and the largest producer of patent research in the country.

In 2014, the figures of UNICAMP were: faculty, 1,759 (99% with doctorate degree); non-faculty, 8,254; undergraduate academic programs, 66; undergraduate students, 18,698; graduate academic programs, 153—master’s programs, 75, doctoral programs, 70; graduate students, 15,918—master’s, 5,175, doctoral, 6,223, graduates, 2,477; extension courses, 1,133; extension course students, 7,801.

Campinas is a city of one million inhabitants and one of the good cities in Brazil. It is the location of many universities and institutions of higher education (that are not universities). It has a famous National Synchrotron Light Laboratory and the Center for Research and Development in Telecommunications. Since 1995, it has been a sister city with San Diego.

UNICAMP ProFIS Program — Interdisciplinary Higher Education Program

It is a two-year general education undergraduate program, established in 2011, whose purpose is to increase access for low-income and minority students to the university in an innovative way.

ProFIS aims to develop student skills in the following areas: critical analysis, abstract reasoning, written and oral communication, knowledge of the natural world,

teamwork and problem solving, quantitative and qualitative research and the ability to transfer knowledge from one scenario to another.

ProFIS has 9 innovations:

- It is only for students from Campinas public schools, making it a form of social inclusion.
- Each of the 92 Campinas public schools has at least one spot for its students; there are 120 places each year.
- Every student has a scholarship.
- It is a full-time course.
- It is a general education course
- It is an interdisciplinary course.
- Every student develops a research project during one year (called Scientific Initiation).
- Students have pedagogic support for their learning difficulties.
- Students have support for their career choice.
- After ProFIS, students are admitted to a four- or five-year undergraduate program at UNICAMP without having to pass an admission exam. The student selection is based on their performance.

The curriculum is comprised of 28 mandatory and some elective courses. All of the research evaluation shows that ProFIS is fulfilling its aims.

Higher Education Census and the New Era

The Higher Education Census annually collects data in the country. The latest was in 2013 and it counted more than 7 million students. Since 2013, this number has increased 17.1%. Of the 7 million students: 54.2% are in universities, 15.4% in University Centers and 28.8% in Faculties. In Brazil, as pointed out before, there are more students in private institutions (73%) than in public ones (27%).

According to the 2013 Census, the vast majority of students are from the wealthy families and the percentage representation is 10 times more than that of students from poor families (69% and 6% respectively). There are more women than men in the student population (56.1% and 43.9%). When race or color is considered, 58% of students are white, 39% are Afro-Brazilian, 2% Asian and 1% indigenous.

According to this Census, 63% of students study at night and in private Integrated Faculty Institutions. Universities offer their courses primarily during the day.

Brazil spends 6.6% of its GDP on education and intends to spend 10% by 2020.

Distance Learning (EAD) in Brazil

In Brazil, the distance learning started in 1939 by delivering education via the post office. In the 1970s, radio and television began to offer courses. One of these programs was the Minerva Project, prepared by the federal government to assist in adult education. The third generation of distance education began with the Internet and the emergence of interactive environments such as chats, forums and emails.

According to 2013 Distance Education Census, Brazil offers 15,000 distance education courses, plus 6,500 disciplines associated with classroom courses. Of the course offered 56% are graduate and 32% are undergraduate courses. However, the number of students is larger in undergraduate courses (65%) than in graduate (CENSO EAD/2013)

Private institutions offer most of distance education courses (86%) and all are for-profit. Public institutions offer 18% of distance education courses.

The majority of the courses offered are in the social sciences, followed by education, but the largest student enrollment is in engineering (around 442 students per course). Students in distance learning work and study at the same time, and are predominantly female (56%). The range of ages is 31–40. The main goal of students in distance learning is to improve their career or to get the skills to start another career in a better position. All students aim for the market place. Despite these numbers, undergraduate in-person classes are predominant in Brazil.

Final Considerations

The discussion of the importance of higher education has taken place in debates about the relationship between country development and education quality, and also about the importance of higher education for both the individual and the country. Studies has demonstrated that the more educated the people are, the higher capacity they have for innovation and for bringing change to economic structures (Hanushek and Ludger, 2007). Quality in education has the potential to bring about significant growth and poverty reduction.

Brazil has reached universal coverage in primary education. The target now is to universalize secondary education and to improve the quality and the outcomes of the system.

There has been an increase in the number of higher education places both in public and private institutions, including both face-to-face and distance education. These indicate that public funding and policies regulated by the federal government have contributed to the current expansion and constitute a new era of higher education in Brazil.

Higher education is seen as having a fundamental role in the challenges that Brazil faces in order to assure both economic growth and social justice.

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