6

Access to Higher Education in Portugal, Brazil, and Mexico: Tensions Between, and Challenges to, Democratization and Quality

João Ferreira de Oliveira, Belmiro Gil Cabrito and Armando Alcântara Santuário

Introduction

This text analyzes access to higher education (HE) in three countries: Brazil, Portugal, and Mexico, highlighting some of the basic indicators that show the tensions between, and challenges to, democratization and quality. These three countries were chosen for a number of reasons, namely, that they have elitist higher education systems that are in the process of democratization and universalization, that they have public and private higher education, and that public investment in this level of education is very poor. Democratization and universalization of access to quality higher

J. F. de Oliveira (✉)
Faculty of Education, University Federal of Goiás, Goiás, Brazil

B. G. Cabrito
Institute of Education, University of Lisbon, Lisbon, Portugal
e-mail: b.cabrito@ie.ulisboa.pt

A. A. Santuário
National Autonomous University of Mexico, Mexico City, Mexico

A. M. de Albuquerque Moreira et al. (eds.), *Intercultural Studies in Higher Education*, Intercultural Studies in Education,
https://doi.org/10.1007/978-3-030-15758-6_6

education is actually a common challenge facing all three countries under analysis, especially when considering questions of social origin and conditions of selection and entry. It is pertinent to identify and analyze ideas that governments, politicians, and institutions of higher education have provided to ensure greater inclusion and an improvement in the quality of life of young workers. In order to better understanding how these three countries, with different backgrounds, try to solve these common problems, three basic aspects are examined for each of them: (1) the model(s) of selection or the form of access, types of institutions, number of places available, enrollment and the attendance rates, especially for the population aged 18–24 years; (2) the social origin and race of students in the last few decades, considering the characterization of the higher education system in terms of it being an elitist, mass, or universal service system; (3) the challenges of broadening the social strata of recruitment with a view to greater social inclusion.

The Portuguese Case

In Portugal, the Democratic Revolution of April 25, 1974, the "Carnation Revolution," constitutes a historical landmark for the development and democratization of the country. The April Revolution ended a 48-year dictatorship, established a democracy, and re-established citizens' fundamental rights and freedoms. In the social and economic framework sat many of the "achievements of April": a minimum survival pension was established, a minimum wage was set, unemployment benefit was created, the retirement system was expanded, a national health service created, etc. Education also saw change. As early as 1974, compulsory schooling for a period of 6 years was established. In 1986, this universal, public, free schooling was extended to 9 years; in 2008, to 12 years.

All these processes were reflected in HE. Attention was given to this level of education, considering the role it plays in the development of the country (Lopes 2013), through the creation of new higher education institutions (HEIs) and a widening and diversification of supply. Simultaneously, the Portuguese population, aware of the role that higher education plays in social ascension, especially for the most disadvantaged populations

(Bowles 1963; Accardo 1983), showed a rapidly growing interest in this type of education.

Structure of the Portuguese Educational System and Rates of Schooling by Level of Education

The Portuguese educational system consists of *pre-school education* that lasts a total of 3 years and is compulsory only for children who are 5 years old; *basic education* that lasts a total of 9 years; *secondary education* that lasts 3 years; and *higher education* that is structured over 3 cycles (the 1st cycle lasts 3 years and provides degree diplomas; the 2nd cycle lasts 2 years and delivers master's degrees; and the 3rd cycle lasts 4 years, educating students to the doctoral degree).

Pre-school education (children 5 years old) and both basic and secondary education are compulsory, that is, in Portugal, schooling is compulsory until the age of 18. The Portuguese educational system is universal and free. The state supports students with financial difficulties via several different subsidies. For those students who do not wish to continue with higher education, and/or have been regularly unsuccessful during their secondary education, vocational secondary education training is provided.

One of the results of this policy of expansion of education is an increase in the rate of schooling at each level. Regardless of such an increase, attention is still required in order to accomplish a 100% rate of compulsory schooling, something that would certainly also increase the number of higher education candidates. Nevertheless, the fact is that at the beginning of the 1970s the number of students in higher education was around 40,000—today it is around 400,000 (PORDATA 2016). The actual enrollment rate in higher education reached 17.7% in 1990 and grew to around 20% in 2000—currently it is around 30%, denoting its ability to transform into a mass higher education system, in the sense offered by Trow (1973, quoted by Antunes 2017) (Table 6.1).

Higher education is voluntary. There are two subsystems of HE: university higher education and polytechnic higher education. The latter, created in the late 1970s, is characterized by training more closely aligned to the needs of the labor market. Until 1992, public higher education was

Table 6.1 Rate of schooling by level of education

Year	Level of education					
	Pre-school education	Basic education			Secondary education	Higher education
		1st cycle	2nd cycle	3rd cycle		
1990	41.7	100.0	69.2	54.0	28.2	17.7 (1993)
2000	71.6	100.0	87.4	83.9	58.8	20.0 (approx.)
2010	83.9	100.0	93.8	89.5	71.4	31.9
2015	88.5	96.6	88.5	86.5	74.6	31.4
2016	88.4	96.0	87.2	87.1	75.3	33.1
2017	90.8	95.3	87.2	97.7	77.6	–

Source DGEEC/MEd —MCTES | INE, PORDATA, latest update on July 24, 2018

practically free, after which date students were required to pay (currently €1036 per year in the 1st and 2nd cycles, with variable rates in the 3rd cycle). From 1986 private higher education became available, provided by for-profit institutions charging varying monthly fees from institution to institution (usually in the order of €400 or more for the 1st cycle, with variable rates assigned to the 2nd and 3rd cycles).

Higher Education Access and Attendance in Portugal

In Portugal, HE is assumed to be universal—all young people can apply to any HEI, regardless of gender, race, ethnicity, religion, social background, political preference, etc. However, in order to gain access to HE, candidates must complete their secondary education, which requires a final examination by discipline to be successfully completed. These exams take place at the same time across the national. The Portuguese educational curriculum for all compulsory education is the same across the nation and teacher training is provided by the state (Ministry of Education) regardless of the public or private nature of the educational institution in which they teach. Therefore, all students that are eligible—having completed secondary education—will be, in theory, equally well prepared to enter higher education. Students that

are enrolled on vocational secondary courses received a professional diploma and the secondary academic diploma and may also enter higher education, however, it is possible that will be less well prepared than students enrolled in regular secondary education.

In addition, candidates for HE must complete two national exams to gain access, exams that depend on the scientific area they are applying for. Exams for each subject are taken at a specific date and time regardless of the HEI they wish to attend. Admission to an HEI depends on the classification candidates obtain in their exams. Each candidate is given a final classification to access HE—the result of an arithmetic mean of the grades obtained at the end of their secondary education and the exams specifically taken to access HE, this score can never be below than 9.5 on a scale of 0–20.

Candidates can apply for six course/HEI pairs. In public HEIs, the number of places for each course is fixed annually by the Ministry of Higher Education and Scientific Research. Candidates are placed on a national list according to the access note they obtained. If they do not enter any of the selected HEI/course pairs, candidates are free to apply in subsequent years or compete for a place at a private HEI. In these institutions, the number of vacancies is fixed by the institution.

Until 1986, only public higher education existed in Portugal. This level of education was opened up to private initiatives for several reasons: operational issues; public offers not responding to the rapid growth and demand for HE following the April Revolution; and issues of a political nature, that is, HE being open to private initiatives in a neo-liberal framework by a center-right government "advised" by the World Bank.

Currently, public HE has the capacity to accommodate all candidates. However, due to the number of vacancies at each HEI, and the pairs selected by candidates, each school year has some places that remain vacant.

Application to public HE is made in three phases. The first phase takes place in July, after national entrance exams in June and July. The second and third phases of national competition for access to higher education are in September, for vacancies not completed in the first phase.

There is another access route to higher education for individuals over 23 years old, the "Over 23s" program. These individuals apply to a specific HEI and course, completing a general culture test and, if successful (with a

value of at least 9.5 on a scale of 0–20), will then be subject to an interview to assess their life experience and acquired knowledge. This access road is open to all suitably aged individuals, regardless of the academic diploma they possess. This means that an individual who has never attended any level of education can apply for HE as long as they demonstrate, in the access examination, interview, and CV analysis, the ability to successfully attend HE. In this way, the opportunity to access higher education is available to those individuals that did not have access to higher education at the "normal age"—contributing to an increased degree of equity in higher education and reduced social inequalities in Portugal.

Due to the social and economic conditions experienced by the country in the 2008–2015 period, characterized by a strong economic crisis that materialized as a consequence of austerity policies accompanied by an increase in unemployment, the bankruptcy of thousands of companies, the dismissal of thousands of civil servants, and cuts in the salaries of civil servants and in the value of their pensions at retirement, there was a decrease in the number of candidates for HE. Since 2015, after general elections and in accordance with the policy of the current government formed by the Portuguese Socialist Party and supported in Parliament by the Left Bloc and the Portuguese Communist Party, the living conditions of the Portuguese have generally improved and the number of candidates for HE, that is, the number of applicants and the number of candidates placed in the first phase of the national access tender, increased slightly, leading to a reversal of the previous trend (Table 6.2).

Applicants not able to enter the first phase of the competition are able to apply for the other two phases. However, there will always be candidates who fall outside a particular year of application or have not applied and decide to seek a private institution of higher education. Of course, the growing capacity of public HEIs, on the one hand, and the high prices charged by private HEIs and austerity policies, on the other hand, explain the predominance of public higher education (Table 6.3).

Table 6.2 Applicants and vacancies in public higher education (2008–2017)

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Applicant numbers	53,451	52,812	52,178	46,899	45,429	40,785	42,703	48,556	49,655	52,579
Vacancies	50,219	51,352	53,410	53,500	52,258	51,461	50,820	50,595	50,688	50,838
Applicants placed	44,336	45,277	45,592	42,243	40,415	37,415	37,778	42,068	42,958	44,914

Source DGEEC/MEd —MCTES | INE, PORDATA, latest update on July 24, 2018

Table 6.3 Evolution of the number of students in higher education (total and subsystem)

Year	Total	Public HE		Private HE	
		Number	Percentage	Number	Percentage
1995	157,691	119,733	75.9	38,136	24.1
2000	373,745	255,008	68.2	118,737	31.8
2010	383,627	293,828	76.6	89,799	23.4
2015	349,658	292,359	83.6	57,299	16.4
2016	356,399	297,884	83.6	58,515	16.4
2017	361,943	302,596	83.6	59,347	16.4

Source DGEEC/MEd —MCTES | INE, PORDATA, latest update on July 22, 2018

The Social Origin of Students in Higher Education—From a Higher Education of Elites to a Mass Education

In the past, in Portugal, higher education represented a system for the elite (Antunes 2017; Cabrito 2001, 2002). Prior to the 1974 revolution, education in general, and higher education in particular, had as their primary objective the requirement to produce the managers and technical staff required by the country. Less than 1% of university students in 1974 belonged to the less favored social strata; in 1995 this increased to 12.5% (Cabrito 2002). In fact, during the last few decades, participation in HE by youngsters from social groups with lower incomes has increased, even if the system still remains elitist. Table 6.4 shows the level of income perceived by representative samples of public and private HE students questioned on 4 different dates and social structure of Portuguese population according to Census 1991 and Census 2001.

Table 6.4 shows there has been an increase in the percentage of young people from the less favored classes comprising the total number of students attending HE, in a sense creating a mass higher education—although this subsystem of education still remains strongly elitist. Table 6.4 clearly shows the differences in social origin of HE students and the general population. This is similar to the social composition of students at the end of secondary education, taking into account compulsory schooling.

Table 6.4 Socioeconomic structure of students attending higher education and the resident population—over 12 years old, employed (%)

Household income	1994–1995	2004–2005	2010–2011	2015–2016	Resident population, over 12 years old, employed, 1991[a]	Resident population, over 12 years old, employed, 2001[b]
High/ medium-high	14.4	17.3	38.2	36.7	9.9	15.4
Medium	71.8	74.1	43.8	46.7	52.1	57.3
Low	13.8	8.6	18.0	16.6	38.0	27.3

[a]Cabrito (2002); calculated by the author using data from Statistics National Institute, Census 1991, adapted from Almeida et al.'s social typology (1988)
[b]GrupoMarktest (2002) using data from Statistics National Institute, Census 2001 and thousands of interviews according to demographic, cultural, and social indicators (obtained from www.marktest.com on May 29, 2018)
Source Cabrito (2002) and Cerdeira and Cabrito (2017)

Still considering Table 6.4, it should be noted that the financial crisis that the country experienced since 2010 strongly influenced the social structure of the Portuguese population as well as students' perceptions of their social origin—there has been some disintegration of the middle class, having "lost" individuals either to the lower class, because of the explosive increase in unemployment and the bankruptcy of thousands of small companies, or to the upper class, since the crisis increased inequality via the distribution of income across the country (PORDATA 2016). It must be also noticed that the social composition of the resident population presented in the table refer to data from 1991 and 2001, with no more recent data available.

Tensions and Challenges

In view of the above, it is legitimate to say that much has been done in the country toward the democratization of subsystems and the construction of a mass higher education. However, in order to develop this further, it is necessary to create conditions for extending the social base of recruitment of students in HE. To this end, it is essential, on one hand, that all children accomplish secondary education and, on the other hand, to enable young people from lower income groups to enter. For this to happen, a strengthening of the social support system is required, namely by increasing the number of fellows and scholarships, and creating an appealing credit system in particular for young people with the greatest financial difficulties.

Another challenge facing the country is to call out to "university" adults who did not have the opportunity to attend HE at the "normal" age. To this end, it is necessary to create mechanisms to recognize the skills and professional experience of these adults, enabling them to access higher education through alternatives to the "regular" path described above—as is already happening in the case of the "Over 23s." Of course, because these adults will be, for the most part, workers, it is essential that public HEIs provide evening courses and courses running to less common frequencies.

Extending the social base of recruitment and bringing new public to the university also represents the way for Portugal to comply with the

Europe 2020 strategy of increasing, to at least 40%, the percentage of the population aged 30–34 having a diploma of higher education.

Finally, it is essential that the state recognize HE as a public good, investing what funds are necessary into the public system to respond to the social demand for higher education. In fact, state expenses in education as a percentage of GDP have remained almost static for the last two decades (5.03% of GDP in 1999; 5.13% of GDP in 2014), something that is also true for HE (0.94% of GDP in 1999; 0.91% of GDP, in 2014) according to UNESCO (Institute for Statistics, acceded in September 2017).

The Brazilian Case

In Brazil, the struggle to end the military regime (1964–1985) represented, especially in the field of education, a hope of building a democratic society in form and content. Planning, elaboration, and implementation of public policies guaranteed education as a social right. Article 205 of the Federal Constitution of 1988 (CF/1988) established this right by stating that "Education, the right of all and the duty of the State and the family, shall be promoted and encouraged with the collaboration of society, aiming at the full development of the people, their preparation for the exercise of citizenship and their qualification for work."

Since the 1980s, the social demand for access to public education has widened in the context of the CF/1998, the so called *citizens' constitution*. Fighting for public education meant fighting for the expansion of gratuity and compulsory education, especially in terms of a basic education from birth to 17 years of age. In addition, as a principle of educational planning, participatory democratic management and the extension of teaching and school autonomy in the elaboration of the pedagogical–political projects of schools, were demanded. This is delivered in the context of a decentralization of education in which states and municipalities in Brazil create and assume their own educational systems, based on the principle collaboration between federated entities.

In the 1990s, the National Education Guidelines and Framework Law (LDB, Law no. 9.394/1996) was approved. This law gave great importance to evaluation by the Federal Government (the Union) via an education

and evaluation policy. Although it gave greater administrative flexibility to schools and systems, there was a greater centrality in terms of evaluation processes and mechanisms, reinforcing the perspective of a regulatory and evaluating state.

The LDB continued the historical process of decentralization of educational offers, especially because municipalities had been considered autonomous entities since the CF/1988. Therefore, the LDB defined the collaborative competencies of the Union, states, the Federal District and municipalities in terms of responsibilities for the stages and modalities of school education, especially articulated to basic education (0–17 years). In the late 1990s, there was a strong process of municipalization of education in Brazil, primarily because through the LDB municipalities assumed responsibility for early childhood and elementary education, the latter being shared with its respective states. LDB also establishes that the student teacher relationship will be the responsibility of the direction of the school within the framework of its autonomy (LDB, articles 12º to 15º).

Structure of the Brazilian Educational System

The education system in Brazil consists of two levels: basic education and higher education (Table 6.6), as established by the LDB. Basic education (0–17 years) is composed of early childhood education (kindergarten, 0–3 years, and pre-school, 4–5 years), elementary school education (6–14 years), and high school education (15–17 years). The age range of 4–17 years represents mandatory education. Higher education includes undergraduate courses (bachelor's degree, teaching degree, and technologist) and post-graduate *latosensu* (specialization) and *strictosensu* (master's and doctorate degree). Master's or doctorate courses may be academic or professional. Higher education also includes sequential and short-term courses which do not entitle the student to further studies. The educational system also includes various forms of education such as youth and adult education, rural education, distance education, professional education, and special education (Table 6.5).

In general, the concept of basic education can be understood as an important advancement in Brazil. However, it is important to note that

Table 6.5 Percentage of net enrollment rate for the Brazilian population by level and stage of education or teaching

Year	Early childhood education		Elementary school		High school	Higher education	Special education
	0–3 years (%)	4–5 years (%)	6–14 years (%)	Young people up to 16 years (%)	15–17 years (%)	18–24 years (%)	Varying ages at different stages (%)
2001	13.8	66.4	–	49.1	41.2	9.2	–
2002	14.9	67.6	–	52.1	43.4	10.1	–
2003	15.5	69.7	–	56.6	47.4	11.1	–
2004	17.3	71.8	–	58.0	48.4	10.8	–
2005	16.7	72.5	–	58.9	49.5	11.5	–
2006	19.6	76.7	–	60.8	51.0	12.9	–
2007	21.4	78.9	95.3	62.9	52.3	13.3	54.0
2008	23.0	81.1	96.3	64.8	54.4	14.0	60.5
2009	23.2	83.0	96.8	66.3	54.9	14.8	74.2
2011	25.4	85.6	97.0	67.5	56.5	14.9	75.7
2012	25.7	85.9	97.1	69.5	58.2	15.5	76.9
2013	27.9	87.9	97.2	71.7	59.9	16.6	78.8
2014	29.6	89.1	97.5	73.7	61.4	17.7	80.7
2015	30.4	90.5	97.7	76.0	62.7	18.1	82.0

Source Inep/Basic Education Census (2001–2015); Inep/Higher Education Census (2001–2015), adapted by the authors

Table 6.6 Structure of the Brazilian education system

Level	Stage	Duration (in years)	Age group
Higher education	College education	Variable	18–24 years
Basic education	High school	3	15–17 years
	Elementary school	9	6–14 years
	Child education (pre-school)	2	4–5 years
	Early childhood education (kindergarten)	3	0–3 years

Source LDB (law no. 9349/1996), adapted by the authors

in 1996 compulsory schooling did exist for 7–14-year-olds. With the Law no. 11.274/2006, compulsory schooling was extended to 9 years (6–14-year-olds). Subsequently, with Constitutional Amendment no. 59/2009, education became mandatory for 4–17-year-olds, in spite of the fact that Brazil has yet to universalize education for pre-school and high school. Furthermore, school day is four and a half hours long. The number of full-time schools in the country is very small, although the number is growing. The expansion of education that has occurred since the approval of the LDB/1996 has contributed to the universalization of attendance and the recognition of education as a social right, as well as to the greater democratization of access to higher education. Nevertheless, there is still a huge attendance deficit in compulsory education.

In 2016, basic education (0–17 years) registered the following number of pupils: early childhood education—day care, 3,233,739; pre-school, 5,034,353; elementary school education—from 6 to 10 years, 15,346,008; from 11 to 14 years, 12,242,897; and secondary school education—8,131,988. Higher education accounted for 8,048,701 enrollments, of which 6,058,623 (75.3%) were to private HEIs and 1,990,078 (24.7%) public institutions (Fig. 6.1). In 2016, Brazil had a population of 207.7 million.

It can be observed, however, that the net rate, in 2015, was still very low in pre-school (30.4%) and secondary school (62.7%). Elementary school presents a higher percentage of attendance (97.7%) in 4–14-year-olds. Higher education, which registers an expansion, reached a net rate of 18.1% in 2015, still well below the percentages of other Latin American

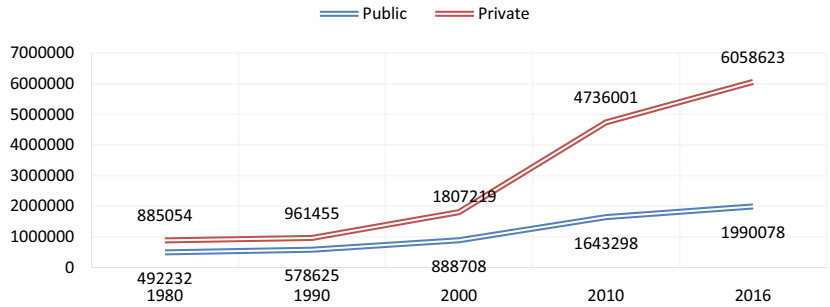

Fig. 6.1 Enrollment in undergraduate courses in public and private HEIs (1980–2016) (*Source* Inep/Higher Education Census [1980, 1990, 2000, 2010, and 2016], adapted by the authors)

countries and well away from the 33% predicted by the Brazil National Education Plan—PNE 2014–2024 (Law no. 13.005/2014). Special education, aimed at people with disabilities, reached 82%, considering all the different age groups and stages. It is important to note that the net service fees have been increasing for all stages.

Higher Education Access and Attendance in Brazil

The history of access to higher education in Brazil, under the perspective of democratization, reveals a permanent tension resulting in continuity and rupture, with the prevalence of continuity under the model of "selection of the best" under the guise of "democratization." The historical apprehension toward the theme highlights the debate about the democratization of access to higher education, equal opportunities, teaching quality, and meritocratic evaluation. From the 2000s, the debate about access was broadened and intensified with the introduction of new themes: the selection process, national high school exams (ENEMs), a unified selection system (SiSu), affirmative action, racial quotas, inclusion, and permanence.

CF/1988 established (Article 208, item V) that the "access to the highest levels of education" must be "according to the capacity of each one." Therefore, access to higher education is not a subjective public right, as in the case of basic education for 4–17-year-olds. In turn, LDB/1996 estab-

lished (Article 44, item II) that access to undergraduate courses is open "for candidates who have completed high school or equivalent and have been classified in a selection process." Therefore, in theory, the law suggests a diversification of the selection processes for entry to higher education. However, since the creation of ENEM in 1998, there has been a substantial standardization of the selection process for access to higher education in Brazil, especially since the creation of SiSu (a unified selection system), instituted by Normative Rule MEC No. 2 of January 26, 2010, by the Ministry of Education (MEC). SiSu established a unified selection process based on the marks obtained in ENEM. The system is computerized and managed by the MEC, to select candidates for vacancies in undergraduate courses offered by public institutions of higher education that participate in the test. There has also been a large expansion in the number of ENEM participants—in 1998 116,000 candidates participated, in 2015 5,811,000 participated. This growth is in large part due to the creation of SiSu, which unifies selection and covers vacancies at all federal institutions of higher education.

It is also worth noting the approval of the Quotas Law (Law no. 12.711/2012), which determines the entrance into federal universities and federal institutions of technical secondary education. This law establishes that federal institutions of higher education, linked to the MEC, "shall reserve, in each competitive contest for admission to undergraduate courses, by course and shift, at least 50% of their vacancies for students who have completed high school in public schools" (Article 1). It also states that 50% of the vacancies must be reserved for students from families with incomes equal to or less than 1.5 times the minimum wage (minimum and average wage) per capita. Vacancies "will be filled by course and shift by self-declared black, brown and indigenous people, and by people with disabilities, according to the legislation, in proportion to the total number of vacancies at least equal to the respective proportion of blacks, brown, indigenous, and disabled people in the population of the Federation unit where the institution is located, according to the last census of the Brazilian Institute of Geography and Statistics (IBGE)" (Article 3).

Table 6.7 shows that there has been a steady increase in course enrollments, admissions, and completions in Brazilian higher education from 2006 to 2016.

Table 6.7 Courses, enrollments, admissions, and completions in Brazilian higher education per year

Year	Courses	Enrollments	Admissions	Completions
2006	23,257	4,944,877	1,998,163	784,218
2007	24,653	5,302,373	2,165,103	806,419
2008	26,059	5,843,322	2,360,035	885,586
2009	28,966	5,985,873	2,081,382	967,558
2010	29,737	6,407,733	2,196,822	980,662
2011	30,616	6,765,540	2,359,409	1,022,711
2012	32,050	7,058,084	2,756,773	1,056,069
2013	32,197	7,322,964	2,749,803	994,812
2014	33,010	7,839,765	3,114,510	1,030,520
2015	33,607	8,033,575	2,922,400	1,152,458
2016	34,440	8,052,254	2,986,636	1,170,960

Source Inep/Higher Education Census (2006–2016), adapted by the authors

The Social Background of Higher Education Students: The Construction of a Mass System

In 2015 a net rate of 18.1% of the population of 18–24-year-olds were registered in Brazilian higher education. This indicates that the system is still considerably elitist. In addition, the richest fraction of the population usually enter the most prestigious undergraduate courses. This underwent changes with the approval of the Quotas Law in 2012 in so far as the law reserved at least 50% of HE vacancies for students who completed public high school.

Table 6.8 shows the distribution of Brazilian higher education students (18–24-year-olds) by income. It is clear that higher education access by the poorest and middle social classes from 2006 to 2015 has improved. However, the predominance of the richest 20% has also increased.

Tensions and Challenges

Brazil's historical elements and educational indicators show that there has been a certain process of expansion and democratization of access at all levels and stages of education since the country's re-democratization, even though educational deficits exist that need to be corrected (Oliveira 2013).

Table 6.8 Distribution of Brazilian high school students (18–24-year-olds) by income

Fraction	2006–2008 (%)	2009–2012 (%)	2013–2015 (%)
20% poorest	1.5	3.4	4.9
2nd fifth of income	2.8	5.3	9.1
3rd fifth of income	7.3	10.9	15.5
4th fifth of income	16.8	21.2	26.0
20% richest	48.2	49.9	53.1

Source IBGE/Pnad (2006–2015), adapted by the authors

Social inequality accentuated by regional and state asymmetries, given the inequality in the country, makes this task even more difficult.

There is a large contingent of children and young adults who evade, or are out of the school system. The net high school rate (62.7%) is certainly a strong obstacle to the expansion of higher education. Brazil is far from having a massive system of higher education, since it has only achieved 18.1% of the 18–24-year-old population. In addition, offers to higher education are predominantly private (75.3%). The Quotas Law (Law no. 12.711/2012) contributed to increasing entrance to higher education by the poorest and the middle classes, but the system is still considerably elitist.

The National Education Plan—PNE 2014–2024, represents an ambitious target for access to higher education—to achieve, by 2024, an enrollment of 33% for 18–24-year-olds. This would represent a "revolution" in terms of access to higher education in Brazil (Oliveira 2017). This would certainly have a great effect on opportunities available to the population, on social inclusion, on the production of knowledge, and on the development of the country, especially if the quality of supply is assured (Oliveira & Dourado 2017).

The Mexican Case

Mexico has a very large and diverse educational system, which largely reflects the demographic and socio-cultural conditions of its population. The country is the third most populated in the Americas and the second in Latin America. Most of its 123.5 million inhabitants live in cities, while

almost 20% of its population live in rural locations with less than 100 inhabitants (INEGI 2017). Mexicans have an enormous cultural wealth brought by the indigenous population: 10% of Mexicans consider themselves part of different native tribes, and many of them speak an indigenous language. In Mexico, a great socioeconomic inequality prevails and about half of its inhabitants live in conditions of poverty. The social and economic disparity along with ethnic diversity are linked to inequalities in access, permanence, and graduation at different types and levels of schooling. These inequalities limit the right to education and the full development of individuals.

Structure of the Educational System

The educational system consists of three levels: basic education, upper secondary education, and higher education. Basic education is compulsory and is composed of three levels: pre-school education, primary education, and secondary education. Pre-school education includes 3 school grades and the children who attend are from 3 to 5 years old. Primary education is composed of 6 school grades and the students range from 6 to 11 years of age. Junior high school is composed of 3 grades and serves students from 12 to 14 years of age.

Upper secondary education consists of an upper high school level and/or its equivalent. Since 2012, its mandatory nature was established by law. Most of its programs last for 3 years and the typical age of students is between 15 and 17 years. This type of education integrates three major educational models: general upper high school, technological upper high school, and technical professional studies.

The main purpose of higher education is the training of professionals in all branches of knowledge. It is composed of bachelor's, master's, and doctorate degrees. It also includes teacher education programs (the training of basic education teachers) at all levels and specialties.

In addition to these three types of education, the Mexican Educational System (SEM) provides early childhood education (for children under 4 years old); special education (for people with disabilities or with outstanding skills); adult education; and work training programs (Table 6.9).

Table 6.9 General structure of the Mexican educational system

Type of education	Level of education	Ideal or typical age (years)	Duration (years)
Basic education	Pre-school	3–5	3
	Primary	6–11	6
	Secondary	12–13	3
Upper secondary education	Bachelor and professional education	15–17	2–3
Higher education	Senior university technician	18–20	2–3
		18–22	4–6
	Bachelor's (undergraduate)	24+	1–2
			2
	Postgraduate: specialization		3–5
	Master's		
	Doctorate		

Source Panorama Educativo de México (2016) and INEE (2017)

In the 2014–2015 school year, the Mexican Educational System (MES) recorded 36.4 million students in basic education, upper secondary education, higher education, and training for work at a total of 255,000 schools with more than 1.9 million teachers. The highest percentage of students (71.2%) corresponded to those in basic education, 13.7% to the upper secondary education, and 10% to higher education. The number of basic education schools represented 88.7%, upper secondary schools 6.3%, and higher education represented 2.7%. The highest percentage of teachers (63.6%) were in basic education, 15.1% in upper secondary education, and 19% in higher education. Across all types and educational levels of the MES, the highest percentages of student attended public institutions (INEE 2017).

Higher Education Access and Attendance in Mexico

There is no national exam to enter public higher education. To apply for a vacancy, one must have a certificate of completion of previous studies. Some universities develop their own assessment instruments for access,

especially those that receive federal funding and are located in Mexico City. At the National Autonomous University of Mexico (UNAM), the largest and most important public university, access to undergraduate studies consists of two modalities. On the one hand, students who completed high school studies at UNAM schools enter without doing an admission exam. On the other hand, those who did not study in such schools complete a test which evaluates knowledge, verbal reasoning, and mathematical reasoning.

Most HEIs use the National Higher Education Entrance Exam (EXANI II), developed by CENEVAL (the National Center for Higher Education Assessment), as their admission test. Other institutions use a test from the College Board of Puerto Rico. The most prestigious private universities apply some of these instruments, but there are also many low-quality, private HEIs that do not have a formal admission process.

Payment of fees in public universities varies from a symbolic payment of a few Mexican Pesos to a fee of about US$700 per year. In private HEIs the range of fees is even greater: from the high costs associated with the most prestigious universities to more accessible fees at medium- and low-prestige institutions. In 2012, the Federal Government created a financial program to support private banks granting educational loans to study at high-quality private universities.

In order to promote the permanence of students in public HEIs, the Federal Government launched the National Scholarship Program for Higher Education (PRONABES) in 2001, for students enrolled in a bachelor or technologist degree program coming from families with low socioeconomic status. In 2014, the program simplified its title to "maintenance grants." Since its inception, the program has provided economic support to hundreds of thousands of students (CINDA 2016).

In addition to "maintenance Grants," there are other economic support programs, of more limited scope, funded by the National Council of Science and Technology (CONACyT). One supports vocational training (bachelor's degree or senior university technician) of women who are mothers and heads of households (single, widowed, divorced, or separated), with durations of 1–36 months. Another program supports indigenous women who study postgraduate programs. There is also a program to stimulate the scientific and technological vocations of young people.

Table 6.10 Enrollment in higher education (2016–2017; school category)

Level/support	Total number of students	Women	Men	Teachers	Schools
Higher education	3,762,679	1,864,102	1,898,577	388,310	5311
Normal	94,241	69,532	24,709	14,730	450
Bachelor's	3,429,566	1,669,009	1,760,557	315,801	4285
Postgraduate	238,872	125,561	113,311	57,779	2296
Public	2,655,711	1,263,018	1,392,693	231,658	2208
Private	1,106,968	601,084	505,884	156,652	3103

Source SEP/DGPPyEE; formatos 911

This instrument puts young students in contact with science and technology through the implementation of coordinated practices and activities developed by scientists and academics. Other programs are organized and financed by several public universities, aimed at supporting students with disabilities to carry out their undergraduate and graduate studies (CINDA 2016).

The institutional diversity of higher education is integrated by a broad public sector that includes federal, state, and state with solidarity support: technological institutes and universities, polytechnic universities, national pedagogical universities, open and distance universities, intercultural universities, public research centers, public normal schools, and other public institutions of various state secretariats. There is also a wide and varied number of private institutions.

In the last four decades, higher education in Mexico has undergone a huge expansion. In 1970, it barely reached 200,000 enrolled students, currently it exceeds 3.6 million. Nowadays, it serves 35% of the population aged appropriately for higher education (gross coverage rate). During the last 5 years, undergraduate enrollment has increased by almost one million students, which represents almost 25% of the total enrollments in higher education throughout the country. Most of the growth has occurred in public HEIs. The postgraduate and non-school category also demonstrated a significant increase. Some 70.6% of enrolled candidates attend public institutions, although in the private sector the number of educational establishments is larger. More than 90% of students are enrolled in a

Table 6.11 Enrollment in higher education (2016–2017; non-school category)

Level/support	Total number of students	Women	Men
Higher education	667,569	358,301	309,268
Bachelor's	572,332	302,420	269,917
Postgraduate	95,237	55,881	39,356
Public	287,717	151,848	135,869
Private	379,852	206,453	173,399

Source SEP/DGPPyEE; formatos 911

bachelor's degree program, in comparison with those who are in graduate schools (6.3%) or in normal schools (teacher training) (2.5%) (Tables 6.10 and 6.11).

The Socioeconomic Background of Students

In the last two decades, there have been several national studies that have analyzed the backgrounds of students, mainly through a quantitative approach focused on sociodemographic factors (Cinda 2016). There have also been other investigations at the regional and institutional levels that have analyzed study conditions at home, study habits, school practices, and cultural consumption (De Garay 2005); social capital and cultural capital (Casillas et al. 2007); social background and opportunities for access to university (Enciso 2013); and social composition of students, paths, student life, identities, and experiences (Guzmán 2011).

A recent study published in 2016 by the Centro Interuniversitário de Desarrollo indicates that, although enrollment in higher education has grown significantly in recent years, the way in which different segments of society have access to higher education is differentiated. In 2014, only 3.4% of students belonged to the lower income segment, while more than 40% of enrollments were from the highest income category. However, inequality is lower in terms of enrollments at public institutions. Contrary to this, enrollments at private HEIs show increased inequality. The access from 2011 to 2014 was still unbalanced and there is no installed capacity to meet the increasing enrollment. Access opportunities have also decreased

for the poorest sectors of the population, although opportunities have increased for the middle classes (CINDA 2016).

Tensions and Challenges

One of the greatest tensions in the system is caused by the requirement to meet the needs of people who seek access to HEIs, in the context of growing economic challenges. Furthermore, public and private HEIs must offer an education that is both high quality and of significance to students facing a difficult labor market. It is necessary to have sufficient financial resources to create an infrastructure that sustains the growth of the system and that increases the current low level coverage, in comparison with OECD countries and Latin America. It is also necessary to reduce the inequities in the distribution of access opportunities for students from low economic and disadvantaged backgrounds. Finally, it is not enough to simply improve access to higher education, it is also necessary to ensure study permanence and completion.

Conclusions

Some Comparisons Between Portugal, Brazil, and México

From this chapter it can be concluded that the three countries studies (Portugal, Brazil, and Mexico) despite demonstrating a process of growth and development in education, do not present similar behavior against the basic indicators assessed.

Thus, considering enrollment rates, there is a perception that there are significant differences between the three countries, at different levels of education, especially regarding secondary and higher education attendance (Table 6.12). Enrollment in higher education in Mexico and Portugal exceeds 30% of the population aged 18–24 years, while Brazil reached only 18.1% of the homologous population in the year 2015, even decreasing to 13.3% in 2016.

Concerning the nature of offers of higher education, all three countries offer public and private higher education, the share of which varies from country to country due to the specific processes of growth and diversification of higher education in each country (Table 6.13).

The percentages given in Table 6.13 show that enrollments in higher education in Brazil are predominantly in private institutions (75.3), partly due to the federal government programs that finance scholarships. In addition, public expansion has not accompanied the strong growth of the private sector. In the Mexican and Portuguese cases, there is a greater presence of public offerings, indicating that in these countries higher education is regarded more as a public good, even though both countries present levels of equity in their higher education systems that are strongly unequal.

On the other hand, all three countries invest very little both in education as a whole, including higher education, as evidenced by percentages of GDP (Tables 6.14 and 6.15).

Table 6.12 Actual rates of schooling by level of education (2016)

Country	Fundamental/ elementary/pre-school, and basic (3–14 years)	High school/upper secondary education/secondary education (15–17 years)	Higher education (18–22 years)
Brazil	90.0	62.7	17.3[a]
Mexico	94.9	62.0	37.3
Portugal	90.0	75.3	33.1

Source Brazil—INEP (2018a[a], b); México—SEP, Sistema Nacional de Indicadores Educativos (2017) [www.snie.sep.gob.mx]; Portugal—DGEEC/MEd—MCTES | INE, PORDATA (latest update on July 24, 2018)

Table 6.13 Students in higher education by subsystem (as a percentage of the total in higher education)

Administrative sphere	Brazil	Mexico	Portugal
Public HE	24.7	70.6	83.6
Private HE	75.3	29.4	16.4

Source Brazil—INEP (2018b); Mexico—SEP, Principales Cifras del Sistema Educativo Nacional 2016–2017 (2017) [fs.planeacion.sep.gob.mx]; Portugal—PORDATA (2018)

Table 6.14 State spending on education (percentage of GDP)

Country	1999	2005	2010	2011	2012	2013	2014	2015	2016	2017
Brazil	3.80	4.48	5.65	5.74	5.86	5.84	5.95	5.50[a]	–	–
Mexico	3.66	4.91	5.19	5.15	5.17	4.74	5.33	5.3[b]	4.9[b]	4.6[b]
Portugal	5.05	5.07	5.40	5.12	4.95	5.28	5.12	3.8[c]	3.9[c]	3.8[c]

[a]INEP (2018a)
[b]Presidencia de la República, 5th Informe de Gobierno (2017) (www.presidencia.gob.mx/quintoinforme)
[c]PORDATA, latest update on June 6, 2018
Source UNESCO—Institute for Statistics, accessed in August 2018

Table 6.15 State spending on higher education (percentage of GDP)

Country	1999	2005	2010	2011	2012	2013	2014	2015	2016	2017
Brazil	0.80	0.85	0.93	0.96	1.01	1.09	1.15	–	–	–
Mexico	0.76	0.86	1.02	0.93	1.00	1.05	1.14	0.89[a]	0.83[a]	0.76[a]
Portugal	0.94	0.92	1.09	1.01	–	0.90	0.91	–	–	–

[a]Presidencia de la República, 5th Informe de Gobierno (2017) (www.presidencia.gob.mx/quintoinforme)
Source —Institute for Statistics, accessed in August 2018

Table 6.16 Socioeconomic structure of students in higher education (as a percentage)

Household income	Brazil (2015)	Mexico (2014)	Portugal (2015)
High/medium-high	44.5	40.0	36.7
Medium	50.6	56.6	46.7
Low	4.9	3.4	16.6

Source Brazil—IBGE/Pnad (2006, 2015); Mexico—CINDA (2016); Portugal—Cerdeira and Cabrito (2017)

From the percentages given in Table 6.14 one can conclude that the investment in education in all three countries is weak. It should be highlighted that the decrease in investment that occurred in recent years in Portugal is due to the economic and financial crisis experienced in previous years. From 2015 onwards, the elected government defined a policy of social support for workers and pensioners who had been harmed by the previous government—the consequence being that investment in other social areas declined. A similar trend was observed in Mexico and Brazil, probably due to economic and political crises affecting economic growth.

In a similar manner to what happened in terms of investment in education, the share of public expenditure on higher education, in all three countries, is also extremely low—substantial growth in public investment at this level of education is not predicted. Moreover, in the Mexican case, the decline in public investment in the sector over the last 3 years, has been significant.

Finally, it should be noted that the three countries, despite demonstrating growth in higher education, still present themselves as countries with rather elitist higher education systems, albeit with significant differences in degree of equity given their different degrees of concentration of wealth, a situation that to some extent arises and denotes their different levels of development (Table 6.16).

Final Thoughts

The present study shows that access to higher education in Portugal, Brazil, and Mexico has been growing with the aim of becoming mass systems.

However, one of the greatest tensions arising is to be able to guarantee entry and permanence for low-income groups and disadvantaged sectors of the population (blacks, indigenous people, people with disabilities). A strong inequality exists in all three countries, especially in Brazil and Mexico, which impacts access to higher education, in favor of the most prestigious social classes. In the Brazilian case, the situation is intensified by the lack of universalization of compulsory basic education, especially secondary education (15–17 years). There is also a concern about the quality of supply, especially in private institutions.

The democratization of access and permanence in higher education implies the creation of conditions that allow the social base of student recruitment to be extended. In order to do so, it is necessary to improve student welfare, especially for youths suffering greater financial difficulty. In addition, it is necessary to create favorable conditions so that the population of individuals over 24 years of age can enter and complete higher education, something that will certainly contribute to there countries achieving their target net and gross rates. In Portugal, the "Over 23s" program exemplifies one possible way to broaden the social base of recruitment of higher education, bringing new audiences "to university."

Finally, it is imperative that higher education be seen as a public social good, something that the state must invest resources in so that greater social inclusion can be guaranteed.

References

Accardo, A. (1983). *Initiation à la Sociologie de l'Illusionisme Social*. Le Mascaret: Bordeaux.

Almeida, J. F., Costa, A. F., & Machado, F. L. (1988). Famílias, Estudantes e Universidade. *Sociologia: Problemas e Práticas, 4*, 11–44.

Antunes, F. (2017, jan/maio). Uma trajetória singular? Apontamentos sobre europeização, privatização e especificidades do ensino superior português. *Revista Electrónica de Educação, 11*(1), 165–184.

Bowles, S. (1963). *Planning Educational Systems for Economic Growth*. Cambridge, MA: Harvard University Press.

Brazil. Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira (Inep). (2018a). *Report of the Second Cycle of Monitoring the Goals of the National Education Plan—2018*. Brasília, DF: Inep.

Brazil. Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira (Inep). (2018b). *Synopsis Statistic of the Census of Higher Education (1980, 1990, 2000, 2010 e 2016)*. Brasília, DF: Inep. Available at http://portal.inep.gov.br/web/guest/sinopses-estatisticas-da-educacao-superior. Accessed on 3 July 2018.

Cabrito, B. (2001). Higher Education and Equity in Portugal. *Tertiary Education and Management, 7,* 23–39.

Cabrito, B. (2002). *O Financiamento do Ensino Superior*. Lisboa: EDUCA.

Casillas, M., Chain, R., & Jácome, N. (2007, Abril–junio). Origen social de losestudiantes y trayectoriasestudiantiles em laUniversidad Veracruzana. *Revista de laEducación Superior, XXXVI* (2)(142), 7–29.

Cerdeira, L., & Cabrito, B. (Orgs.). (2017). *Custos dos Estudantes do Ensino Superior Superior Português*. Lisboa: EDUCA.

CINDA. (2016). *Educación Superior em Iberoamérica. Informe 2016*. Santiago de Chile: CINDA—UNIVERSIA.

De Garay, A. (2005). *Los ActoresDesconocidos. Una aproximación al conocimiento de losestudiantes.* México: ANUIES (5ª. Reimpresión).

Enciso, M. I. (2013, Enero-marzo). El origen social de los graduados y laequidade em elacceso a launiversidad. *Revista de laEducación Superior, XLII* (I)(165), 11–29.

Guzmán, C. (2011). Avances y retos enelconocimiento sobre losestudiantes mexicanos de educación superior em laprimera década delsiglo XXI. *Perfiles educativos, XXXIII* (núm., esp.), 91–101.

Instituto Nacional de Estadística y Geografía (INEGI). (2017). *Población de México*. México: INEGI.

Instituto Nacional para laEvaluación de laEducación (INEE). (2017). *Panorama Educativo de México. Indicadores del Sistema Educativo Nacional 2016. Educación básica y media superior.* México: INEE.

Lopes, M. C. (2013). Educação, desenvolvimento e conhecimento: novas roupagens da troca desigual e globalização. O caso da África subsariana. In *Grandes Lições* (Vol. 2, pp. 111–135). Fundação CalousteGulbenkian. *Próximo Futuro*, 1ª edição, Lisboa, Tinta da China.

Oliveira, J. F. (2013). Acesso à educação superior no Brasil: entre o elitismo e as perspectivas de democratização. In José Vieira de Sousa (Org.). *Educação superior: cenários, impasses e propostas*, 1ªed. (pp. 1–27). Campinas: Autores Associados.

Oliveira, J. F. (2017). LDB, PNE (2014–2024) e Construção do Sistema Nacional de Educação: avanços, tensões e perspectivas. In Jorge Najjar & Maria Celli Vasconcelos (Org.). *A LDB e as políticas educacionais: perspectivas, possibilidades e desafios 20 anos depois*, 1ed. (pp. 30–45). Curitiba: Appris.

Oliveira, J. F., & Dourado, L. F. (2017). A Educação Superior no Plano Nacional de Educação (2014–2024): expansão e qualidade em perspectiva. In Luiz Fernandes Dourado (Org.). *Plano Nacional de Educação PNE 2014–2024: avaliação e perspectivas*, 1ed. (pp. 105–138). Campinas: Mercado de Letras.

PORDATA, Base de Dados Portugal Contemporâneo. (2016).

Secretaría de Educación Pública (SEP). (2017). *Estadísticas del Sistema Educativo Nacional.* México: SEP.