



Education in Brazil

AN INTERNATIONAL PERSPECTIVE



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Foreword

Education was central to Brazil's social and economic development in the first decade of the millennium. Higher enrolment rates at every level of education, a reduction of inequalities in access and falling rates of illiteracy have meant that young people entering the workforce are much better educated than previous generations. However, in the past few years, economic growth and social progress have stalled and, in some cases, gone into reverse. More recently, the COVID-19 outbreak has and continues to cause severe human suffering in Brazil, and plunged the economy into another, even deeper economic recession. The social and economic effects of the pandemic have hit the most vulnerable individuals and communities hardest, increasing the risks of poverty and exacerbating inequalities.

If education is to support the country's recovery, the progress that has been achieved in recent decades needs not only to be sustained, but also accelerated. The challenges faced by Brazil are significant and call for redoubled, well-resourced and sustained efforts to improve the *quality* and *equity* of education provision, alongside immediate measures to deal with the effects of the COVID-19 crisis. Our report provides suggestions for policy makers on how to meet this challenge.

The publication was prepared by the OECD, at the request of the Brazilian foundations, Todos Pela Educação and Instituto Sonho Grande, who provided invaluable insights into the Brazilian context and policy developments.

The report was developed drawing on internationally comparative data on education in Brazil, in particular the extensive range of data collected by the OECD. The experiences of other countries and how they have tackled challenges similar to those now faced by Brazil, along with the insights from consultations with national experts, also inform the analysis. The report benchmarks with OECD and a set of comparator emerging economies the whole education system from early childhood education and care to tertiary education, focusing on:

- Access and participation
- Learning and labour market outcomes
- The allocation, use and efficiency of financial, human and material resources
- School leaders, teachers and teaching
- The school climate and student well-being

The report highlights the many strengths of Brazil's education system, identifies the main challenges ahead and offers policy implications for the future.

I hope this report will support Brazil in building a stronger and more equitable education system able to shape the country's future and help Brazilians realise their dreams. The OECD is ready to help Brazil in this effort.

Andreas Schleicher
Special Advisor on Education Policy to the Secretary-General
Director for Education and Skills

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Abbreviations and acronyms

ANA	National Assessment of Literacy (<i>Avaliação Nacional da Alfabetização</i>)
BNCC	National Common Curricular Base (<i>Base Nacional Comum Curricular</i>)
B-S-J-Z (China)	acronym for the four Chinese provinces that participated in PISA 2018: Beijing, Shanghai, Jiangsu and Zhejiang
CAPES	Foundation for the Co-ordination of Improvement of Higher Education Personnel (<i>Coordenação de Aperfeiçoamento de Pessoal de Nível Superior</i>)
CEE	State Education Council (<i>Conselho Estadual de Educação</i>)
CIPAVes	Internal Commissions for the Prevention of Accidents and School Violence (<i>Comissões Internas de Prevenção de Acidentes e Violência Escolar</i>)
CME	Municipal Education Council (<i>Conselho Municipal de Educação</i>)
CNE	National Council of Education (<i>Conselho Nacional de Educação</i>)
CONAE	National Education Conference (<i>Conferência Nacional de Educação</i>)
CONSED	National Council of Education Secretariats (<i>Conselho Nacional de Secretários de Educação</i>)
CPC	Preliminary Course Score (<i>Conceito Preliminar de Curso</i>)
CPD	continuous professional development
DCNs	National Curriculum Guidelines (<i>Diretrizes Curriculares Nacionais</i>)
ECEC	early childhood education and care
EJA	adult learning programmes (<i>Educação de Jovens e Adultos</i>)
EMTI	Full-Time Upper Secondary (<i>Ensino Médio em Tempo Integral</i>)
ENADE	National Examination of Student Performance (<i>Exame Nacional de Desempenho dos Estudantes</i>)
ENCCEJA	National Examination for Certification of Youth and Adult Skills (<i>Exame Nacional para Certificação de Competências de Jovens e Adultos</i>)
ENEM	National Upper Secondary Exam (<i>Exame Nacional do Ensino Médio</i>)
ESCS	Programme for International Student Assessment (PISA) Index of Economic, Social and Cultural Status
FECp	State Fund to Combat and Eradicate Poverty (<i>Fundo Estadual de Combate e Erradicação à Pobreza</i>)
FENEP	National Federation of Private Schools (<i>Federação Nacional das Escolas Particulares</i>)

FIES	Student Financing Fund (<i>Fundo de Financiamento Estudantil</i>)
FNDE	National Education Development Fund (<i>Fundo Nacional de Desenvolvimento da Educação</i>)
FNE	National Education Forum (<i>Fórum Nacional de Educação</i>)
FUNDEB	Basic Education Maintenance and Development Fund (<i>Fundo de Manutenção e Desenvolvimento da Educação Básica</i>)
FUNDEF	Primary and Lower Secondary Education Maintenance, Development and Teacher Promotion Fund (<i>Fundo de Manutenção e Desenvolvimento do Ensino Fundamental e de Valorização do Magistério</i>)
GDP	Gross Domestic Product
GSHS	Global School-Based Student Health
HDI	Human Development Index
IBGE	National Institution of Statistics in Brazil (<i>Instituto Brasileiro de Geografia e Estatística</i>)
ICT	information and communications technology
IDD	indicator of assumed learning gain (<i>Indicador de Diferença entre os Desempenhos Observado e Esperado</i>)
IDEB	national education quality index (<i>Índice de Desenvolvimento da Educação Básica</i>)
IMF	International Monetary Fund
INEP	National Institute of Educational Studies and Research Anísio Teixeira (<i>Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira</i>)
IPTU	tax on private urban real state (<i>Imposto Predial e Territorial Urbano</i>)
ISCED	International Standard Classification of Education
ISEI	International Socio-Economic Index of Occupational Status
ISS	income from the tax over services (<i>Imposto Sobre Serviços de Qualquer Natureza</i>)
ITE	Initial Teacher Education
ITP	Initial Teacher Preparation
LATAM	Latin American countries
LDB	Law on National Education Guidelines and Framework (<i>Lei de Diretrizes e Bases da Educação Nacional</i>)
LLECE	Latin-American Laboratory for Assessment of the Quality of Education (<i>Laboratorio Latinoamericano de Evaluación de la Calidad de la Educación</i>)
MDE	Maintenance and Development of Education (<i>Manutenção e Desenvolvimento do ensino</i>)
MEC	Ministry of Education (<i>Ministério da Educação</i>)
NEET	neither in employment nor in education or training (" <i>jovens nem-nem</i> ")
Parfor	National Programme for Teacher Training in Basic Education (<i>Programa Nacional de Formação de Professores da Educação Básica</i>)
PDDE	Direct Money to School Programme (<i>Programa Dinheiro Direto na Escola</i>)
PE	Physical education lessons

PEE	State-level Education Plan (<i>Plano estadual de Educação</i>)
PeNSE	National Student Health Survey (<i>Pesquisa Nacional de Saúde do Escolar</i>)
PERCE	First Regional Comparative and Explanatory Study (<i>Primer Estudio Regional Comparativo y Explicativo</i>)
PIAAC	Programme for the International Assessment of Adult Competencies (OECD Survey of Adult Skills)
PIBID	Institutional Teaching Initiation Scholarship Programme (<i>Programa Institucional de Bolsas de Iniciação à Docência</i>)
PIRLS	Progress in International Reading Literacy Study
PISA	OECD Programme for International Student Assessment
PIT	Declaration on Propriety, Integrity and Transparency in the Conduct of International Business and Finance
PNA	National Literacy Policy (<i>Política Nacional de Alfabetização</i>)
PNAD	National Household Survey (<i>Pesquisa Nacional por Amostra de Domicílios</i>)
PNE	National Education Plan (<i>Plano Nacional de Educação</i>)
PNLD	National Programme of Educational Material and Books (<i>Programa Nacional do Livro e do Material Didático</i>)
PPP	purchasing power parity
ProBNCC	Support Programme for the Implementation of the new curricular standards (<i>Programa de Apoio à Implementação da Base Nacional Comum Curricular</i>)
ProNem	Support Programme for the new Upper Secondary Education (<i>Programa de Apoio ao Novo Ensino Médio</i>)
ProUni	“University for All” Programme (<i>Programa Universidade para Todos</i>)
PSE	Health in Schools Programme (<i>Programa Saúde nas Escolas</i>)
SAEB	Basic Education Assessment System (<i>Sistema de Avaliação da Educação Básica</i>)
SDGs	Sustainable Development Goals
SEE	State Education Secretariat
SERCE	Second Regional Comparative and Explanatory Study (<i>Segundo Estudio Regional Comparativo y Explicativo</i>)
SIOPE	Information System on Public Funds for Education (<i>Sistema de Informações sobre Orçamentos Públicos em Educação</i>)
SISU	Unified Selection System (<i>Sistema de Seleção Unificada</i>)
SME	Municipal Education Secretariat (<i>Secretaria Municipal de Educação</i>)
SNE	National Education System (<i>Sistema Nacional de Educação</i>)
SWOT	strengths, weaknesses, opportunities and threats
TALIS	OECD Teaching and Learning International Survey
TERCE	Third Regional Comparative and Explanatory Study (<i>Tercer Estudio Regional Comparativo y Explicativo</i>)

TIMSS	Trends in International Mathematics and Science Study
UIS	UNESCO's Institute of Statistics
UNDIME	National Union of Municipal Education Managers (<i>Educational Union National dos Dirigentes Municipais de Educação</i>)
UNESCO	The United Nations Educational, Scientific and Cultural Organization
USE	upper secondary education
VET	vocational education and training
WHO	World Health Organization

Executive summary

Even before the COVID-19 crisis, the social and economic development which Brazil achieved over recent decades had stalled and gone into reverse. Against that background, the COVID-19 pandemic has deepened economic recession, and has hit hardest on those least able to cope with the downturn, exacerbating inequalities that still place Brazil among the more unequal countries globally (see Chapter 1). Education, the topic of this report, has played a big part in Brazil's progress, and has the potential to support the country's recovery. Drawing on the extensive range of data available, and the experience of OECD and comparable countries, this report examines the challenges faced by Brazil in improving the *quality* and *equity* of education while also addressing the immediate demands from the COVID-19 crisis.

Participation in education has expanded, but is still far from reaching OECD levels, and significant disparities remain

In the last few decades, Brazil has dramatically enhanced the participation of children and young people, closing the gap, at least in some respects, with high-performing countries. Early childhood education and care (ECEC) has been expanded, enrolment in primary education is close to universal, and around 80% of the cohort participate in lower secondary education (see Chapter 2), with well over half now progressing to upper secondary education. Tertiary participation has also grown, and access enhanced for the most disadvantaged. Despite major advances, attainment and participation is still behind the OECD average. Moreover, disadvantaged individuals face barriers both in accessing and remaining in education. As a result, levels of attainment and participation in education vary significantly across Brazil's population. While socio-economic background and regional differences are factors in all systems, their impacts are stronger in Brazil than in many comparable countries. Moreover, a large proportion of young people does not complete education on time or at all. This is the result of a number of factors, including grade repetition and a disengaging curricula. Some students also abandon education to look for a job or take over caring responsibilities at home. The COVID-19 pandemic may have further encouraged this trend, especially among the most disengaged and disadvantaged.

Ensuring quality education for all remains a key challenge for Brazil

Evidence from the OECD Programme for International Student Assessment (PISA) shows that growth in education participation in Brazil has been realised alongside some improvements in learning outcomes (see Chapter 3). While this is a remarkable achievement, student performance remains well behind OECD and comparable countries. Half of the 15-year-olds in Brazil lack a baseline level of proficiency in reading, compared with only about one in five in OECD countries on average. Furthermore, Brazil's education system does not offer a level playing field for children and young adults. Students' social and economic background, including race, has a significant impact on learning outcomes. Students from less well-off backgrounds do not have the same opportunities as their better-off peers and tend to attend lower-quality schools. This damages their life chances, as measured by their employment status and earnings, both

reflecting and compounding inequalities in the country. Prolonged school closures and distance learning models put in place during the COVID-19 pandemic may also lead to learning losses, in particular among disadvantaged students.

Ensuring that resources are effectively used and equitably distributed can support learning

The Brazilian government spends a large share of the national income on education. In 2017, public spending on education institutions comprised 5.1% of Brazil's Gross Domestic Product, compared with 4.3% in Latin American countries and 4.0% in OECD countries (see Chapter 4). Despite increases in education spending over the years, Brazil has only seen limited improvements in national and international assessments. To sustain and accelerate progresses in teaching and learning, Brazil will need to retain current levels of education resources. However, there is also significant scope to use resources more equitably and effectively. For example, at present, Brazil invests more in tertiary education than in ECEC, despite evidence that access to high-quality ECEC not only contributes to better learning outcomes but can also help reduce inequalities. Even within tertiary education, funding arrangements tend to disproportionately benefit students from advantaged backgrounds.

Supporting teachers and school leaders can help enhance educational outcomes

It is widely acknowledged that two of the most important factors in determining the success of an educational system are teachers and school leaders. For the most part, the teaching profession fails to attract able young entrants in Brazil: teacher salaries are lower than for other tertiary-educated careers, the profession is not socially valued, and part-time contracts of limited duration are unattractive. Selection measures are not always effective in selecting highly-qualified candidates. Initial teacher education is weak and provides limited emphasis on practical skills leaving many teachers unprepared for the classroom. Once on-the-job, teachers receive limited support to improve their practice. Brazilian teachers rarely benefit from systematic induction, and often face obstacles to participation in continuous professional development opportunities. While teacher appraisal is common, many of the key elements of a structured teacher appraisal system are lacking. The school leadership role is particularly under-developed in Brazil, relative to OECD and high-performing countries. Brazil's school leaders rarely have postgraduate qualifications. Selection processes for school leaders remain unstructured and often political. Evidence points to shortcomings in access to and provision of training (see Chapter 5).

A greater focus on students' behaviour, expectations and well-being is needed

On several measures, the well-being and life chances of Brazilian children have clearly improved. However, significant issues remain, and new challenges have emerged, many of which are linked to the COVID-19 crisis (Chapter 6). National and international evidence point to some key education challenges that need to be addressed. Student misbehaviour and disruption in the classroom are common and take time away from actual learning. Furthermore, relationships within schools are strained and, at times, hostile. This creates an unsafe environment where students feel little connection, which in combination with a disengaging curricula, encourages student truancy, dropout and underperformance. While there is growing recognition of the importance of well-being, many aspects of psychological, social and physical health remain overlooked by school networks, schools and teachers. Lack of access to basic material and educational resources at home can be a barrier for learning, in particular for disadvantaged students. Once again, the COVID-19 crisis and the move to distance learning has amplified this issue, as home support becomes doubly vital during school closures.

1. The Brazilian education system

Even before the COVID-19 crisis, the economic growth and reduced inequality which Brazil achieved over recent decades had stalled and gone into reverse. Against that background, the COVID-19 pandemic has deepened economic recession, and has hit hardest on those least able to cope with the downturn, exacerbating inequalities that still place Brazil among the more unequal countries globally. Education, the topic of this report, has played a big part in Brazil's progress, and has the potential to support the country's recovery. This report will examine the strategic challenges faced by Brazil in improving the *quality* and *equity* of education while also addressing the immediate demands flowing from the COVID-19 crisis. Chapter 1 sets the scene for this report, describing the national context, and the education system of Brazil and how it is organised and governed.

Introduction

During the first decade of the millennium, Brazil achieved remarkable social and economic development. However, as argued in the recent OECD economic review of Brazil, much of it is now at risk (OECD, 2020^[1]). Even before the COVID-19 crisis, economic growth had stalled, and productivity levels lagged behind that of other emerging economies, undermining competitiveness. Social progress has stalled and, in some cases, gone into reverse. The COVID-19 outbreak has caused severe human suffering in Brazil, and plunged the economy into another, even deeper recession. The social and economic effects of the pandemic have hit the most vulnerable individuals and communities hardest, increasing the risks of poverty and exacerbating inequalities.

Education, the topic of this report, plays a big part in this story. Over recent decades, the expansion of education was an integral part of the country's progress, with higher enrolment rates at every level of education, a reduction of inequalities in access and falling rates of illiteracy. The younger generations entering the workforce are much better educated than previous generations, and this higher skilled workforce has played, and will continue to play a vital role in Brazil's economic development.

At the same time, education shares in the wider challenges now faced by Brazil. To support the country's recovery, the progress that has been achieved needs not only to be sustained, but also improved upon, with more focus on improving students' learning outcomes and reducing inequalities. Most urgently, many millions of students have had their education interrupted by school closures and will need well-planned support to facilitate their learning recovery and support their well-being. This calls for redoubled, well-resourced and sustained efforts to improve the *quality* and *equity* of education provision, alongside immediate measures to deal with the effects of the crisis. In addressing this challenge, Brazil can draw on its many demonstrated strengths and track record in innovative policy development, evident not only nationally, but also in the host of creative initiatives in states, municipalities, schools, and universities across the country.

This report, which aims to help in meeting this challenge, was prepared by the OECD, drawing on the extensive range of data available to the OECD, wide experience of other countries and how they have tackled challenges similar to those now faced by Brazil, and through consultation with experts. It draws on a wide range of indicators to compare Brazil's education system with those of other OECD and non-OECD countries, augmented by an examination of national data sources. This chapter sets the scene, describing the national context, the education system of Brazil and how it is organised and governed. Chapter 2 looks at participation, documenting its growth over time as well as how participation rates compare internationally. It also explores the issue of dropout and grade repetition. Chapter 3 draws on evidence from the OECD Programme for International Student Assessment (PISA) and some national and regional studies to assess learning outcomes. Chapter 4 looks at financing and resource issues, including mechanisms such as the Basic Education Maintenance and Development Fund (*Fundo de Manutenção e Desenvolvimento da Educação Básica*, FUNDEB), and other options for prioritising education funding. Chapter 5 examines school leaders, teachers, and teaching, drawing on rich evidence from PISA and the OECD Teaching and Learning International Survey (TALIS). Chapter 6 considers the school climate, increasingly recognised as a key driver of education outcomes, exploring issues like the sense of school belonging, and the prevalence of school bullying. Chapter 7 draws the threads together to identify policy implications in the form of **ten steps to a stronger education system**.

Box 1.1. Education in Brazil: an international perspective – methodological approach

This report benchmarks the performance of Brazil's education system in relation to relevant comparator countries, including across the OECD and Latin American (LATAM) region, to form a perspective of how Brazil has progressed in relation to both international objectives (e.g. the Sustainable Development Goals) and national goals (e.g. the National Education Plan, *Plano Nacional de Educação*, PNE). Drawing on this analysis, this report will identify implications for education policy.

Scope

This report examines the entire education system, but places particular focus on Brazil's basic education system (in the International Standard Classification of Education (ISCED), this concerns ISCED 0 to ISCED 3).

Methodology

This report combines quantitative and qualitative investigation with the aim of presenting both comparable information and in-depth contextual evidence on policies and practices.

Evidence and data sources

This report is based on the most recently available evidence and data, drawing on international and national sources. This includes student assessment data from PISA and the United Nations Educational, Scientific and Cultural Organization (UNESCO) Latin-American Laboratory for the Assessment of the Quality of Education (*Laboratorio Latinoamericano de Evaluación de la Calidad de la Educación*, LLECE) assessments, as well as results from Brazil's national assessments. In addition, it is based on data collected through national and international surveys, such as TALIS. Data from the OECD Education at a Glance and UNESCO Institute of Statistics (UIS) were also mined. When available, this report draws on trend data to monitor progress and trends in performance.

Qualitative data were collected through desk-based research and a limited number of interviews with experts, carried out in 2020.

Benchmark countries and jurisdictions

This report uses the OECD and LATAM averages as the main benchmarks. In addition, the OECD identified 13 benchmark countries with education systems that share key socio-economic and political characteristics with Brazil and/or carry relevant insights for Brazil. These countries and jurisdictions were chosen because they met one or more of the following criteria:

- Emerging Latin American economies: Argentina, Chile, Colombia, Costa Rica, Mexico, Peru and Uruguay.
- Other major emerging countries and jurisdictions: Indonesia, Malaysia, Philippines and Thailand, which make up ASEAN-4, as well as China and the Russian Federation.

The evidence from these countries was used selectively, and where relevant. Additional countries have been included as a reference when their experience and policies in specific areas were considered particularly informative for Brazil.

Notes: The countries included in the OECD and LATAM averages may vary according to the data available, and countries' participation in assessments, surveys, and other forms of data collection. For example, 37 OECD countries and 8 LATAM countries participated in PISA 2018, whereas only 31 OECD countries and 5 LATAM countries participated in TALIS 2018. When calculating averages, the threshold for the OECD average was established at a minimum of 20 countries, while the minimum threshold for the LATAM was set at 5 countries.

When calculating trend data for PISA and TALIS, OECD averages and LATAM averages were calculated across the different cycles based on the same list of countries across years. For PISA, different averages based on different numbers of OECD countries have been estimated (for instance, OECD average 37, OECD average 36a, OECD average 36b and OECD average 29) as many OECD countries did not take the earlier PISA assessments. However, the list of countries for each of those OECD averages remains the same across PISA cycles. This report draws on results for China as a country, as well as from specific Chinese regions. Notably, PISA 2018 results do not reflect data for China as a country, but exclusively for specific regions. This report has drawn on PISA 2018 results for Beijing, Shanghai, Jiangsu and Zhejiang (China) (hereafter “B-S-J-Z [China]”).

National context

The population is now rapidly ageing

Brazil's 2019 population of 211 million people lives mostly (87%) in urban areas (World Bank, 2020^[2]). The population is concentrated in the Southeast (42%) and Northeast (27%) regions (IBGE, 2020^[3]). In recent decades, falling fertility rates, particularly among the most disadvantaged and least educated, alongside some decline in mortality rates, have caused sharp changes in the demographic profile – between 2010 and 2015, fertility rates had fallen to 1.7 per woman, well below the population replacement rate of 2.1 (UNFPA Brazil, 2018^[4]). Consequently, Brazil's population is rapidly ageing. The share of the population aged over 65 will double from around 10% of the population in 2020 to 23% in 2050 (United Nations, 2019^[5]). Among OECD countries, only Costa Rica¹ and Korea will age more rapidly (OECD, 2020^[1]). At the same time, the number of children and young people in the country will continue to fall, with important implications for the education system and the labour market (United Nations, 2019^[5]).

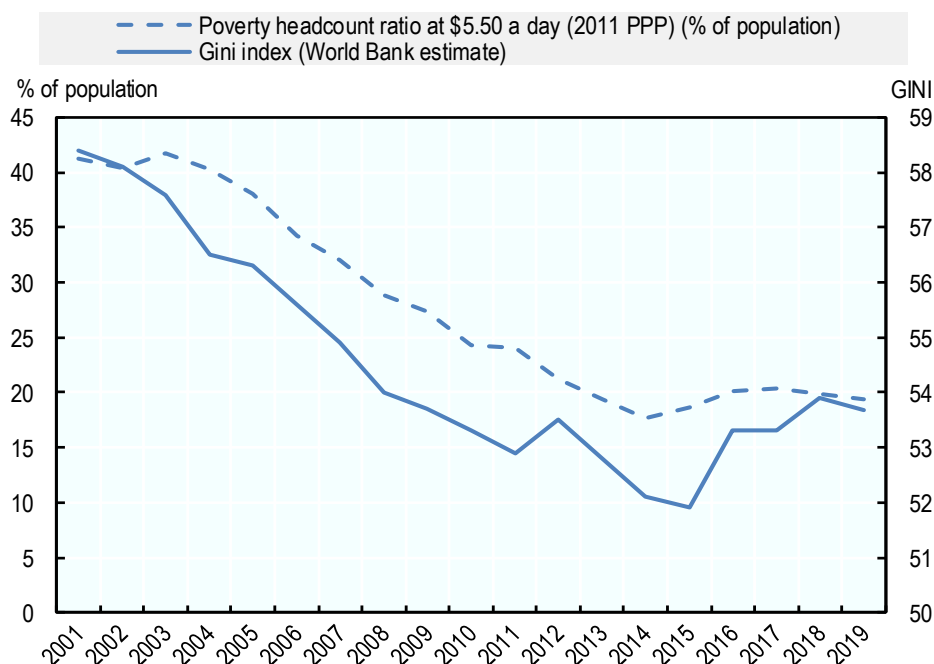
Economic growth has halted

In Brazil, economic growth has been supported for many years by favourable demographics and high commodity prices. Economic growth, alongside targeted policies, improved living standards, lifting more than 29 million people out of poverty between 2003 and 2014, reducing child mortality by 73% between 1990 and 2011, and expanding access to basic education (World Bank, 2020^[6]; UN, 2012^[7]; Ipea, 2014^[8]). However, around 2015, the country entered a deep recession (OECD, 2018^[9]; World Bank, 2020^[6]; OECD, 2020^[1]). In 2020, the COVID-19 pandemic also reversed a gradual recovery from the last downturn and plunged the economy into another, even deeper recession, with a GDP drop of 4% (IBGE, n.d.^[10]). Unemployment increased from 6.6% in 2014 to 12% in 2019 (World Bank, 2020^[2]), and is expected to reach 15% in 2021² (OECD, 2020^[1]). High levels of public spending and a large government debt burden present major challenges of fiscal sustainability (OECD, 2020^[1]). Looking to the future, the rapid ageing of the population and the moderate and unstable price of commodities are forecasted to slow the economy's potential growth (Bogmans and Restrepo, 2019^[11]; OECD, 2020^[1]), putting Brazil's economic development model into question.

Inequality remains large, and COVID-19 might exacerbate gaps

By some measures Brazil has the second highest level of inequality among OECD and partner countries (OECD, 2018^[12]). Currently, the bottom 40% of income earners receive only 10% of disposable income, while the top 10% pocket more than four times as much (OECD, 2020^[1]). The recent economic recessions have reverted much of the progress in social mobility and equality that took place in the 2000s: 20% of the population was living under the poverty line³ in 2018, up from 18% in 2014 (see Figure 1.1) (World Bank, 2020^[2]; Medeiros, 2016^[13]; OECD, 2020^[1]).

Figure 1.1. Percentage of the population under the poverty line and inequality levels as measured by the Gini index, 2001-2019



Note: The Gini index measures the extent to which the distribution of income (or, in some cases, consumption expenditure) among individuals or households within an economy deviates from a perfectly equal distribution. The Gini index measures the area between the Lorenz curve and the hypothetical line of absolute equality, expressed as a percentage of the maximum area under the line. A Gini index of zero represents perfect equality and 100, perfect inequality.

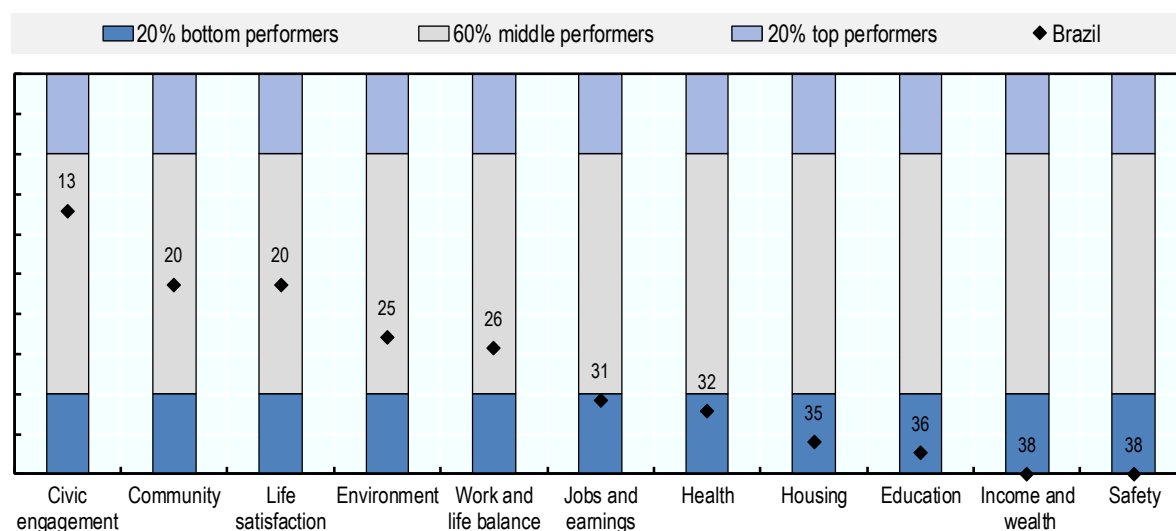
Source: Adapted from (OECD, 2020_[1]), *OECD Economic Surveys: Brazil 2020*, <https://doi.org/10.1787/250240ad-en>.

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Other measures of social and economic development reveal challenges

Other measures of national development also highlight challenges. Brazil's ranking is low on the OECD Better Life Index, which compares well-being across countries according to indicators of safety, income, education, health and housing (see Figure 1.2) (OECD, 2020_[1]). Brazil ranked last in the index for safety, partly because of its very high homicide rates (UNDP, n.d._[14]). In health and housing, Brazil also lags, with only two-thirds (68%) of the population having access to basic sanitation, and worse figures in the North and Northeast. Some households still lack access to water (IBGE, 2020_[3]).

Figure 1.2. OECD Better Life Index and its well-being indicators



Note: The numbers indicate Brazil's ranking among the 38 countries included in the Index.

Source: Adapted from (OECD, 2020^[1]), *OECD Economic Surveys: Brazil 2020*, <https://doi.org/10.1787/250240ad-en>.

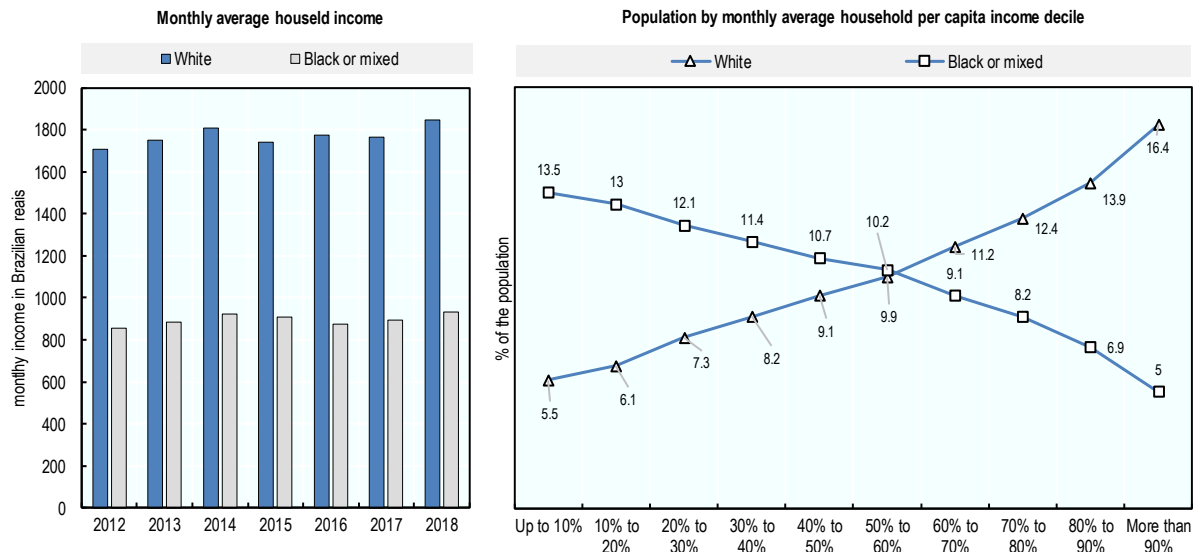
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Brazil's great diversity goes together with large inequalities

Brazil's ethnically, culturally, and socio-economically diverse population (see Box 1.2) is marked by deep-rooted inequalities which are often intersectional. Vulnerable groups include racial and sexual minorities, indigenous populations, people living in the *favelas*, riverside populations and others. For example, black and mixed individuals represent more than half of the population (56%) (IBGE, 2020^[3]), and are disproportionately represented among the most disadvantaged. In 2018, black or mixed individuals made up over 75% of the poorest decile of the population (IBGE, 2019^[15]), and recent years show little sign of any narrowing of the race-based income gap (see Figure 1.3). The black and mixed population lags behind whites on a wide range of indicators, including representation in politics (IBGE, 2019^[15]). They constitute only 24% and 30% of federal and state congressmen, respectively – an issue related to a lack of support and incentives (IBGE, 2019^[15]). Geographic disparities can also be large: for example, average per-capita income in Maranhão, in the Northeast, is less than half of that for São Paulo, in the Southeast (see Figure 1.4) (OECD, 2020^[1]).

Figure 1.3. Income disparities by race

Trend in monthly average household income in Brazilian reais (BRL) between 2012-2018, by race (figure on the left); distribution of population by race and monthly average household per-capita income, 2018 (on the right)

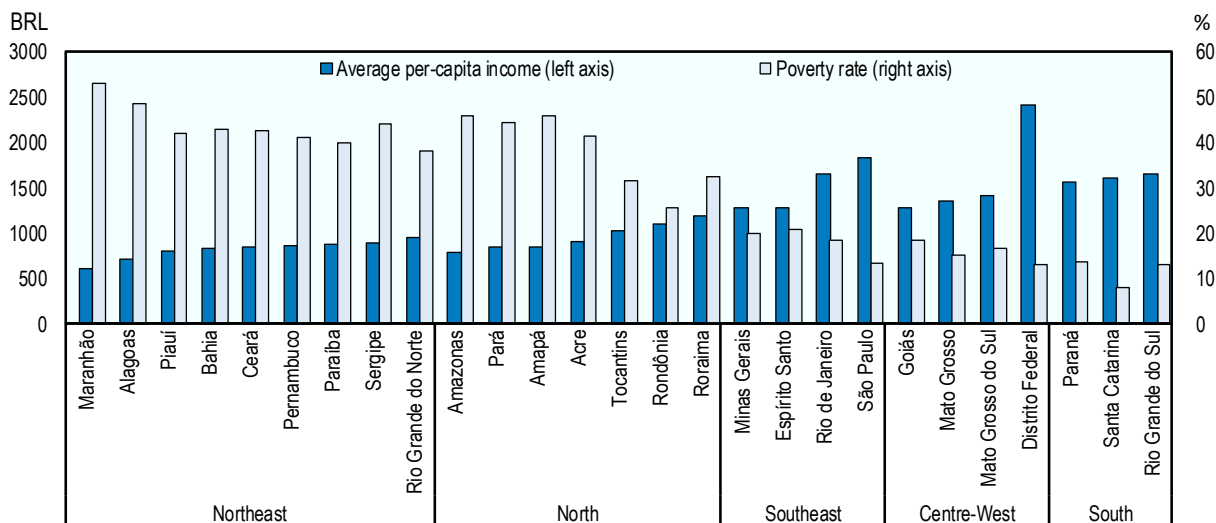


Source: Adapted from (IBGE, 2019^[16]), *Síntese de Indicadores Sociais: Uma análise das condições de vida da população brasileira 2019* [Synthesis of Social Indicators: An analysis of the living conditions of the Brazilian population 2019], <https://biblioteca.ibge.gov.br/visualizacao/livros/liv101678.pdf> (accessed on 23 April 2020).

StatLink  <https://stat.link/namw1p>

Figure 1.4. Income disparities, by state and region, 2018

Average per-capita income in BRL and poverty rates by state and region, 2018



Source: Adapted from (OECD, 2020^[11]), *OECD Economic Surveys: Brazil 2020*, <https://doi.org/10.1787/250240ad-en>.

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Box 1.2. Institutional definition of race in Brazil

The National Institution of Statistics in Brazil (*Instituto Brasileiro de Geografia e Estatística*, IBGE) uses five different categories under which Brazilians can identify themselves:

- Whites (*População branca*), those who identify as descended from European immigrants, although in practice many have more diverse ancestry; 47% of the population identified themselves under this heading in the 2010 census.
- Mixed or Pardo Brazilians (*População parda*), those who are descended from many different racial groups, including those of African, Indigenous and European origin. 43% of the population identified themselves under this heading in the 2010 census.
- Blacks (*População preta*) identifying themselves as being of mainly African origin – descended from African slaves. 8% of the population identified themselves under this heading in the 2010 census.
- Asian Brazilians (*População amarela*). 1.1% of the population identified themselves under this category.
- Indigenous people (*População indígena*), from diverse tribes. 0.4% identified themselves under this heading.

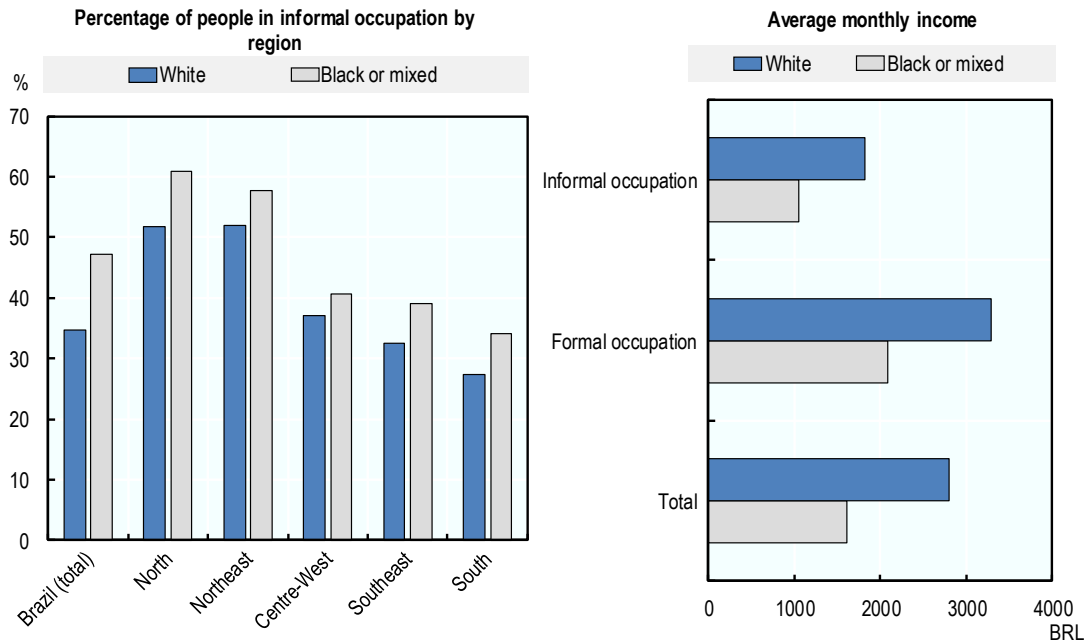
Source: (IBGE, n.d.^[17]), *Population Census (2010)*, <https://www.ibge.gov.br/en/statistics/social/labor/18391-2010-population-census.html?=&t=o-que-e> (accessed on 14 September 2020).

The many workers in the informal economy are especially vulnerable

In 2019, 41% of the workforce was working in the informal economy (IBGE, 2020^[18]). These informal workers commonly have less job security, and poverty levels are four times higher among these workers than the national average (OECD, 2020^[11]). Women, black and mixed individuals, and those with lower educational attainment are more likely to be informally employed (see Figure 1.5) (IBGE, 2019^[16]).

Figure 1.5. Levels of informality, by region and race, 2018

Percentage of people working in the informal economy, by region and race (left figure) and average monthly income of workers in BRL, by race (right figure), in 2018



Note: For the monthly income, data refers to people 14-years-old and older.

Source: (IBGE, 2019^[15]), *Desigualdades Sociais por Cor ou Raça no Brasil* [Social Inequalities by Colour or Race in Brazil], https://biblioteca.ibge.gov.br/visualizacao/livros/liv101681_informativo.pdf (accessed on 5 May 2020).

StatLink  <https://stat.link/9nk41w>

Current setbacks in the fight against corruption have increased the population's mistrust in the government

Around 90% of Brazilians think that corruption is an important issue and more than half of those (54%) think that it has worsened recently (Transparency International, 2019^[19]). National and international reports signal setbacks in the fight against corruption in recent years (Transparency International, 2019^[20]; OECD, 2019^[21]; Transparência Internacional, 2021^[22]; Transparência Internacional, n.d.^[23]), including the watering down of the country's anti-corruption legislation, growing political interference in law-enforcement institutions and lack of communication between government and civil society organisations and increasing press harassment (Transparency International, 2019^[20]). Corruption is also a problem in the education sphere. National and international evidence shows that mismanagement of public spending on education damages the quality of teaching and learning. In Brazil, around 60% of corruption cases are linked to the education and health sectors (Ferraz, Finan and Moreira, 2012^[24]) (see Chapter 4).

Coupled with the perception of lack of representation in politics and the sometimes questionable electoral mechanisms, much of the population does not trust government, its bodies and representatives (Transparency International, 2019^[19]). According to a national public survey carried out in 2017, 78% of citizens did not trust politicians or their political parties (FGV/DAPP, 2017^[25]).

The structure of the education system

Education is a social right in Brazil and the country's Federal Constitution guarantees access to free public education at all levels. Brazil divides its education system into basic and higher education levels. The basic level includes: early childhood education (ISCED 0, and in Portuguese, *ensino infantil*); primary and lower secondary education (ISCED 1 and 2, also known in the country as elementary education, and in Portuguese, *ensino fundamental*); and upper secondary education (ISCED 3, and in Portuguese, *ensino médio*) (see Figure 1.6). Compulsory education starts at the age of four, in pre-school education, and lasts 14 years, up until the end of upper secondary education.

Figure 1.6. Structure of Brazil's education system

ISCED 2011	Starting age	Administrative unit (primarily responsibility)	Grade/Year	Education programme		
8	23-26	Federal government	Higher education	Doctoral degree (<i>Doutorado</i>)		
7	22			Academic Master's degree, stricto sensu (<i>Mestrado, stricto sensu</i>)	Professional Master's degree, stricto sensu (<i>Mestrado Profissional, stricto sensu</i>)	Specific Professional diploma, lato sensu (<i>Curso de especialização, lato sensu</i>)
6	18			Bachelor's degree (<i>Bacharelado</i>)	Licentiate's degree (<i>Licenciatura</i>)	Technological degree (<i>Graduação Tecnológica</i>)
4	18	Federal government and states				Technical course (<i>curso técnico de nível médio subsequente</i>)
3	15	States	Grade 3	Upper secondary education (<i>ensino médio</i>)		
			Grade 2			
			Grade 1			
2	11	Municipalities and states	Year 9	Lower secondary (<i>anos finais do ensino fundamental</i>)		
			Year 8			
			Year 7			
			Year 6			
1	6	Municipalities	Year 5	Primary (<i>anos iniciais do ensino fundamental</i>)		
			Year 4			
			Year 3			
			Year 2			
			Year 1			
0	4	Municipalities		Pre-school (<i>pré-escola</i>)		
	0			Early childhood educational development (<i>creches</i>)		

Notes: In Brazil, the different levels which compose elementary education are referenced as Years (i.e. Year 1 of primary education) while Grade is used for upper secondary education (i.e. Grade 2 of upper secondary education).

Education programmes in blue refer to those which are part of mandatory education. Education programmes (in bold) are recognised exit points of the education system.

Source: (Presidência da República, 1996^[26]), *Lei Nº 9.394, de 20 de Dezembro de 1996* [Law No. 9.394 of December 20, 1996], http://www.planalto.gov.br/ccivil_03/leis/l9394.htm, (accessed on 6 August 2020); (OECD, 2015^[27]), *Education Policy Outlook: Brazil*, <http://www.oecd.org/education/Brazil-country-profile.pdf> (accessed on 6 August 2020).

Governance

Governance structure

Multilevel governance in Brazil's federal system

Brazil has a three-level federal system of government, including: the federal government, and federative entities (including 26 states, the Federal District and 5 569 municipalities). Responsibility for education is shared among the three levels (see Figure 1.7). States and municipalities have direct responsibility for the delivery of education for ISCED 0 to ISCED 3, with municipalities primarily delivering early childhood education and care (ECEC), primary and lower secondary education, and states primarily delivering lower and upper secondary education. The federal government is primarily responsible for higher education (see Figure 1.6).

In Brazil's decentralised education system, federal, state and municipal entities are on equal footing, meaning that local governments are not subordinate to the federal government. Nevertheless, reports suggest that the federal government has been predominantly anchored in a vertical and centralised mode of operation (CNE, 2012^[28]). According to the OECD report *Auditing Decentralised Policies in Brazil*, top down, centralised policies are unable to account for the heterogeneity of Brazilian cities and states, which is critical as the country shifts its focus from access to education to the quality of education (OECD, 2020^[29]).

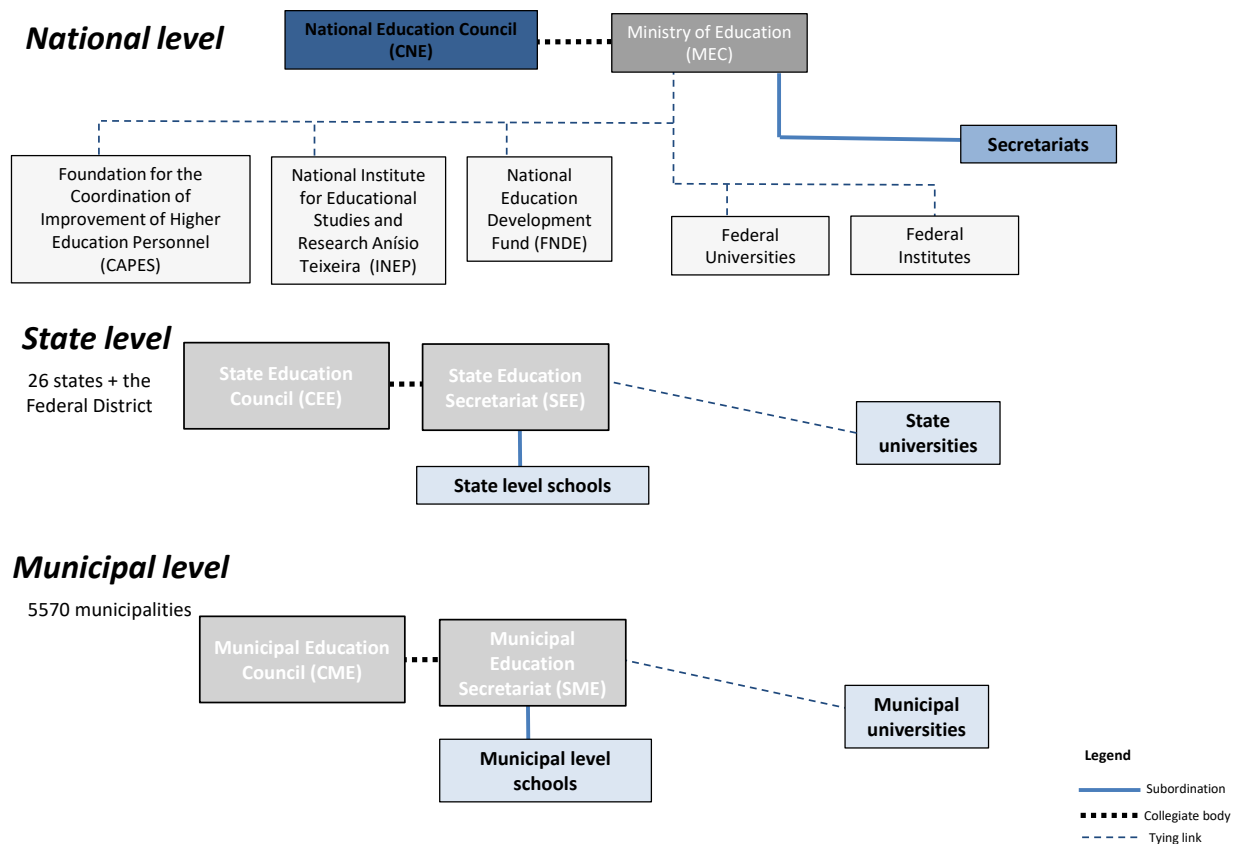
Education responsibilities of the federal government

The federal government's education functions include: setting national standards and overall objectives for the country (e.g. the PNE); directly managing institutions including the federal universities and vocational federal schools; co-ordinating education policies and practices across the different levels of government; and providing technical and financial assistance to states and municipalities. The Ministry of Education (*Ministério da Educação*, MEC) is also responsible for regulating all education levels in Brazil, from early childhood to higher education. MEC evaluates the education system through the National Institute of Educational Studies and Research Anísio Teixeira (*Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira*, INEP), which focuses primarily on pre-tertiary education, and the Foundation for the Co-ordination of Improvement of Higher Education Personnel (*Coordenação de Aperfeiçoamento de Pessoal de Nível Superior*, CAPES), which focuses on higher education. In collaboration with state and municipal governments, MEC determines curricular guidelines (i.e. common competencies and subjects) to be taught at schools. Three key associated bodies are:

- The National Council of Education (*Conselho Nacional de Educação*, CNE). It is a collegiate body to the Ministry of Education that is responsible for advising and monitoring the design and implementation of national education policy. It ensures the participation of the Brazilian society in education policy development and improvement.
- INEP, which is a semi-autonomous agency responsible for carrying out assessments and exams to evaluate Brazil's basic and higher education and establishing quality performance indicators. It is responsible, among other matters, for: the main national-level assessment during pre-tertiary education (*Sistema de Avaliação da Educação Básica*, SAEB) and in tertiary education (*Exame Nacional de Desempenho dos Estudantes*, ENADE); the main national indicator to measure the quality of pre-tertiary education (*Índice de Desenvolvimento da Educação Básica*, IDEB) (see Chapter 3); and the main exam granting access to higher education in the country (*Exame Nacional do Ensino Médio*, ENEM). It also collects and disseminates reference information and statistics on the education system in Brazil.

- The National Education Development Fund (*Fundo Nacional de Desenvolvimento da Educação*, FNDE), which is a semi-autonomous body responsible for resource allocation and providing technical support to states and municipalities.

Figure 1.7. Organigram of the main bodies in the education sector at the national, state and municipal level



Note: Brazil has 27 federal units, including 26 states and the Federal District. Not all municipalities have their own education network. Those that do not follow norms and guidelines established by their state councils. Municipalities are primarily responsible for early childhood and primary education, while states are responsible for lower and upper secondary education.

Source: (Presidência da República, 2020^[30]), Constituição da República Federativa do Brasil de 1988 [1988 Constitution of the Federative Republic of Brazil], http://www.planalto.gov.br/ccivil_03/constituicao/constituicao.htm (accessed on 19 August 2020); (Presidência da República, 1996^[26]), Lei Nº 9.394, de 20 de Dezembro de 1996 [Law No. 9.394 of December 20, 1996], http://www.planalto.gov.br/ccivil_03/leis/19394.htm, (accessed on 6 August 2020); (MEC, 2020^[31]), Organograma [Organizational Chart], <https://www.gov.br/mec/pt-br/estrutura-organizacional/organograma> (accessed on 6 August 2020).

Governance at the state level and municipal level

State and municipal governments are responsible for their respective education networks. These responsibilities are exercised through State Education Secretariats and Councils (*Secretaria de Estado da Educação*, SEEs and *Conselho Estadual de Educação*, CEEs, respectively) and Municipal Education Secretariats and Councils (*Secretaria Municipal de Educação*, SMEs and *Conselho Municipal de Educação*, CMEs, respectively). Table 1.1 presents a full description of some of their main responsibilities.

Table 1.1. Main responsibilities of administrative bodies at the state and municipal level

	State Education Secretariats	State Education Councils	Municipal Education Secretariats	Municipal Education Councils
Defining curriculum content and pedagogy	Elaborate the state curriculum to guide state, municipal and private schools at pre-tertiary education levels and state education plans in alignment with national guidelines. Run the state-level school network.	Validate the pedagogical project, the disciplines offered, the workload and the teaching staff of the state schools. Approve the state curriculum.	Elaborate and implement the municipal curriculum and municipal education plans in alignment with national and state guidelines. Run the municipal-level school network.	Approve the basic curriculum for the municipal education network.
Management issues	Exercise a redistributive role in relation to their schools. Manage school meals, transportation and school calendar.		Exercise a redistributive role in relation to their schools. Manage school meals, transportation and school calendar. Provide transportation for students in the municipal school network.	
Regulation		Supervise state educational institutions. Authorise the operation of state public and private schools.		Draw up rules for municipalities in accordance with federal and / or state laws Supervise municipal educational institutions Authorise the operation of municipal public and private schools
Accountability and Monitoring	Ensure that educational quality standards set by federal agencies and the national common curriculum are met.	Monitor the implementation of state education plans.	Ensure that educational quality standards set by federal agencies and the national common curriculum are met.	Monitor the implementation of public policies and the educational results of the municipal education system
Human Resources and Development	Develop actions to promote interaction between schools, parents, students and communities, such as "pedagogical meetings". Create and manage cultural and sports programmes for the school community Hold admission processes for education civil servants.		Develop actions to promote interaction between schools, parents, students and communities, such as "pedagogical meetings". Create and manage cultural and sports programmes for the school community. Hold admission processes for education civil servants.	

The National Council of Education Secretariats (*Conselho Nacional de Secretários de Educação*, CONSED) at the state level and the National Union of Municipal Education Managers (*Educação União Nacional dos Dirigentes Municipais de Educação*, UNDIME) at the municipal level, promote and support the interaction between local stakeholders and between them and the federal government. Nevertheless, horizontal co-ordination, such as between municipalities, is reported to be low (Abrucio, 2017^[32]; OECD, 2020^[29]).

Overlaps of responsibility and a lack of co-ordination mechanism

Brazil has a complex governance structure, reflecting in part its size and diversity. It also faces some distinct challenges. It is unusual for two separate levels of government – states and municipalities – to directly run schools at the same education level. Normally that responsibility is given to one or other level of government on grounds of clarity and efficiency. In addition, Brazil still lacks a national system that clearly outlines and harmonises the roles and responsibilities of the different levels of government, laying out the ways in which they should work together to deliver education policy (SASE/MEC, 2014^[33]) (see Box 1.3). While CONSED and UNDIME play a role in articulating state and municipal stakeholders, respectively, they are not formal government entities. Moreover, despite the existence of some participatory spheres, such as deliberative councils, (see Table 3.4 in (OECD, 2020^[29]) there are no official regular arrangements or body to facilitate the co-ordination of *all* the different levels of government with actual decision-making powers. This lack of co-ordination often leads to overlap or duplication of work, inefficiencies, and gaps in education provision (SASE/MEC, 2015^[34]; OECD, 2020^[29]).

Box 1.3. Towards a National Education System

The creation of a National Education System (*Sistema Nacional de Educação*, SNE) has been in the public debate for some years now. It bears the promise of fulfilling the principle of the “collaboration regime” (Dourado, 2013^[35]) which has not yet been regulated. The documents for the 2014 National Education Conference (*Conferência Nacional da Educação* – CONAE), elaborated by the National Education Forum (*Fórum Nacional de Educação*, FNE), had argued that its creation would contribute to achieving the following objectives:

- To promote common educational guidelines throughout the national territory, with the perspective of overcoming regional inequalities and promoting the right to quality education.
- To define and guarantee common educational purposes, guidelines and strategies, without prejudice to the specificities of each system.
- To reinforce the federal government’s role in promoting articulation, standardisation, co-ordination and regulation of public and private national education.

Later in 2014, with the Law of the National Education Plan (Law nº 13.005/2014), the creation of such a system became mandatory. Article 13 of the Law states that:

Art. 13. The public power must establish, in a specific law, two years after the publication of this Law, the National Education System, responsible for the articulation between the education systems, in a collaborative regime, for the effectiveness of the guidelines, goals and strategies of the National Education Plan.

Given that the National Education System would have to be created by a specific national law, advocacy groups and non-governmental organisations, together with congressmen, congresswomen and senators whose platform of work is education, have been promoting this agenda in the National Congress. The Complementary Law Project nº 25, which foresees the creation of the SNE, was proposed in February 2019 at the Chamber of Deputies (the lower chamber of Brazil’s National Congress). However, it awaits appreciation by the Education Commission since March of that same year. Another Law Project enacting the SNE was proposed in 2019, this time at the Federal Senate. The Complementary Law Project nº 235, proposed in October 2019, awaits appreciation by the Education Commission since December of that year. The non-governmental organisation Todos pela Educação and the National Campaign for the Right to Education argue that a specific law of the National Education System should bring the following changes:

- Establish the competences and duties of each entity more clearly, with emphasis on strengthening the federal government’s role of co-ordinating national education, while diminishing its role as executor of policies.
- Establish national benchmarks for the provision of quality education, through the adoption of the index of Cost Pupil Quality and with the support of a tripartite council or body.
- Assign to each state government the role of overseeing education policies in their territories, by establishing clear criteria for issues such as: enrolment, curriculum, evaluation, teaching materials, selection and training of teachers.
- Create mechanisms to foster collaborative practices between municipalities, among which intermunicipal consortia and the institutionalisation of Education Development Arrangements.
- Give special attention to the North and Northeast regions: in light of the Brazilian federative pact, the SNE must guarantee the necessary conditions for quality and equity in educational care, especially at the basic level, seeking to overcome historical regional inequalities.

Given Brazil's decentralised education system, where federal, state and municipal entities are on equal footing, the design and implementation of a National Education System is a complex issue. The matter – as well as the many proposals mentioned above - remain the subject of heated debates between government entities, civil society and the general public.

Source: Adapted from: (OECD, 2020^[29]), *Auditing Decentralised Policies in Brazil: Collaborative and Evidence-Based Approaches for Better Outcomes*, <https://doi.org/10.1787/30023307-en>.

Legal frameworks and policies structuring and guiding education in Brazil

A set of normative arrangements serve to structure and guide the education sector

Brazil enshrines in law and in key regulations certain education rights and guidelines, helping to ensure consistency and minimum standards in provision. Key elements include:

- Brazil's 1988 Federal Constitution established public education as a right to be provided free of charge at all education levels, from early childhood education to higher education.
- The 1996 National Education Guidelines and Framework Law (*Lei de Diretrizes e Bases da educação nacional*, LDB) defines the structure of Brazil's basic education and its education levels; sets the main responsibilities of the federal government, states, and municipalities in education, and lays down the minimum qualification levels for teachers.
- The PNE 2014-2024 sets out 20 targets to be achieved by the Brazilian educational system by 2024. Following the Plan, every state and municipality in Brazil has had to develop their own educational plan to support the achievement of the targets set in the PNE, while taking into account their own local needs and demands. Every two years, INEP publishes a monitoring report assessing progress towards the goals established in the PNE (see Table 1.2).

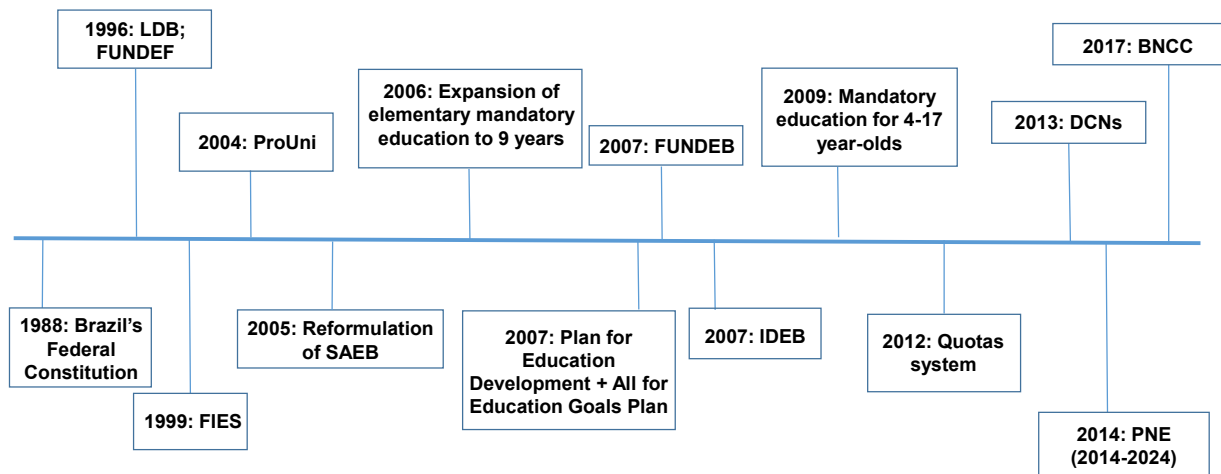
Table 1.2. Examples of PNE's (2014-2024) targets and their status in the most recent year with available data

Target	Indicator	Target,	Last result
Universalise, by 2016, early childhood education for 4-5 year-olds and expand the offer of early childhood education in daycare centres in order to attend at least 50% of 0-3 year-olds until the end of the term of this PNE.	1A: Percentage of 4-5 year-olds who attend school /daycare centre	100% (by 2016)	93.8% (2018)
	1B: Percentage of 0-3 year-olds attending school / daycare	50%	35.7% (2018)
Raise the average schooling years of 18-29 year-olds in order to achieve at least 12 years of study in the last year of this Plan for the population of the countryside, regions with the lowest level of education in the country and the poorest 25%, and also equalising the average level of education between blacks and non-blacks as per declared to the IBGE	8A: Average schooling, in years of study, of 18-29 year-olds	12 years	11.6 (2019)
To train, at the postgraduate level, 50% of the teachers working at pre-tertiary education (ISCED 0 to 3) until the last year of validity of this PNE, and guarantee to all professionals continuous education development in their area of expertise, considering the needs, demands and contextualisation of education systems.	16B: Percentage of teachers who participated in continuous education development programmes	100%	38.3% (2019)

Source: (INEP, 2020^[36]), *Relatório do 3º ciclo de monitoramento das metas do Plano Nacional de Educação – 2020* [Report on the 3rd cycle of monitoring the goals of the National Education Plan – 2020], http://portal.inep.gov.br/informacao-da-publicacao/-/asset_publisher/6JYIsGMAMkW1/document/id/6957506 (accessed on 17 September 2020).

- The 2013 National Curriculum Guidelines (*Diretrizes Curriculares Nacionais*, DCNs), covering ISCED 0 to 3, establish the structure of curricula for all these levels, and, individually for each education level (ISCED 0, ISCED 1 and 2, ISCED 3), as well as for special education modalities such as Quilombola Schools⁴ and Indigenous School Education. The DCNs establish the structure of the curricula to be followed by all schools.
- The recently introduced National Common Curricular Base (*Base Nacional Comum Curricular*, BNCC), which defines minimum national learning standards in each stage of Brazil's basic education. The BNCC is not a curriculum per se but offers content guidelines for curriculum planning. This achievement follows years of work and intensive consultation. In 2017, the BNCC was approved for early childhood education (0-5 year-olds), primary and lower secondary education and a year after, for upper-secondary education. Pre-primary, primary and lower secondary schools had until the beginning of 2020 school year to implement the BNCC's guidelines – including curriculum adaptation, training of the teaching staff, updating teaching materials, etc. For upper-secondary education, schools will have until 2022 to apply the changes.
- The Basic Education Maintenance and Development Fund (*Fundo de Manutenção e Desenvolvimento da Educação Básica*, FUNDEB). It was implemented to replace its predecessor, the Primary and Lower Secondary Education Maintenance, Development and Teacher Promotion Fund (*Fundo de Manutenção e Desenvolvimento do Ensino Fundamental e de Valorização do Magistério*, FUNDEF), which was in place from 2007 until the end of 2020. FUNDEB redistributes financial resources across states, backed by a contribution from the federal government. It is currently being relaunched from 2021 with a new mandate and as a permanent feature of Brazil's education funding system (see Chapter 4).

Figure 1.8. Set of some of the main legal frameworks, policies, and reforms in the education sector in the past three decades



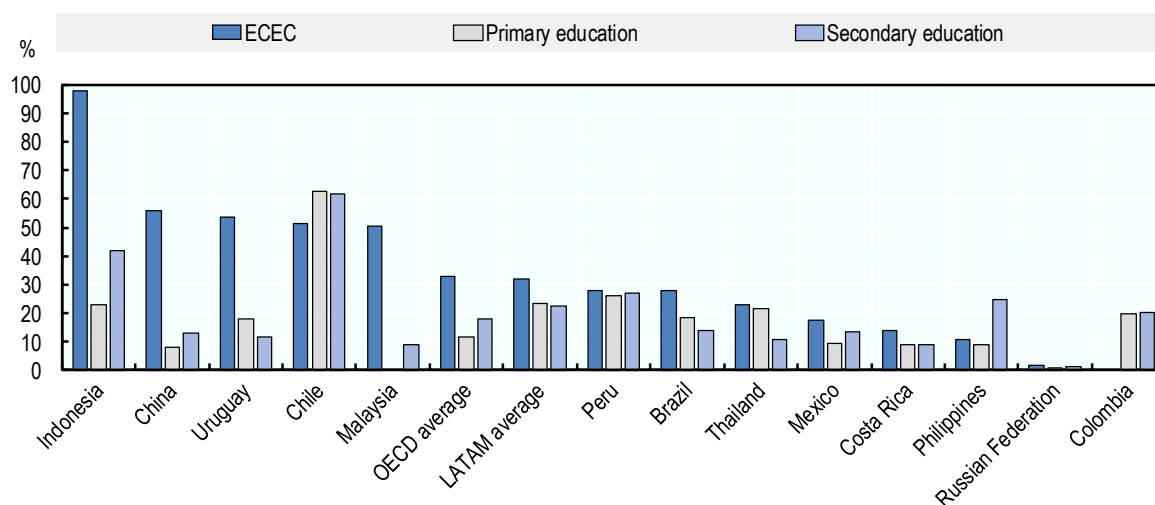
Source: Adapted from (Todos pela Educação, 2019^[37]), *Propostas para Aprimoramento nos Mecanismos de Financiamento da Educação Básica* [Proposals for Improvement in Basic Education Financing Mechanisms], <https://www.todospelaeducacao.org.br/uploads/posts/258.pdf> (accessed on 10 September 2020).

The role of the private sector

At the basic level, most students are enrolled in public schools. Students in the private sector come from wealthier backgrounds

In the Brazilian basic level, most students are enrolled in public institutions (81%) (INEP, 2020^[38]) (see Figure 1.9). Private institutions charge a monthly fee for students' enrolments, and fees are unregulated. Grants and scholarships for private schools are not common or publicly-supported. As a result, across all cycles of the basic level, most students in public schools come from the poorest socio-economic quintiles, while the reverse is true for private schools (see Table 1.3).

Figure 1.9. Share of students enrolled in private institutions, by education level, 2018



Note: Data for ECEC in Colombia is not available and data for primary education in Malaysia is not available. Countries are ordered in descending order from percentage of enrolment in ECEC in private institutions.

Source: (UNESCO-UIS, n.d.^[39]), *UIS dataset*, <http://data.uis.unesco.org/> (accessed on 29 June 2020).

StatLink  <https://stat.link/jp03yu>

Table 1.3. Students per socio-economic quintile by education level and type of institution in Brazil, 2018

Socio-economic quintile in ascending order per household per-capita income	ECEC (ISCED 01 and 02)		Elementary education (ISCED 1 and 2)		Upper-secondary Education (ISCED 3)	
	Public	Private	Public	Private	Public	Private
Up to 20%	36.4%	8.5%	40.7%	7.2%	30.0%	5.3%
More than 20% up to 40%	27.7%	14.7%	28.3%	13.7%	28.7%	9.8%
More than 40% up to 60%	19.1%	15.7%	17.1%	16.4%	21.0%	14.3%
More than 60% up to 80%	12.4%	22.6%	10.4%	22.6%	14.6%	23.9%
More than 80%	4.4%	38.5%	3.5%	40.0%	5.6%	46.7%

Source: Adapted from (IBGE, 2019^[16]), *Síntese de Indicadores Sociais: Uma análise das condições de vida da população brasileira 2019* [Synthesis of Social Indicators: An analysis of the living conditions of the Brazilian population 2019], <https://biblioteca.ibge.gov.br/visualizacao/livros/liv101678.pdf> (accessed on 23 April, 2020).

Growth in private sector provision until the COVID-19 crisis

Demographic changes in Brazil mean that there are declining numbers of children and young people. As a result, in 2019, 47.9 million students were enrolled in Brazil's basic education system, around 9% less than in 2009 (INEP, 2009^[40]). During the same period, public sector enrolments fell by around 14%, while private sector participation increased by 24% (INEP, 2009^[40]). However, private sector growth has slowed since 2015 (INEP, 2020^[38]), and in 2020 was thrown into sharp reverse by the COVID-19 crisis. One survey found that 60% of surveyed private schools have lost more than 10% of their students (Folha de São Paulo, 2020^[41]) and according to some accounts, around 300 000 teachers working in private institutions have been let go during the pandemic – mainly because of the non-payment of tuition fees and lower school revenues (Folha de São Paulo, 2020^[41]). According to the National Federation of Private Schools (*Federação Nacional das Escolas Particulares*, FENEP) around two-thirds of 0-3 year-olds will leave private crèche facilities in 2020 (Agência Brasil, 2020^[42]). One potential impact will be a sudden influx of students into the public school system (see discussion in Chapter 7).

Rising demand for tertiary education, especially among poorer students, has been largely met by the private sector

Over three-quarters of bachelor's students in Brazil attend private universities, compared to less than one-third among OECD countries. (OECD, 2019^[43]). Recent decades have witnessed a rapid increase in private sector enrolments, and in the number of private higher education institutions, following regulatory relaxation from the end of the 1990s (Traina-Chacon and Calderón, 2015^[44]; Barros, 2015^[45]). Government funding programmes such as the Student Financing Fund (*Financiamento Estudantil*, FIES) and the "University for All" Programme (*Programa Universidade para Todos*, ProUni), (see Chapter 2) expanded access by helping disadvantaged students to enrol in private institutions. However, the public higher education network has a higher share of poorer individuals enrolled if compared to private higher education institutions (9.7% and 5.5%, respectively) (IBGE, 2019^[16]). Overall, higher education is still mainly accessed by the most privileged individuals (see Table 1.3). The equity challenges of entry and participation in tertiary education are further discussed in Chapters 2 and 4.

Recent and emerging issues

Upper secondary reform

A major reform of upper secondary education was agreed in 2017 and is now being implemented. Students will follow a common core programme (including mandatory Portuguese and mathematics in all years) alongside options in one (or more) programmes: languages; mathematics; natural sciences; human and social sciences; technical and professional training. Vocational education is no longer a separate track, but has instead become an optional component of students' upper secondary studies. The reform reduces the number of mandatory subjects to be taught every year throughout the three years of upper secondary education and progressively increases class time, with schools having to reach 1 000 annual hours by 2022. Up to 1 800 of the total hours making up upper secondary education will cover the BNCC, and at least 1 200 hours will be used to cover the optional pathways students choose to pursue according to the availability of programmes offered by schools.

The reform is intended to improve quality, align the curriculum and instruction methods with student needs, offer more choice and make upper secondary education more attractive and engaging – a key requirement given high dropout rates at this level (see Chapter 2). Education networks, together with schools, will have flexibility to develop their curricula and programme offer. This approach offers considerable advantages, which must be set alongside the risk that the degree of choice will depend very much on the resources available to the school (Catelli, 2017^[46]). Looking to the future, key challenges include the use of extra

teaching hours, the precise structure of vocational programmes, as well as training of teachers (Muylaert, 2019^[47]; Catelli, 2017^[46]).

The COVID-19 crisis

In response to the COVID-19 pandemic, most schools in Brazil closed for the most part of 2020 and into the first quarter of 2021⁵. In total, estimates reveal that schools closed for over 40 weeks during the pandemic crisis (UNESCO, n.d.^[48]). While online and other forms of distance teaching were developed in response, differences in households' access to the Internet, parents' capacity to provide support to their children, coupled with disparities across school systems in their ability to implement effective education responses during the crisis, meant that students from disadvantaged backgrounds and schools often missed important learning opportunities. This also contributed to amplifying gaps across students and raising dropout rates.

However, the impact of COVID-19 is not only seen in students' learning outcomes. Confinement and social distancing have negative consequences for students' overall well-being. Being prevented from going to school and having to stay home increases the risk of poor nutrition among children, their potential exposure to domestic violence, as well as raising stress and anxiety levels among young people (OECD, 2020^[49]). As, hopefully, the pandemic recedes, the main challenge will become that of re-opening schools under new physical distancing measures and hygiene protocols, implementing learning recovery plans for the students who have had their learning interrupted and providing socio-emotional support to children. This issue is discussed throughout this report, but particularly in Chapter 7.

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World Bank (2020), *World Bank Open Data*, <https://data.worldbank.org/> (accessed on 1 May 2020).

[2]

Notes

¹ Costa Rica is still in the process of becoming a full OECD member country. In May 2020, OECD countries unanimously decided to invite Costa Rica to become a member of the Organisation. Costa Rica's accession, extending the OECD's membership to 38 countries, will take effect after the country has taken the appropriate steps at the national level to accede to the OECD Convention, and deposited its instrument of accession with the French government, the depository of the Convention.

² This figure is likely underestimating the actual levels of unemployment in the country, since it does not take into account the large numbers of unemployed people who are not even looking for a job.

³ Poverty gap at USD 5.50 (dollars) a day (2011 purchasing power parity, PPP) (%).

⁴ Quilombola schools are schools implemented in quilombola settings (quilombos). Quilombos are Brazilian settlements founded and formed by descendants of enslaved Africans, who mostly live on subsistence agriculture on lands which were donated, purchased or that have been occupied for a long time. Quilombola schools were implemented as a way of supporting the local culture, traditions, and ways of learning. These schools were regulated in 2012 with the creation of National Curricular Guidelines for the Quilombola Scholar Education.

⁵ Responses to school operations have varied across Brazil. Some states and municipalities have closed schools, others have left them fully open or employed hybrid models. Approaches have also depended on the education level.

2. Taking part in education

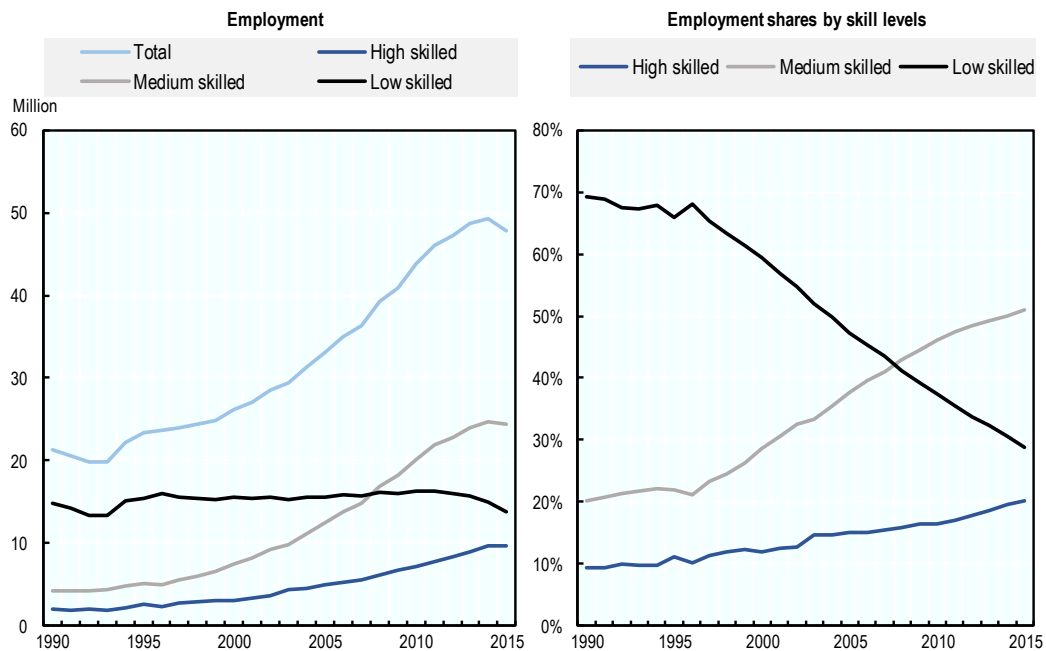
This chapter looks at the participation of Brazilian children and youth in education and how it compares with other countries. It explores their enrolment in schools and other educational institutions and how they progress through the different stages of education. It examines Brazil's key challenges: ensuring progression and improving equity.

Taking part in education: progress and remaining barriers

Despite major advances, educational attainment in Brazil is still well behind the OECD average

1. In Brazil, the types and distribution of skills in the labour market have changed dramatically over the last three decades, with many more high- and medium-skilled jobs, and fewer low-skilled jobs (see Figure 2.1). At the same time, the skills levels, as measured by educational attainment, of the adult population have increased markedly. In 2018¹, nearly half (46%) of young adults (25-34 year-olds) had attained upper secondary education, more than twice the level in the older generation (22% among 55-64 year-olds) (OECD, n.d.^[1]).

Figure 2.1. Trend in total formal employment and employment shares by skill levels, 1990-2015



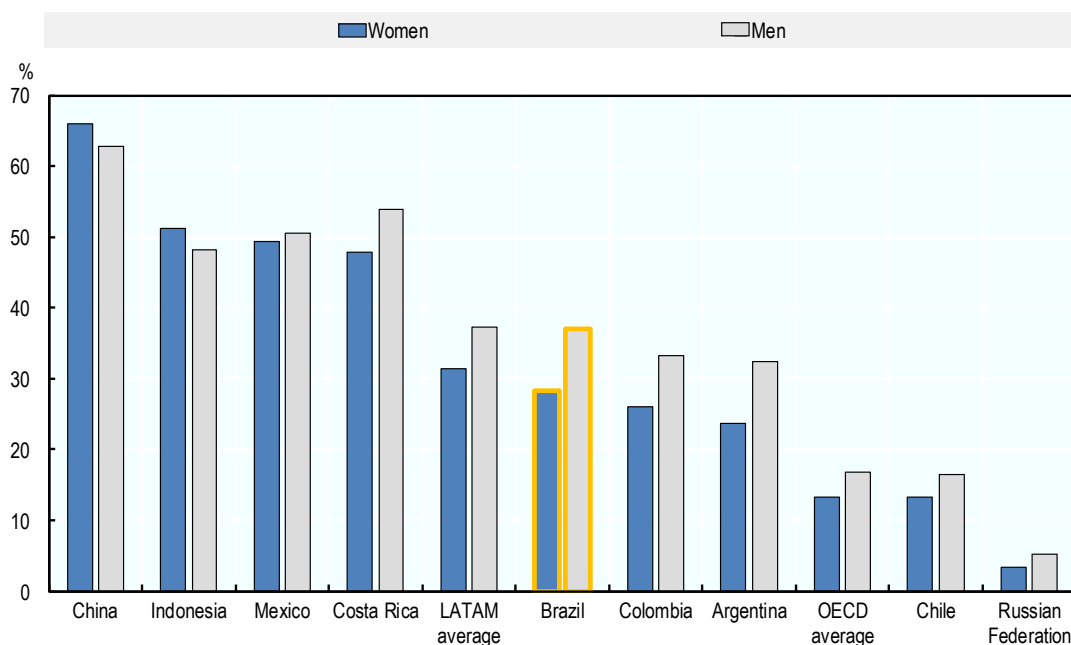
Note: Skill level is defined according to educational attainment: upper secondary not completed (low skilled), secondary completed and tertiary non-completed (medium skilled) and tertiary completed (high skilled).

Source: (OECD, 2020^[2]), *OECD Economic Surveys: Brazil 2020*, <https://doi.org/10.1787/250240ad-en>.

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Despite these improvements, the qualification levels of the adult population are still far lower than those of OECD countries: in 2018 nearly half of those aged 25-64 had not completed upper secondary education (47%), more than double the OECD average of 22% (OECD, 2019^[3]). In the same year, only around 18% of 25-64 year-olds had completed tertiary education, less than half the OECD average (39%) and also below some Latin American (LATAM) countries such as Chile and Colombia (OECD, 2019^[4]). Even among younger adults aged 25-34, nearly 40% of Brazilian men and nearly 30% of women lacked upper secondary qualifications, a much higher proportion than found on average in OECD countries, though below that of Mexico (see Figure 2.2). Improvements in the levels of attainment and skills will be vital if Brazil is to advance with much-needed structural reforms and open up to the global economy. Higher skills will help boost productivity and prepare the future workforce for jobs that require higher levels of knowledge and skills (OECD, 2020^[2]).

Figure 2.2. Percentage of 25-34 year-olds without a qualification at upper secondary level or above, by gender, 2018



Source: (OECD, 2019^[3]), *Education at a Glance 2019: OECD Indicators*, <https://doi.org/10.1787/f8d7880d-en>.

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Not all have shared the benefits of education expansion

Despite major advances in education participation, some groups have been left behind, including the socio-economically disadvantaged, ethnic minorities and those living in rural areas (World Bank, 2018^[5]). While socio-economic background is a factor everywhere, its impact is stronger in Brazil than in many comparable countries (see Box 2.1). In Brazil, among 18-29 year-olds, 59% of the poorest quintile had not completed upper-secondary education, several times the equivalent rate for the richest quintile (8%) (IBGE, 2019^[6]). This gap is higher than in LATAM countries on average (see Figure 2.11). Similarly, repetition rates for the poorest quintile in Brazil are double those of the richest quintile (see Figure 2.9).

Box 2.1. Addressing socio-economic inequality in and through education

In recent decades, Brazil has made strenuous efforts to reduce inequality (see Chapter 1) and education has been widely recognised as a powerful tool to this end. Since re-democratisation, Brazil has laid the foundations of a strong normative framework that promotes equality in education. The principles of equity and inclusion in education are firmly enshrined in the Federal Constitution and front and centre in national and sub-national strategies for education. Brazil has also signed up to international declarations that promote quality education for all, including the Universal Declaration of Human Rights and the United Nations Sustainable Development Goals.

Brazil has launched several initiatives designed to reduce inequality, including some designed to assist the poorest communities in accessing education. *Bolsa Família*, a major initiative designed to combat inequality and poverty, has helped increase school participation among disadvantaged groups. The programme, which was first introduced in 2001 and then expanded in 2003, offers a monthly payment to low-income families if, among other things, their children are enrolled and attend school regularly. Evaluations have found positive effects on enrolment, attendance, grade progression, and retention rates.

Recent initiatives have sought to make tertiary education more available to those from modest backgrounds, by offering funding for students to attend private universities, and reserving places in public universities for disadvantaged groups (e.g. students coming from public schools, black and mixed students, students from indigenous communities and those with disabilities) through a quota system. For example, since its creation in 2004, the “University for All” programme (*Programa Universidade para Todos*, ProUni) has already served around 2.5 million students with scholarships. These programmes have helped to increase the share of black, mixed and disadvantaged students in Brazil’s tertiary education system.

Sources: (Presidência da República, 2020^[7]), *Constituição da República Federativa do Brasil de 1988* [1988 Constitution of the Federative Republic of Brazil], http://www.planalto.gov.br/ccivil_03/constituicao/constituicao.htm (accessed on 19 August 2020); (MEC, 2014^[8]), *Plano Nacional de Educação – Lei N° 13.005/2014* [National Education Plan – Law N° 13.005/2014], <http://pne.mec.gov.br/18-planos-subnacionais-de-educacao/543-plano-nacional-de-educacao-lei-n-13-005-2014> (accessed on 17 June 2020); (United Nations, 2015^[9]), *Universal Declaration of Human Rights*, https://www.un.org/en/udhrbook/pdf/udhr_booklet_en_web.pdf (accessed on 19 August 2020); (Ministry of Foreign Affairs, n.d.^[10]), Sustainable Development Goals (SDGs), <http://www.itamaraty.gov.br/en/politica-externa/desenvolvimento-sustentavel-e-meio-ambiente/6298-sustainable-development-goals-sdgs> (accessed on 19 August 2020); (Bruns, Evans and Luque, 2012^[11]), *Achieving World-Class Education in Brazil : The Next Agenda*, <https://doi.org/10.1596/978-0-8213-8854-9>; (OECD, 2015^[12]), *Brazil Policy Brief: Inequality*, <https://www.oecd.org/policy-briefs/brazil-improving-policies-to-reduce-inequality-and-poverty.pdf> (accessed on 19 August 2020).

Large inequalities across ethnic groups remain. In 2018, among 18-29 year-olds, only 60% of the black or mixed population had at least attained upper-secondary education, compared to 76% among whites (IBGE, 2019^[13]). The proportion of white 18-24 year-olds who were following or had already completed higher education was 36% in 2018, double the proportion found among the black and mixed population, at 18% (IBGE, 2019^[13]). In 2019, nearly 25% of black and/or mixed individuals aged 18-24 were not enrolled in education or employed – much larger than the equivalent figure for whites (17%) (IBGE, 2020^[14]). Data suggest that black and mixed students often drop out of school early to find a job, and because of social exclusion (Rodrigues, 2014^[15]; Folha de São Paulo, 2019^[16]).

Such education inequalities both reflect and contribute to Brazil’s large wealth and income disparities. As discussed in Chapter 1, despite a sharp decline in the 2000s, income inequality remains remarkably high (Medeiros, 2016^[17]) and evidence suggests that some long-term improvements have been reversed – since the end of 2014, income inequality has started to rise again (Neri, 2018^[18]). As discussed

in Chapter 1, the COVID-19 pandemic is likely to further magnify disparities. Tackling disparities in access to education will be key for Brazil's social and economic development.

Early childhood education and care

Brazil increasingly recognises early childhood education and care as a vital element in education

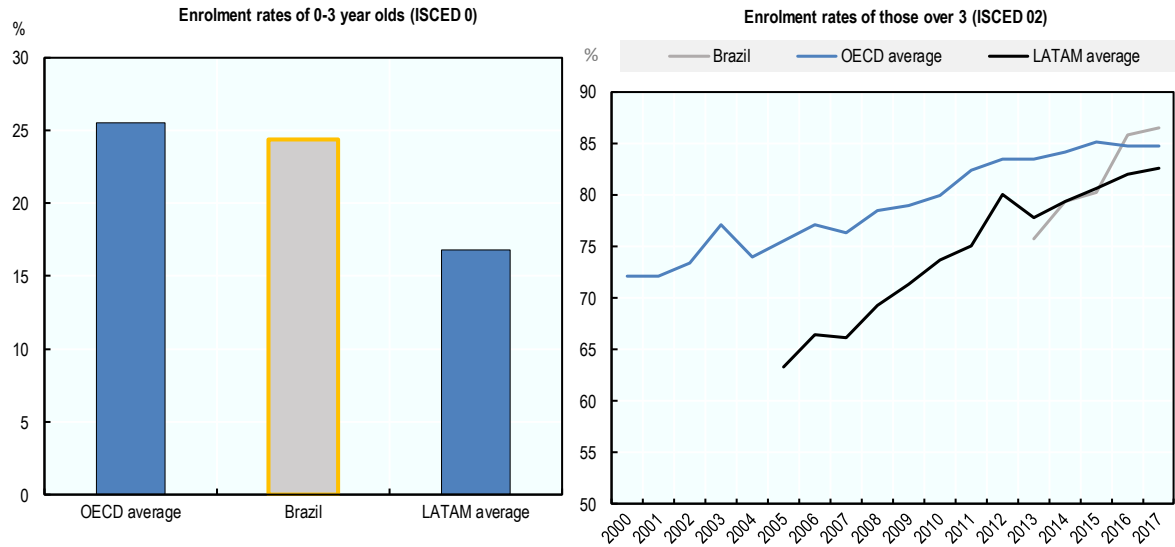
Early childhood education and care (ECEC) has three overlapping functions: first, as a form of care, keeping children healthy, well-nourished and safe while their parents are at work; second, as a means of socialising young children so that they acquire social and emotional skills; and third, as a vehicle for cognitive learning, including basic literacy and numeracy (OECD, 2001 - 2018^[19]). The balance across these different roles has changed. Historically, ECEC was mainly seen as a form of childcare, rather than as part of the basic education system. Recent years have changed this perception, not least because of the weight of evidence demonstrating its importance in the development of young children, and its particular value in supporting the most disadvantaged. In Brazil, these factors are weighty, given a legacy of extreme poverty and inequity in some sections of Brazilian society, and the compelling evidence that ECEC, alongside good quality child health and nutrition measures, is one of the most powerful means of rectifying inequity.

In response, Brazil has given increased policy priority to expanding ECEC. A constitutional amendment redefined compulsory education so that it now starts at age 4 (Presidência da República, 2009^[20]). In addition, Target 1 of the National Educational Plan (*Plano Nacional de Educação*, PNE) (see Chapter 1) is universal enrolment in pre-primary education for 4-5 year-old children by 2016, and increasing the offer in nurseries so as to enrol at least half of children aged 0-3 by 2024 (MEC, 2014^[8]). Brazil's Early Childhood Legal Framework (*Marco Legal da Primeira Infância*) also recognised the importance of quality ECEC for young children's holistic development (Presidência da República, 2016^[21]). The policy objectives in respect of young infants (0-3 year-olds), and slightly older children prior to their entry to primary school (3-years-old and above) have been different in emphasis:

- **Children under the age of 3.** An important area of focus, and of progress, in Brazil has been child health, and in particular child mortality. In recent decades, the infant mortality rate has declined dramatically, from 30 deaths per thousand live births in 2000 to 13 in 2018 – similar to Colombia (12), although above Costa Rica (8) and most OECD countries (6) (World Bank, 2020^[22]). Progress has also been made in the enrolment of children under the age of 3 in ECEC, which increased from 10% in 2010 to 24% in 2018 (OECD, 2019^[3]; OECD, 2020^[23]). Still, participation of young children in ECEC (ISCED 0) remains low, and slightly lower than the OECD average² (26%) (see Figure 2.3, left-hand chart).
- **Those aged over 3.** At this age, the focus has been on children's learning and participation in education. Since the 2000s Brazil has gradually expanded the duration of compulsory education to encompass the earlier years. In 2006 the starting age of primary education was lowered from 7 to 6, and in 2009 pre-primary education was officially included into compulsory education by law (Constitutional Amendment 59/2009) (Presidência da República, 2009^[20]). International data show that enrolment in pre-primary education for children aged from 3 to the start of primary education increased from 76% in 2013 to 86% in 2017, slightly higher than the OECD average of 85% and above that of other LATAM countries (see Figure 2.3, right-hand chart).

Figure 2.3. Participation in early childhood education (ISCED 0 and 02)

Enrolment of children under the age of 3 in ECEC (ISCED 0), 2018 (on the left); enrolment of children aged from 3 to the start of primary education in pre-primary education (ISCED 02), from 2000 to 2017 (on the right).



Sources: (OECD, 2020^[23]), *Education at a Glance 2020: OECD Indicators*, <https://dx.doi.org/10.1787/69096873-en>; (UNESCO-UIS, n.d.^[24]), *UIS dataset*, <http://data.uis.unesco.org/> (accessed on 17 November 2020).

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The Brazilian government has also given increased attention to family literacy, with particular attention to the early years. Two federal programmes are relevant. *Conta pra Mim*, launched in 2019, seeks to improve interaction between children and their parents, and to incentivise reading habits. The basic literacy program *Tempo de Aprender* provides financial and pedagogical support to preschools.

Resources are not always targeted towards reducing inequalities in access to ECEC

Despite improvements, access to ECEC remains unequal in Brazil. While more than half (51%) of 0-3 year-olds from the most affluent quintile of the population were enrolled in some form of early childhood education, the comparable figure for the poorest quintile was only 26% (INEP, 2020^[25]). Similarly, 38% of 0-3 year-olds in urban areas were enrolled, compared with only 21% of their rural counterparts. Moreover, there are very large variations in enrolment rates between states, with enrolment rates for 0-3 year-olds varying between 11% in Amapá, and 49% in São Paulo states.

This means that certain segments of Brazilian society are less likely to benefit from the cognitive and non-cognitive developmental opportunities that take place in ECEC settings. As a result, they are not as well prepared for school. This has long-term impacts on their academic achievement, as observed in PISA findings (see Box 2.2 for more details).

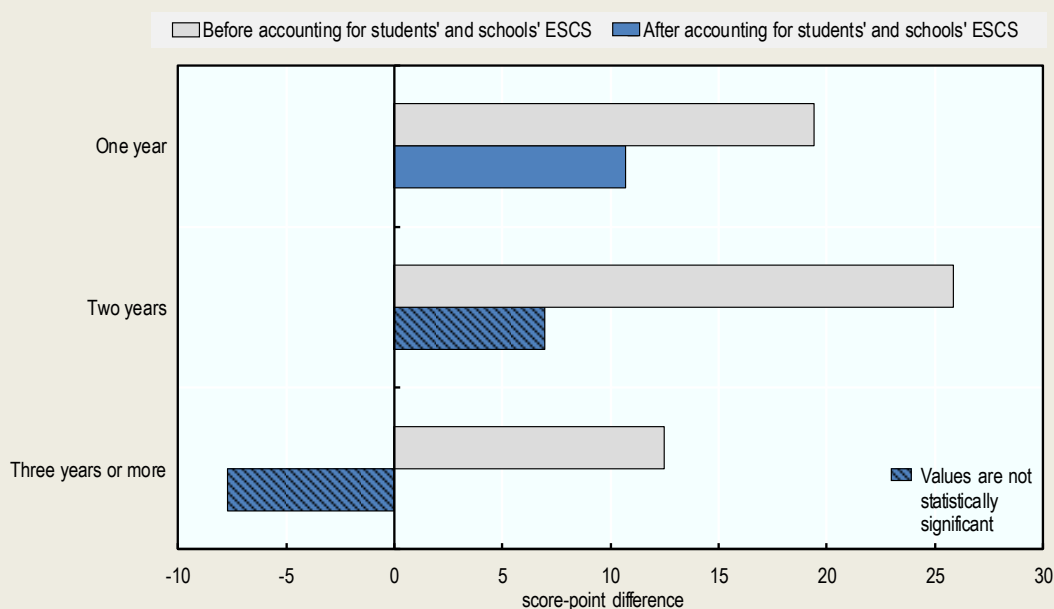
To tackle inequality, support for young children needs to be targeted at those most in need. Continued efforts to expand ECEC should be linked to measures designed to tackle extreme poverty, and to support the health and nutrition of very young children (OECD, 2020^[2]). Specifically, government-supported ECEC might usefully be targeted at low-income households and single parents in order to close gaps in access and promote female labour force participation.

Box 2.2. Attendance in pre-primary education and student performance in Brazil

PISA 2018 results show that, on average, pre-primary attendance is associated with slightly higher reading scores in the majority of PISA-participating countries, including in Brazil. According to PISA 2018 results, Brazilian students who attended pre-primary for at least one year but less than two years scored 19 points more in reading than their peers who had not attended pre-primary or attended for less than a year (OECD average: 26) (OECD, 2019^[26]). However, this relationship is not linear: the benefits of pre-primary attendance become increasingly small with prolonged participation, as observed in Figure 2.4.

Figure 2.4. Number of years in pre-primary education and reading performance, PISA 2018

Score-point difference in reading relative to students who had not attended pre-primary school or had attended it for less than a year, before and after accounting for students' and school's socio-economic status (ESCS)



The gains associated with participation in pre-primary education are significantly lower once the students' and schools' socio-economic status (ESCS) is taken into account, and in certain cases even disappear. This raises questions about the average quality of the pre-primary education in Brazil.

Source: (OECD, 2019^[26]), *PISA 2018 Database*, <https://www.oecd.org/pisa/data/2018database/> (accessed on 13 October 2020); (Balladares and Kankaraš, 2020^[27]), *Attendance in early childhood education and care programmes and academic proficiencies at age 15*, <https://doi.org/10.1787/f16c7ae5-en>; (OECD, 2020^[28]) *PISA 2018 Results (Volume V): Effective Policies, Successful Schools*, <https://doi.org/10.1787/ca768d40-en>.

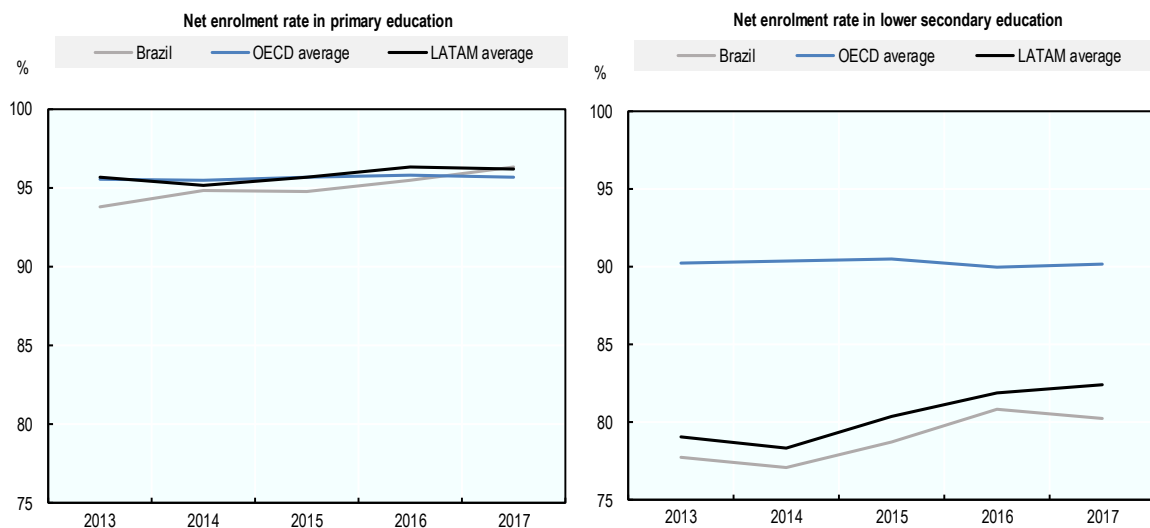
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Primary and lower secondary levels

Enrolment in primary education is near universal, but lower secondary enrolment rates are still low by international standards

Since the 1990s, Brazil has made sustained efforts to ensure that all children attend primary school. Today, enrolment in primary school education (Years 1-5, usually 6-10 year-olds) is near universal (UNESCO-UIS, n.d.^[24]). In lower secondary education (Years 6-9, usually 11-14 year-olds), net enrolment rates are lower – 79% for boys and 82% for girls – which means that around 20% of young adolescents are not enrolled in this phase of education at the right age or, in some cases, at all (UNESCO-UIS, n.d.^[24]). Despite improvements, this remains much higher than in OECD countries, although similar to the LATAM average (see Figure 2.5). Moreover, national data reveal disparities across ethnicities and gender: boys, black and mixed students have lower enrolment rates in lower secondary education (IBGE, n.d.^[29]).

Figure 2.5. Trend in net enrolment in primary and lower secondary education, 2013-2017



Source: (UNESCO-UIS, n.d.^[24]), *UIS dataset*, <http://data.uis.unesco.org/> (accessed on 17 November 2020).

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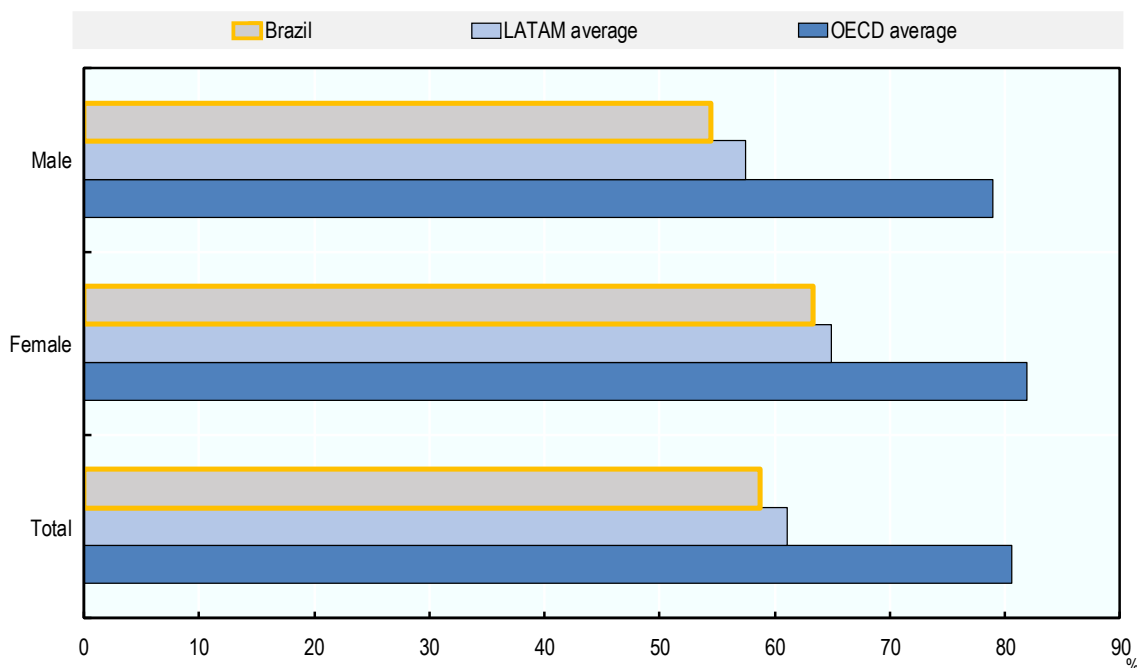
Upper secondary education

Participation in upper secondary education remains lower than across OECD countries

In Brazil, 59% of young people (usually 15-17 year-olds) are enrolled in upper secondary education. This is similar to the LATAM average but compares with around 80% in OECD countries (see Figure 2.6). In developed economies, this level of education is often considered the minimum for many types of jobs, in particular for medium-skilled jobs (OECD, 2020^[2]). As the number of stable low-skilled jobs decreases in Brazil (see Figure 2.1), young people who do not complete upper secondary education will find it increasingly difficult to find good jobs. At the same time, growing participation in upper secondary education will also help Brazil's economy, increasing productivity and international competitiveness (OECD, 2020^[2]). Recognising the importance of this issue, Brazil has ambitious plans to increase the net enrolment rate in upper secondary education to 85% by 2024 (MEC, 2014^[8]).

Figure 2.6. Net enrolment rates in upper secondary education, by gender, 2017

For Brazil, the age range is 15-17 years-old



Note: Total number of students in the theoretical age group for a given level of education enrolled in that level, expressed as a percentage of the total population in that age group.

Source: (UNESCO-UIS, n.d.^[24]), *UIS dataset*, <http://data.uis.unesco.org/> (accessed on 17 November 2020).

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Participation in vocational programmes is low

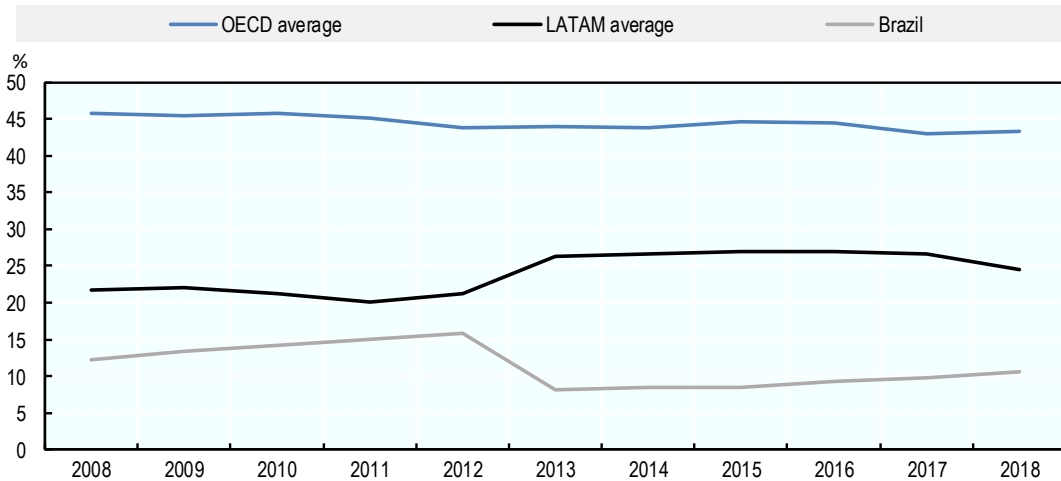
In many countries, vocational education and training (VET) programmes begin at upper secondary level, and in OECD countries on average more than 40% of those enrolled at this level pursue such programmes. While participation in vocational programmes in Brazil has risen significantly in the past decades (INEP, 2020^[25]), it remains limited by international standards. Even among LATAM countries where participation in vocational programmes is generally low, Brazil stands out as having only 11% of students in vocational programmes (see Figure 2.7).

Until very recently, students in VET programmes in Brazil took academic *and* vocational courses as one programme in the same school (*ensino técnico de nível médio integrado*) or as separate programmes in the same or in separate institutions (*ensino técnico de nível médio concomitante*). These programmes have tended to attract high-performing students, many of which come from higher socio-economic backgrounds. Studies also show that (outside the quite separate institution of apprenticeship) workplace learning have not been a standard part of VET programmes in Brazil. Internationally, many countries have developed hybrid VET models to allow students to obtain real on-the-job training. This has been shown to be effective for students' learning progression, allowing them to acquire practical experience and key technical skills. In addition, it can also facilitate a two-way flow of information between potential employers and employees, making recruitment more effective or less costly for the employer (World Bank, 2016^[30]). Some studies suggest that low participation in VET programmes is also a result of low awareness of the programmes on offer (Almeida et al., 2015^[31]).

In the PNE, Target 11 is to increase enrolment in upper secondary VET threefold, while ensuring the quality of the offer, and delivering at least 50% of this increase in the public sector (OECD, 2018^[32]). The intention is that realisation of this target will not only help engage and keep less academically-oriented students in education, offering alternative pathways, but also support upskilling and, through this, improvements in labour market outcomes and productivity. This is particularly important in Brazil, given that a large share of young people enter the labour market directly after leaving school without undertaking tertiary education or further training.

Figure 2.7. Trends in enrolment in upper secondary vocational programmes

Percentage of upper secondary students enrolled in vocational programmes



Source: (UNESCO-UIS, n.d.^[24]), UIS dataset, <http://data.uis.unesco.org/> (accessed on 17 November 2020).

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Reform of upper secondary education is now under way and could enhance student engagement

Traditionally, much of the focus of upper secondary education has been on preparation for the National Upper Secondary Exam (*Exame Nacional do Ensino Médio*, ENEM), which plays a critical role in selection for tertiary education (see Box 2.3). In addition, upper secondary certification is required to access higher education, and is automatically provided by schools or local education authorities upon successful school completion. Upper-secondary certification can also be obtained through adult learning programmes (e.g. *Educação de Jovens e Adultos*, EJA) or by passing the National Examination for Certification of Youth and Adult Skills (*Exame Nacional para Certificação de Competências de Jovens e Adultos*, ENCCEJA).

Currently, as described in Chapter 1, a major reform in this level of education is under way, designed to introduce a competence-based and more flexible curriculum coupled with an extension of the school day. If well implemented, it is anticipated that one effect will be to make the curriculum more relevant and engaging for students, and as a result dropout and repetition rates should decrease (World Bank, 2017^[33]). The reform is intended to offer more flexibility, so that students would be able to combine professional and technical education with academic programmes of study. This should also help ensure that more students graduate with the technical skills and knowledge required by the labour market.

Box 2.3. The ENEM: an examination for access into tertiary education

The ENEM was created in 1998 and is managed by the National Institute of Educational Studies and Research Anísio Teixeira (*Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira*, INEP). While initially seen as a tool to evaluate Brazil's education system, it has progressively become the main examination gateway to tertiary education. This role has been enhanced, particularly since 2010 when scores in the exam became the only criterion used in the selection process for public federal universities. Private and state universities usually have their own exams and/or entry criteria but some also include the ENEM as part of their selection process. ENEM results are also used to select and determine the eligibility of students for ProUni scholarships or the Student Financing Fund (*Fundo de Financiamento Estudantil*, FIES) for those who wish to attend a private higher education institution.

The ENEM is widely respected as a transparent and objective competitive examination. However, the high stakes associated with this examination have contributed to the emergence of a shadow education sector in the country. The economic returns from higher education qualifications (see Chapter 3) and the fact that university places, in particular prestigious public universities, remain limited, lead many students and families – and in particular those from advantaged backgrounds – to seek out additional opportunities outside of school, in particular private tutoring and the *cursinho*. This situation contributes to disparities in access to higher education, as children from socio-economically advantaged households will be better prepared for university entrance examinations (see Chapter 3 for a discussion on disparities in the level of quality between the private and public sectors), including the ENEM (Medeiros, 2016^[17]).

Current reforms will allow students to use their results in the Basic Education Assessment System's (*Sistema de Avaliação da Educação Básica*, SAEB) assessments taken in Grades 1, 2 and 3 of upper secondary (known as *ENEM seriado*) for entry into higher education institutions. While it is too early to tell, spreading out the SAEB assessments across three years could help mitigate the perception of high-stakes consequences associated with the ENEM, which will continue to be offered upon students' graduation. Conversely, this reform could encourage excessive "teaching to the test" during upper secondary education, taking time away from actual learning. Introducing an alternative entrance route to higher education may also pose risks to equity and the perception of fairness in the system.

Sources: (IBGE, 2019^[6]), *Desigualdades Sociais por Cor ou Raça no Brasil [Social Inequalities by Colour or Race in Brazil]*, https://biblioteca.ibge.gov.br/visualizacao/livros/liv101681_informativo.pdf (accessed on 5 May 2020); (MEC, 2018^[34]), *ENEM: Apresentação [ENEM: Presentation]*, <http://portal.mec.gov.br/enem-sp-2094708791> (accessed on 8 April 2020); (INEP, 2020^[35]), *Inep disponibiliza Caderno de Conceitos e Orientações do Censo Escolar 2020 e Glossário da Educação Especial*, http://inep.gov.br/artigo/-/asset_publisher/B4AQV9zFY7Bv/content/enquete-sobre-nova-data-do-enem-comeca-neste-sabado-20-21206%20 (accessed on 20 July 2020).

Progressing through compulsory education: grade repetition, dropout and completion

Grade repetition remains common in Brazil

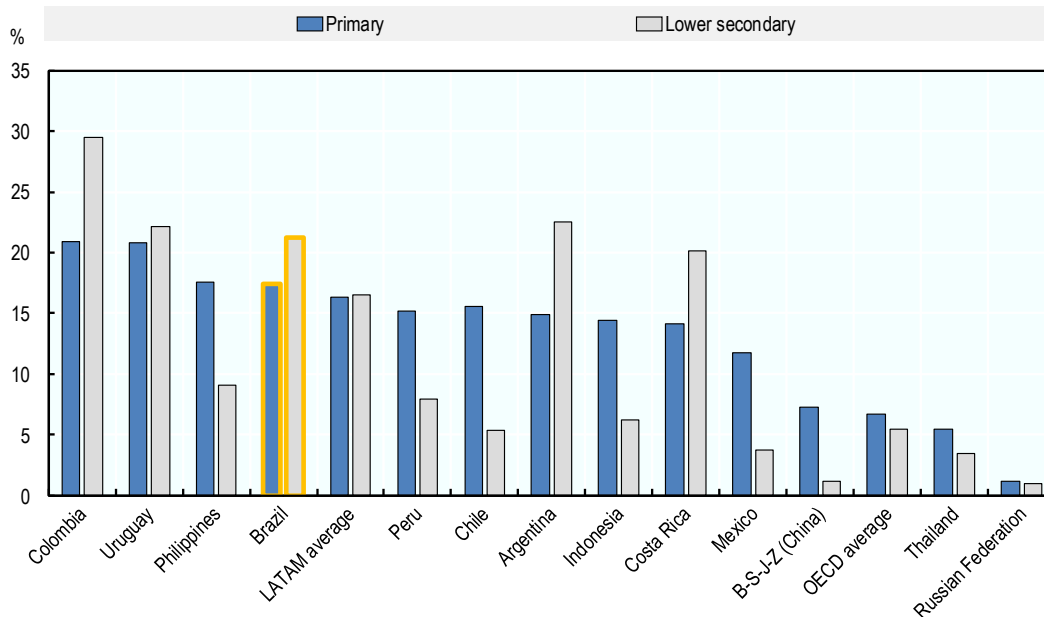
Brazil has high rates of grade repetition

In many countries, pupils need to demonstrate mastery of the work of a given grade before they can proceed to the next one. Those who fail to do so, according to their results in tests or assessments, are required to repeat the grade or year. However, research evidence suggests that repetition is very costly,

not effective in raising outcomes, and can have other negative effects such as further lowering student motivation and engagement (see Box 2.4). In Brazil, rates of grade repetition are much higher than in OECD countries, although comparable with other parts of Latin America (see Figure 2.8).

Figure 2.8. Grade repetition rates, PISA 2018

Percentage of 15-year-olds reporting that they had repeated grades in primary and lower secondary education



Note: B-S-J-Z (China), an acronym for the four Chinese provinces that participated in PISA 2018: Beijing, Shanghai, Jiangsu and Zhejiang.

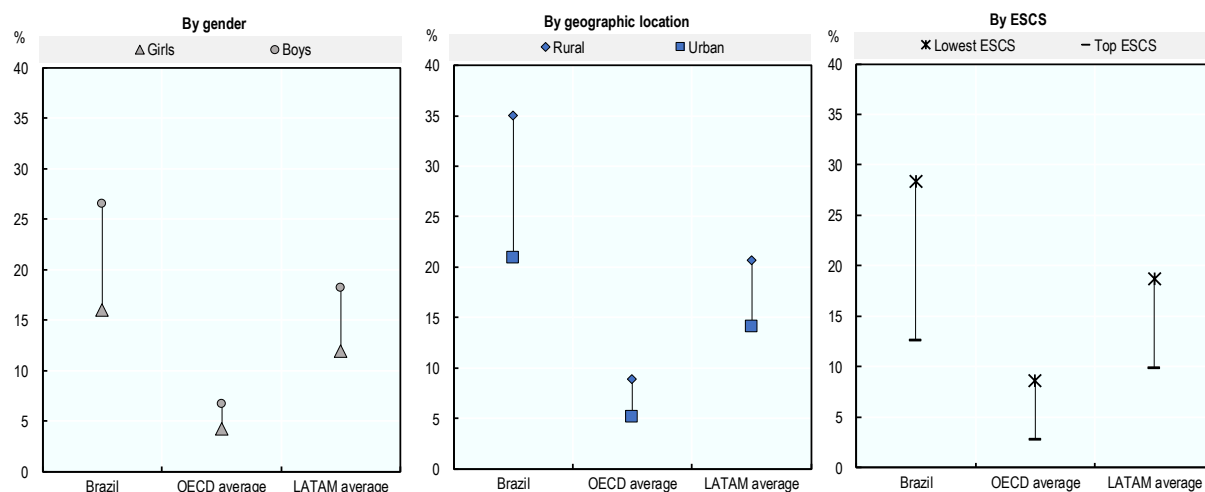
Source: (OECD, 2019^[36]), *PISA 2018 Results (Volume III): What School Life Means for Students' Lives*, <https://doi.org/10.1787/acd78851-en>.

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In Brazil, as in many other countries, repetition is more common among those from poorer and rural households, and among male students. Such disparities are greater in Brazil than in many comparable countries. For example, pupils from the lowest socio-economic quartile (as measured by PISA's ESCS index) are at least twice as likely to have repeated at least one grade than pupils from the highest quartile in lower secondary education (28% as opposed to 13%, respectively) (see Figure 2.9). In comparison, in OECD countries the absolute difference is much smaller, around 9% and 3%, respectively. One of the consequences of repeating grades is that students end their school careers at a later age than normal: 26% of all upper secondary students in Brazil are two or more years older than the expected age for their year (Todos Pela Educação, 2020^[37]). This also means that while the vast majority (93%) of 15-17 year-olds are enrolled in school, many of them have not yet reached upper secondary education – only 71% of 15-17 year-olds are in upper secondary education (Todos Pela Educação, 2020^[37]).

Figure 2.9. Grade repetition rates by gender, geographic location and socio-economic background, PISA 2018

Percentage of 15-year-olds reporting at least one year of repetition in lower secondary school by students' gender, school geographic location and students' and schools' socio-economic background (ESCS)



Note: PISA defines the profile of a school's location based on the principals' characterisation of the community in which it is located. The same definition is applied across all participating countries and includes five categories: villages, hamlets or rural areas (fewer than 3 000 people), small towns (3 000 to about 15 000 people), towns (15 000 to about 100 000 people), cities (100 000 to about 1 000 000 people) and large cities (with over 1 000 000 people). In line with OECD conventions, this report identifies "rural" in the PISA data as those in communities with fewer than 3 000 people and "urban" as those located in any city with more than 100 000 people, unless otherwise noted.

Source: (OECD, 2019^[36]), *PISA 2018 Results (Volume III): What School Life Means for Students' Lives*, <https://doi.org/10.1787/acd78851-en>.

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Box 2.4. Research evidence on why grade repetition is undesirable

The effects of grade retention can be hard to measure through observational studies as it is difficult to distinguish these effects from other factors associated with the profile of students who have been held back. However, findings from randomised controlled experiments show that repetition can have a number of undesirable effects on education systems and students alike. They suggest that grade repetition

- **has high costs:** repetition means an extra year of schooling at public or private expense, and the individual pupil loses a year of potential earnings. Cross-country evidence estimates that widespread use of repetition increases the overall cost of primary and secondary education by around 5% in Brazil, Germany and Italy and up to 10-12% in Portugal and Spain.
- **is largely ineffective:** for those who struggle to learn, merely repeating the experience in which they have already failed is unlikely to succeed. Targeted support, to address students' specific needs and difficulties is a more effective approach.
- **lowers students' motivation and engagement:** pupils are often required to repeat all subjects, even those in which they have demonstrated adequate performance. This can further lower motivation and engagement, in particular since repetition may be triggered by weak performance in only some areas.
- **encourages higher dropout and lower educational attainment:** this is often a consequence of repeaters' low motivation and confidence.
- **leads to lower performance levels and higher inequalities, at the system level:** according to an OECD report from 2011, in countries where grade repetition is very common, overall performance tends to be lower and social background also tends to have a bigger impact on learning outcomes than is the case when compared to countries where fewer students are retained.

Sources: (Ikeda and García, 2014^[38]), *Grade repetition: A comparative study of academic and non-academic consequences*, https://doi.org/10.1787/eco_studies-2013-5k3w65mx3hnx; (OECD, 2011^[39]), *When Students Repeat Grades or Are Transferred Out of School: What Does it Mean for Education Systems?*, <https://doi.org/10.1787/5k9h362n5z45-en>; (Manacorda, 2012^[40]), *The Cost of Grade Retention*, <http://personal.lse.ac.uk/manacorda/repetic.pdf> (accessed 17 June 2020); (Rebelo, 2009^[41]), *Efeitos da retenção escolar, segundo os estudos científicos, e orientações para uma intervenção eficaz: Uma revisão [Effects of school retention, according to scientific studies, and guidelines for effective intervention: A review]*, https://doi.org/10.14195/1647-8614_43-1_2; (Ribeiro, 1991^[42]), *A pedagogia da repetência [The pedagogy of repetition]* <http://dx.doi.org/10.1590/S0103-40141991000200002>; (Instituto Unibanco, 2017^[43]), *Reprovação não contribui para aprendizagem [Failing does not contribute to learning]*, *Aprendizagem em Foco* 32 <https://www.institutounibanco.org.br/aprendizagem-em-foco/32/> (accessed on 29 June 2020); (UNESCO-UIS, 2012^[44]), *Opportunities lost: The impact of grade repetition and early school leaving*, http://uis.unesco.org/sites/default/files/documents/opportunities-lost-the-impact-of-grade-repetition-and-early-school-leaving-en_0.pdf (accessed on 22 June 2020); (UNESCO, 2016^[45]), *Reporte Técnico: Tercer Estudio Regional Comparativo y Explicativo [Technical Report: Third Regional Comparative and Explanatory Study]*, <https://unesdoc.unesco.org/ark:/48223/pf0000247123> (accessed on 6 May 2020).

Brazil is taking steps to reduce grade repetition

In recent years, Brazil has taken major steps to reduce grade retention (see Box 2.5 for a discussion on OECD and partner countries' strategies). Target 3.5 of the PNE calls for measures "to correct student progression during Brazil's basic education through individualised support and practices such as tutoring in complementary shifts, recovery studies and partial progression, in order to reposition students in the school cycle in a manner compatible with their age" (MEC, 2014^[8]). Some states, municipalities and schools have introduced transition models (e.g. "continuous progression", which is also referred to as

“promotion with support” or “automatic promotion”) that help limit grade repetition as well as tutoring sessions for students falling behind. As a result, repetition rates in Brazil have been decreasing gradually.

Nevertheless the practice remains common, particularly in secondary education, from Year 6 onwards. There are multiple reasons. First, Brazilian families, teachers and schools appear to be attached to this approach (Instituto Unibanco, 2017^[43]). Second, the alternative to grade repetition of “automatic promotion” or “continuous progression” is often misunderstood as lowering standards. In fact, the alternative to grade repetition is to offer a range of supports for struggling students. Such students might therefore receive targeted support and take remedial classes and/or tutoring sessions to help them catch up with their peers, and correct any gaps. Such targeted support is more effective and less costly than grade repetition in helping struggling students catch up. Therefore, assuming this support is in place, the effect is to raise rather than lower standards. Third, schools and sub-national units often lack the necessary policies, resources and capacity to identify struggling students and to offer individualised support to students. It is therefore very important to ensure that the cost savings arising from cutting back on grade repetition are cycled back to the schools so that they can invest in this capacity.

Other initiatives have also contributed to the gradual decrease in grade repetition. For example, schools following the Full-Time Upper Secondary programme (*Ensino Médio em Tempo Integral*, EMTI) are reporting lower repetition rates (MEC, 2018^[46]). Box 2.5 reports different initiatives used in OECD and other countries to reduce repetition rates.

Box 2.5. OECD and partner country strategies to reduce grade repetition

Several OECD countries have implemented strategies to reduce grade repetition while ensuring that students are indeed learning. They tend to focus on two or more of the approaches described below:

1. **Early and preventive interventions:** such initiatives often have a two-step approach. First, diagnostic assessments identify the first signs of students' learning difficulties. Second, students are offered early and targeted support. Studies show that this is an efficient and cost-effective strategy to reduce – or indeed eliminate – retention. Finland managed to drastically lower its retention rates after introducing automatic promotion in combination with early intervention methods.
2. **Tutoring programmes or remedial classes to attend to individual learning needs:** providing additional and individualised support to students that are falling behind has been identified as a powerful mechanism to reduce repetition. In 2008 as part of a wider reform to reduce grade repetition, France introduced two hours of individualised support and other catch up opportunities for students in the last two years of primary education. In Brazil, some schools and networks offer after-school remedial support to students who are falling behind. Teachers claim that these initiatives contribute to students' learning development and stronger outcomes.
3. **Smoothing transition:** some countries have introduced alternative transition models (also referred to as “promotion with support”) as a way of limiting retention. Some examples include:
 - a. allowing grade repetition only at specific points of a students' academic career (e.g. at the end of an education level/cycle), rather than in any grade. This is the case of the Brazilian states of São Paulo and Minas Gerais.
 - b. limiting retention only to the course(s) failed by students, so students repeat the course but not the whole year. This is the case in Canada, Finland and the United States. In Finland, students in upper-secondary education build their own learning schedules and are able to complete the courses selected at their own pace.

Research has highlighted that in order to correct educational deficits, these alternative models need to focus on scaffolding students' learning during the school year.
4. **Supporting teachers:** it is key that teachers be equipped with the tools and strategies to identify and address diverse individual learning requirements, recognising that a reduction in grade repetition will increase performance range within classrooms.
5. **Setting limits at the school and/or system level:** some countries have established “targets” for the maximum number of students who could be required to repeat in a year as a way to limit retention. This is the case of France where schools are held accountable for their repetition rates and school leaders are invited to explain their educational results. Others have limited the number of times that students may repeat. In Brazil, the national education quality index (*Índice de Desenvolvimento da Educação Básica*, IDEB) includes a measure for grade repetition, such that schools, municipalities and states which make many students repeat receive lower IDEB scores.

In countries such as Brazil, where repetition is a widespread practice and embedded in the school culture, reform efforts meet resistance. Building stakeholder commitment and awareness is key to the success of reforms. The following strategies may be considered:

- **Educational authorities should raise teacher awareness of its consequences.** National campaigns and other materials may be used for this purpose.
- **Financial incentives can be used for schools to reduce repetition,** as per-capita funding gives schools few incentives to take into account the high costs of grade repetition. One option could be for schools to retain any savings made from reductions of grade repetition so that these savings can be used for other purposes, such as financing alternatives to repetition.
- **Reduction of repetition could also be introduced into accountability systems,** by making schools accountable for the number of students held back, and also ensuring they focus not

only on those just under the grade level but also the lowest achievers, so they support all those falling behind.

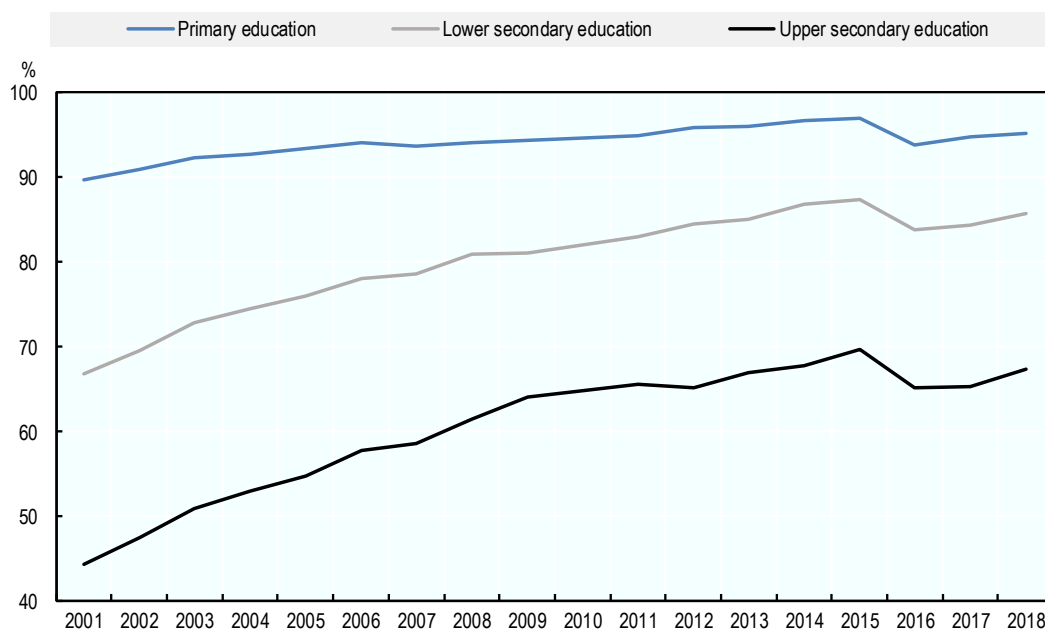
Sources: (UNESCO-UIS, 2012^[44]), *Opportunities lost: The impact of grade repetition and early school leaving*, http://uis.unesco.org/sites/default/files/documents/opportunities-lost-the-impact-of-grade-repetition-and-early-school-leaving-en_0.pdf (accessed on 22 June 2020); (OECD, 2012^[47]), *Equity and Quality in Education: Supporting Disadvantaged Students and Schools*, <https://doi.org/10.1787/9789264130852-en>; (Instituto Unibanco, 2017^[43]), *Reprovação não contribui para aprendizagem [Repetition does not contribute to learning]*, *Aprendizagem em Foco* 32, <https://www.institutounibanco.org.br/aprendizagem-em-foco/32/> (accessed on 5 May 2020).

Dropout and completion remain significant issues

Progress in tackling dropout and raising completion

Completion rates have increased in Brazil. Over the period 2001-2018, the completion rate rose from 90% to 95% in primary education, from 67% to 86% in lower secondary education and from 44% to 67% in upper secondary education (see Figure 2.10), with current rates similar to those seen in other parts of Latin America.

Figure 2.10. Trends in completion rates, 2000-2018



Note: Completion rates refer to the percentage of students that complete a specific phase of education that they began and are therefore an inverse measure of dropout for that phase. Data for 2010 are missing.

Source: (UNESCO-UIS, n.d.^[24]), *UIS dataset*, <http://data.uis.unesco.org/> (accessed on 17 November 2020).

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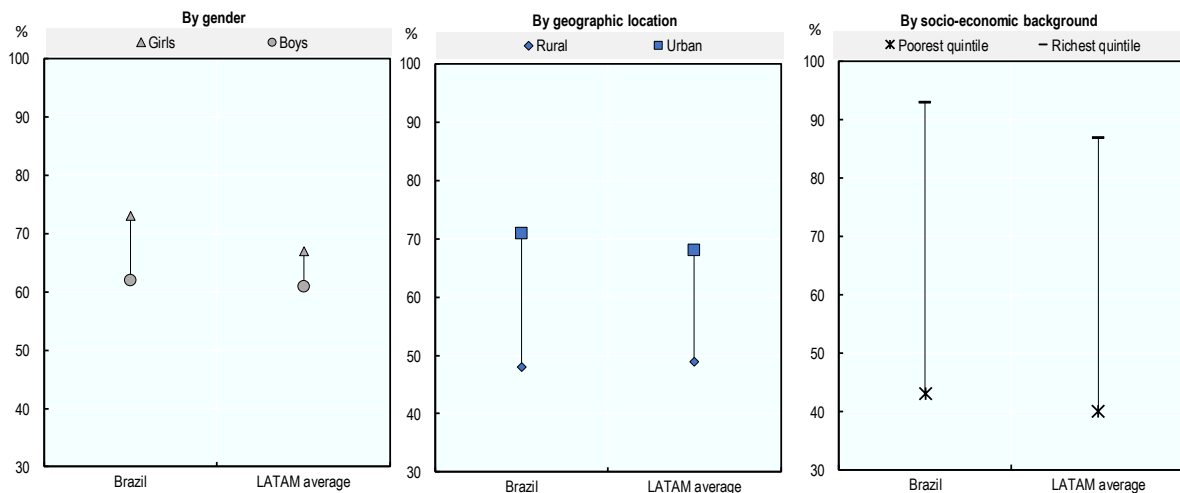
Despite progress, too many students still fail to complete, particularly at the upper secondary level. Nearly one-third of students did not complete upper secondary education in 2018, with most of the dropout taking place in the first year of upper secondary education (Todos Pela Educação, 2020^[37]). National evidence suggests that two main reasons for students to drop out are lack of interest in their studies and the desire

to get a job (Packard, 2018^[48]). While the current reform to Brazil's upper secondary model is expected to help reduce dropout (World Bank, 2017^[33]) by making the curriculum more engaging and relevant for students, the challenging conditions created by the COVID-19 pandemic may increase the risk of dropout, especially among students in difficult socio-economic and family situations (Gouédard, Pont and Viennet, 2020^[49]; Saavedra, 2020^[50]).

Wide disparities in completion rates across socio-economic groups

In Brazil, completion rates tend to be higher for women, for those living in urban areas and for better-off families. The same pattern is found in other Latin American countries and globally, but in Brazil, the impact of socio-economic background is greater. For example, of those who start upper secondary education in Brazil, only 7% of students from the richest quintile failed to complete, compared with 57% for those from the poorest quintile. In LATAM countries on average, the comparable figures are 13% and 59% respectively (see Figure 2.11).

Figure 2.11. Completion rates in upper secondary education, by gender, schools' geographic location and student's socio-economic background, 2018



Source: (UNESCO-UIS, n.d.^[24]), *UIS dataset*, <http://data.uis.unesco.org/> (accessed on 17 November 2020).

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Factors associated with dropout are very different for female and male students. For example, in 2016, one in four women (26%) aged 14-29 said that they had abandoned education because of caring responsibilities for the household, children or elderly people, compared to less than 1% of men (IBGE, 2017^[51]). Male students, on the other hand, might be expected to find a job in order to support their family financially. As a result, the type of activity which women enter upon leaving education differs markedly from men, with a much larger proportion of young women becoming inactive and men entering employment (OECD, 2014^[52]).

Further steps are needed to tackle dropout

Studies show that some initiatives such as *Bolsa Família* have had a positive impact on reducing dropout rates (Santos et al., 2019^[53]; Bruns, Evans and Luque, 2012^[11]). However, further measures are needed in order to meet Target 2 of the PNE, which is to ensure that at least 95% of students (aged 6-14) complete education at the recommended age (MEC, 2014^[8]). Tackling dropout will require incentives and support

directed at students and their families to encourage students to remain in education, alongside measures at the school and classroom level to increase student engagement and motivation, and help accommodate children with different needs (Lyche, 2010^[54]).

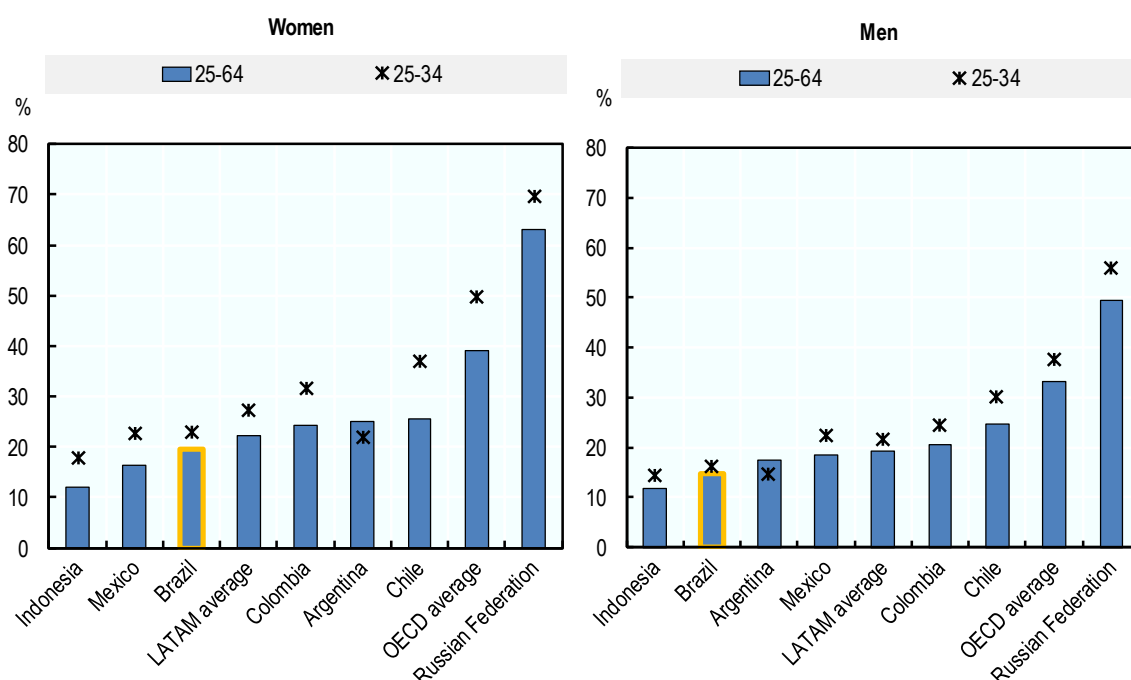
Tertiary education

Tertiary attainment is low in Brazil, particularly at the most advanced levels

Following decades of rapid growth, nearly half of young women and more than one-third of young men (aged 25-34) in OECD countries now have tertiary qualifications. In LATAM countries, about one-quarter of this age group has tertiary qualifications: in Chile one-third is qualified at this level (see Figure 2.12). In Brazil however, tertiary attainment, even among the younger generation is low, at 21% of 25-34 year-olds in 2018. Moreover, postgraduate study is uncommon in Brazil: less than one percent of 25-64 year-olds in Brazil have attained a master's degree, well below the OECD average of 13% (OECD, 2019^[4]).

Figure 2.12. Tertiary attainment by gender in different age groups, 2019

Share of 25-64 year-olds and 25-34 year-olds who attained tertiary qualifications – ISCED 5 (short-cycle tertiary education) to ISCED 8 (doctoral or equivalent)



Note: Data for Argentina, Brazil, and the Russian Federation refer to 2018, and for Chile and Indonesia to 2017.

Source: (OECD, n.d.^[1]), *Education and Training / Education at a Glance*, <https://stats.oecd.org/> (accessed on 26 November 2020).

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A sequence of reforms has sought to expand tertiary education, but enrolment remains low

Brazil has made substantial efforts to increase participation in tertiary education. Between 2003 and 2010, 16 new public federal universities were created, and enrolments in federal universities increased by 47% (Traina-Chacon and Calderón, 2015^[55]). However, much of the expansion has taken place through growth in private higher education institutions, which more than doubled in number in the 1990s and early 2000s. This has been facilitated by federal financing (FIES) and scholarships, such as the ProUni programme (see Chapter 4). As a result, over three-quarters of bachelor's students in Brazil now attend private universities, compared with fewer than one-third of students in OECD countries (OECD, 2019^[41]).

Despite this growth, only 21% of 20-24 year-olds in Brazil were enrolled in tertiary education in 2018, compared to 34% on average across OECD countries³ (OECD, 2020^[23]). Brazil's comparatively lower levels of participation in tertiary education also reflect very limited opportunities to enrol in advanced technical programmes (ISCED 5 between upper secondary and bachelor's programmes), which are common in many OECD countries.

Looking to the future, Target 12 of the PNE aims to increase the gross enrolment rate in undergraduate programmes to at least 50% (in 2019, at 37%) and the net enrolment rate⁴ of 18-24 year-olds to 33% (in 2019, at 25.5%) (MEC, 2014^[8]; INEP, 2020^[25]; INEP, 2020^[56]). Target 14 aims to increase postgraduate enrolment so as to graduate 60 000 masters students and 25 000 doctoral students (MEC, 2014^[8]). Raising participation in advanced levels of education – and in particular in master and doctoral programmes – will be critical to developing the highly-skilled workforce needed to support Brazil's economic growth, as well as the development of a more knowledge-based economy.

Barriers to tertiary education result in disparities in tertiary education participation

Access to higher education has become more equitable in recent years as a result of policies such as FIES, ProUni and the quota system (see Box 2.6). The share of students from the two bottom income quintiles who attend higher education increased from 7% in 2002 to 17% in 2011 in the public sector, and from 2.6% to 10% in the private sector over the same period (IPEA, 2016^[57]). Despite improvements, Brazil's tertiary education system remains highly unequal, with advantaged students much more likely to be enrolled in universities than young people from less privileged backgrounds (see Table 2.1). Chapter 4 further explores the implications of this for funding tertiary education, in a context where there are many competing demands on education budgets, including from sectors such as ECEC, where the contribution to equity is clearer.

Table 2.1. Students enrolled in higher education by sector and household income, 2019

Percentage of students enrolled in public and private higher education, by household income

Socio-economic quintile in ascending order per household per-capita income	Higher education (ISCED 6-8)	
	Public	Private
Up to 20%	10.8%	5.5%
More than 20% up to 40%	15.9%	11.5%
More than 40% up to 60%	20.5%	18.4%
More than 60% up to 80%	23.7%	29.9%
More than 80%	29.2%	34.7%

Source: Adapted from (IBGE, 2020^[14]), *Síntese de Indicadores Sociais: Uma análise das condições de vida da população brasileira 2020* [Synthesis of Social Indicators: An analysis of the living conditions of the Brazilian population 2020], <https://biblioteca.ibge.gov.br/visualizacao/livros/liv101760.pdf> (accessed on 12 April 2021).

Disadvantaged students face several barriers to access and success in tertiary education. First, as discussed in Box 2.3 and in Chapter 3, students from less privileged backgrounds tend to attend lower-quality public schools, and are less likely to have benefitted from private tutoring and extra classes. As a result, they are less prepared to pass the university entry examinations (Medeiros, 2016^[17]). Second, even those who succeed and enter tertiary education programmes often receive inadequate financial and academic support. Ensuring that all students are offered the support they need can not only help all students make the most of their university experience, acquiring advanced skills and knowledge that will boost their personal and professional lives, but can also help reduce dropout and reduce completion time at the system level.

Box 2.6. Quotas in public universities

The quota system in Brazil was implemented in 2012 to address socio-economic and racial gaps in access and participation in education. This policy followed decades of pressure and debate in civil society.

Law nº 12.711 established that at least 50% of places in undergraduate courses provided by federal institutions must be reserved for students who completed their upper secondary education in public schools. The reserved places are distributed based on the student's gross family income: half for those with a family income equal to or less than one and a half minimum salary per-capita and the other half, destined to families with an income per-capita higher than one and a half minimum salary. The distribution is also done in accordance with the proportion of black, mixed and indigenous people and special needs candidates, using data from the last census. The race criterion is self-declared by candidates, while income must be established through documents supplied to Ministry of Education (*Ministério da Educação*, MEC).

The system was implemented progressively over a 4-year period. In 2013, the year following the publication of the law, public federal universities were expected to reserve at least 12.5% of their places for the quota system. Partly as a result, in 2018, black and mixed students became, for the first time, the majority in public higher education institutions (50.3%).

The quotas system is due to be reviewed in 2022. Created as a temporary measure, many education experts and civil society stakeholders not only defend its extension, but also propose that it be accompanied by stronger financial assistance programmes and greater diversity in the academic content of university programmes.

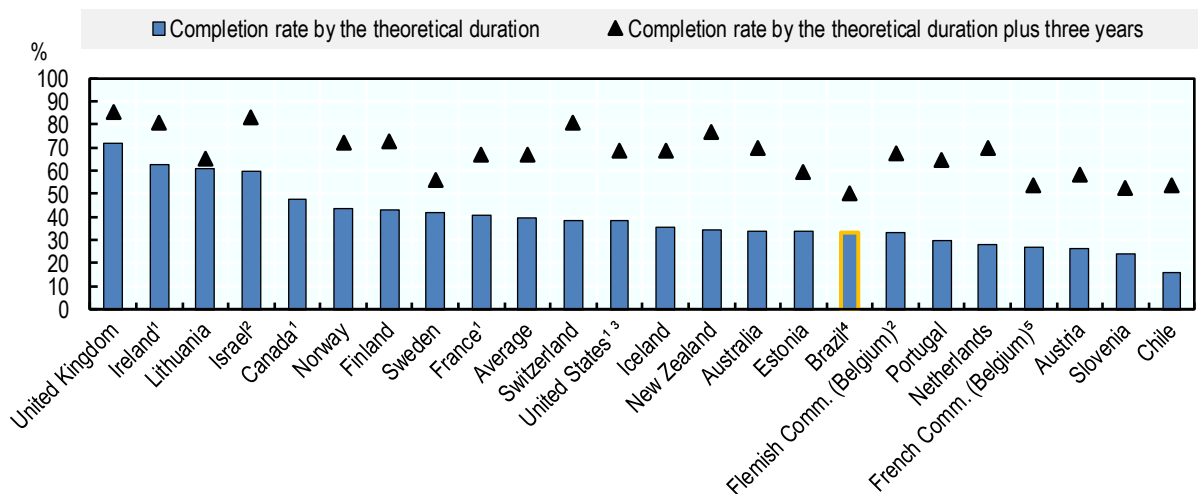
Sources: (IBGE, 2019^[6]), *Desigualdades Sociais por Cor ou Raça no Brasil [Social Inequalities by Colour or Race in Brazil]*, https://biblioteca.ibge.gov.br/visualizacao/livros/liv101681_informativo.pdf (accessed on 5 May 2020); (Neri, 2018^[18]), *Qual foi o impacto da crise sobre a pobreza e a distribuição de renda? [What the crisis' impact on poverty and income distribution?]*, https://www.cps.fgv.br/cps/bd/docs/NOTA-CURTA-Pobreza-Desigualdade-a-Crise-Recente_FGV_Social_Neri.pdf (accessed on 1 May 2020); (MEC, 2012^[58]), *Cotas: Perguntas Frequentes [Quotas: Frequently Asked Questions]*, <http://portal.mec.gov.br/cotas/perguntas-frequentes.html> (accessed on 23 July 2020); (Folha de S. Paulo, 2020^[59]), *Lei de Cotas deve ser renovada, mas não garante permanência de alunos, dizem especialistas [Quota Law should be renewed, but does not guarantee permanence of students, experts say]*, <https://www1.folha.uol.com.br/cotidiano/2020/06/lei-de-cotas-deve-ser-renovada-mas-nao-garante-permanencia-de-alunos-dizem-especialistas.shtml> (accessed on 10 June 2020); (Presidência da República, 2012^[60]), *Decreto Nº 7.824, de 11 de Outubro de 2012 [Decree Nº 7.824, from October 11 2012]*, http://www.planalto.gov.br/ccivil_03/_ato2011-2014/2012/decreto/d7824.htm (accessed on 23 July 2020).

Students often fail to graduate from tertiary education on time

Only one-third (33%) of students who enter a full-time bachelor's programme graduate within its theoretical duration of four or five years, compared to an average of 39% among countries with available data (see Figure 2.13) (OECD, 2019^[4]). In part, this may reflect the fact that in Brazil, it is normal for students – including those undertaking a tertiary degree on a full-time basis – to have a part- or full-time job or internship on the side. In 2019, around 48% of students aged 18-24 also worked (Barcellos, 2020^[61]). National research suggests that this is particularly common among students in private institutions (58%), in comparison to those in public institutions (36.7%) (Barcellos, 2020^[61]). While the explanation for this disparity is unclear, it is likely a consequence of inadequate financial support to disadvantaged students in the private sector (see Chapter 4).

While working experience can enhance students' practical skills and knowledge, a busy schedule and heavy workload can prevent students from fully committing to their studies and, as a result, many fail courses or spread out their credits over a longer period. This is arguably an inefficient use of public resources and, at the individual level, can delay graduates' full entry into the labour market and increase their own private expenditure in education (Brocco and Zago, 2016^[62]).

Figure 2.13. Completion rate of full-time students who entered a bachelor's or equivalent programme, 2017



Notes: The completion includes students who transferred and graduated from another tertiary level. 1. Year of reference differs from 2017. 2. Completion rate of students who entered a bachelor's programme does not include students who transferred to and graduated from short-cycle programmes. 3. The theoretical duration plus three years refers to the theoretical duration plus two years. 4. Data do not include entrants to 6-year bachelor's programmes, which correspond to about 2% of total entrants at this level. 5. Data refer only to the *hautes écoles* and the *écoles des arts*, representing about 60% of entrants to bachelor's or equivalent programmes.

Countries and economies are ranked in descending order of completion rate by theoretical duration.

Source: Adapted from (OECD, 2019^[3]), *Education at a Glance 2019: OECD Indicators*, <https://doi.org/10.1787/f8d7880d-en>.

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Conclusion

In the last two decades, Brazil has made significant progress in ensuring that all children take part in education. While the gap with the OECD has been narrowing, Brazil is still far from reaching OECD levels of participation. In order to sustain growth in participation, three challenges must be addressed.

- First, a large proportion of young people does not complete education on time or at all. This is the result of a number of factors, including grade repetition and an un-engaging curricula. Some students also abandon education to look for a job or take over caring responsibilities at home. The COVID-19 pandemic may have further encouraged this trend, especially among the most disengaged and disadvantaged. Higher completion rates can help raise the level of qualifications and skills of the Brazilian workforce, and support Brazil's development goals. In addition, ensuring timely completion can help reduce inefficiencies in expenditure.
- Second, disadvantaged individuals still face important barriers both in accessing education, particularly at higher levels, as well as obstacles to their success when they do enter programmes. As a result, levels of attainment and participation in education vary significantly across Brazil's population. While socio-economic background and regional differences are factors in all education systems, their impacts are stronger in Brazil than in many comparable countries. The disparities become particularly prominent in upper secondary and tertiary education, although they have their foundations in the early years. Addressing this issue is not only a moral imperative, but it can also contribute to raising living standards in Brazil.
- Third, the limited range of educational pathways in secondary education, and the scarcity of postsecondary programmes at ISCED 4 and 5, may discourage students, particularly those with more specific needs or who are less academically-oriented, from remaining or progressing in education. The recent reform of Brazil's upper secondary education (see Chapter 1) can not only help address this issue, but is designed also to ensure that individuals enter the labour market with a wider set of practical and vocational skills to meet the needs of the labour market and the economy. The reforms are also intended to support the development of a range of 21st century skills, of wide value to those individuals and Brazilian society.

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Notes

¹ For information regarding educational attainment, Brazil's most recent data available in Education at a Glance (EAG) refers to 2018. For that reason, and to guarantee comparability, the OECD average presented here also refers to 2018, although information from 2019 is available in the latest EAG 2020 publication.

² To be classified in ISCED 0, ECEC services should: 1) have an adequate intentional educational properties; 2) be institutionalised (usually school-based or otherwise institutionalised for a group of children); 3) have an intensity of at least 2 hours per day of educational activities and a duration of at least 100 days a year; 4) have a regulatory framework recognised by the relevant national authorities (e.g. curriculum); and 5) have trained or accredited staff (e.g. requirement of pedagogical qualifications for educators). The average does not account for other registered ECEC services that are not in adherence with all ISCED criteria.

³ LATAM average has not been included because of to the lack of available data for the minimum number of countries that compose this average.

⁴ This national indicator, called net enrolment rate, is calculated by dividing the number of 18-24 year-olds who attend or have already completed undergraduate courses by the total number of 18-24 year-olds in the country. The result is then multiplied by 100.

3. Learning and its outcomes

Ensuring that everyone takes part in education is only the beginning. Students also need access to *quality* education, where they are able to learn and develop knowledge and skills of value for the labour market and in their wider lives. However, for many Brazilian students that is not the case. Many leave school without the most basic skills. Drawing on PISA and national assessment results, this chapter looks at the outcomes of Brazil's education system and how they compare to benchmark countries. The analysis focuses on students' learning outcomes and what they mean for individuals' careers and life chances.

Introduction: ensuring education leads to learning

This chapter looks at the outcomes of Brazil's education system to assess the extent to which young Brazilians develop the skills and knowledge to progress successfully into higher levels of education and succeed in life and work. This analysis draws on evidence from the OECD Programme for International Student Assessment (PISA) on the knowledge and skills of 15-year-olds in Brazil, and explores how they compare with peers across the world and changes over time. This evidence is augmented by national sources, which provide fine-grained evidence on student and school performance across the country. The chapter also looks at the implications of learning outcomes and educational attainment for students' later employment and earnings.

Taking part in education does not always lead to real learning

Ensuring that everyone takes part in education — the topic of the previous chapter — is only half the battle. Students also need to profit from the experience, acquiring knowledge and skills of value both in the labour market and in other aspects of their lives. However, according to a recent World Bank report, too frequently participation fails to translate into learning. This report reveals that many emerging countries – including Brazil – are facing a challenge whereby, despite increased participation in schooling, many young people do not acquire basic numeracy and literacy skills. Moreover, as part of this pattern, learning outcomes tend to be highly unequal, with the most disadvantaged students being most likely to leave school without gaining basic skills. Schooling in the context of large variations in access and quality magnifies rather than reduces initial learning inequalities and therefore also amplifies socio-economic divides (World Bank, 2018^[1]). This hampers both the lives of individuals and the efforts of governments to reduce poverty and spur growth (Hanushek and Woessmann, 2015^[2]).

While Brazil has made good progress in universalising access to education in recent decades (documented in Chapter 2), a weakening economy combined with the COVID-19 crisis means that the necessary next step, that of ensuring access to *quality* education *for all students*, is particularly challenging. A successful outcome will depend on many factors, including the flow of financial and material resources to schools and families which will be discussed in Chapter 4, high-quality schools and teachers examined in Chapter 5 and the effective involvement of parents as described in Chapter 6.

Sources of data

PISA is the largest internationally comparable data source on education performance

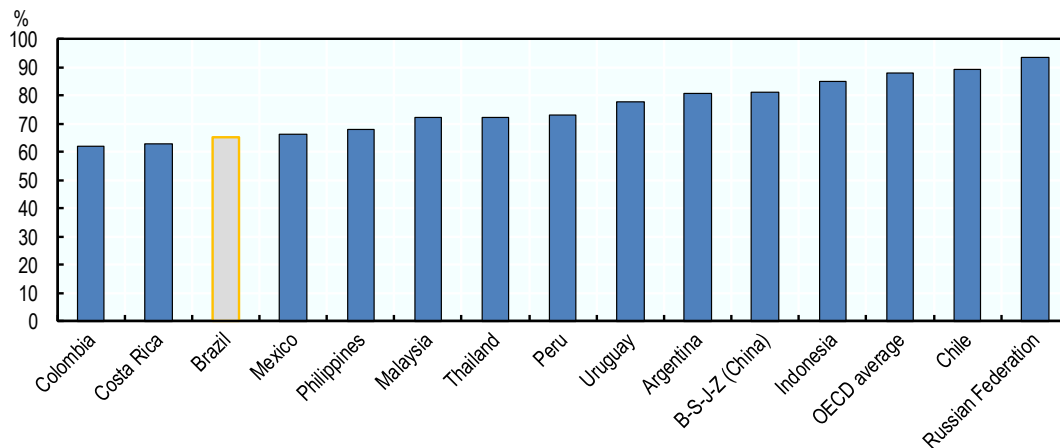
While the Brazilian government has announced it will be taking part in the next cycles of the Progress in International Reading Literacy Study (PIRLS) and the Trends in International Mathematics and Science Study (TIMSS)¹, these assessments will not be carried out until 2022 and 2023. Other regional assessments Brazil takes part in have not taken place since 2013. It follows that international comparisons of learning outcomes are, for the present, heavily dependent on PISA results. This is a triennial survey of 15-year-old students, focusing on proficiency in reading, mathematics and science. Brazil has taken part in all PISA cycles, beginning in 2000. PISA has been influential in Brazil (INEP, 2019^[3]), and has, for example, been used to benchmark national targets in the National Education Plan (*Plano Nacional de Educação*, PNE) (see below and Chapter 1).

In PISA 2018, 10 691 students in 638 schools completed the assessment in Brazil. The student sample represents only two-thirds (65%) of Brazil's 15-year-olds² (OECD, 2019^[4]). The other one-third are not represented, mainly because they were not in school at the time when PISA 2018 was carried out. The coverage rate is much lower than in OECD countries, where only 12% of the 15-year-old cohort are not

covered (see Figure 3.1). However, it has improved in recent PISA cycles – it was only around 55% in 2003 (OECD, 2019^[4]) – as a result of growing rates of educational participation in Brazil (see Chapter 2). The coverage rate has important implications for the analysis of PISA results. First, international comparisons can often conceal varying levels of coverage across PISA-participating economies. More importantly, increases in coverage make it more difficult to interpret how mean scores in PISA have changed over time. Expanding participation in schooling often implies that a larger proportion of disadvantaged low-performing students come to be included in PISA samples (Avvisati, 2017^[5]). This will be discussed in detail below.

Figure 3.1. PISA 2018 coverage rate

Percentage coverage of the total population of 15-year-olds in the PISA 2018 sample (PISA Coverage Index 3)



Notes: Full details of how these statistics are calculated are given in (OECD, 2019^[6]), Chapter 3.

B-S-J-Z (China) is an acronym for the four Chinese provinces that participated in PISA 2018: Beijing, Shanghai, Jiangsu and Zhejiang.

Source: (OECD, 2019^[6]), *PISA 2018 Results (Volume I): What Students Know and Can Do*, <https://doi.org/10.1787/5f07c754-en>.

StatLink  <https://stat.link/hrb12c>

SAEB is the main national assessment instrument and source of performance data

Brazil was one of the first emerging economies to introduce standardised student assessments. Since the early 1990s, Brazil's Basic Education System (*Sistema de Avaliação da Educação Básica*, SAEB) has been used to assess and monitor the quality of Brazil's basic education (Bruns, Evans and Luque, 2012^[7]), and to inform policymaking (Table 3.1). It is widely accepted as a reference point for researchers and policymakers across the country. However, some critics have pointed out that most assessment items fail to capture higher-order skills (Mol, 2019^[8]). The SAEB has undergone regular adaptations over the years and, more recently, given the need to align the new assessments to the National Common Curricular Base (*Base Nacional Comum Curricular*, BNCC). Extensive reforms of the SAEB are being discussed seeking to adapt the instrument to better support teaching and learning³. This includes, for example, gradually increasing the coverage and scope of the assessments, and piloting a digital application.

Table 3.1. The current design of the SAEB and potential direction of change

	Current SAEB (2019)*	Potential reforms under discussion
Frequency	Biannual	-
Grades	Grades 2 and 5 of primary education, Grade 9 of lower secondary education, and last Year of upper secondary education	Covering all years
Coverage	Public schools: all students (census) with the exception of Grade 2 (primary education) which in 2019 was assessed based on a sample. Private schools: a sample of students was assessed in all the Years /Grades mentioned above.	Covering private schools
Subjects	Portuguese and Mathematics In 2019, a sample of students from Year 9 from public and private schools was also assessed in Human and Natural Sciences	Covering Human and Natural Sciences
Application	On paper	Computer-based assessment
Document(s) guiding items formulation	BNCC for: Grade 2 students and Grade 9 students assessed on Human and Natural Sciences SAEB Reference Matrices: used for the Portuguese and Mathematics items for students in Grade 5 of primary education, Grade 9 of lower secondary education and last Year of upper secondary education	BNCC
Admission into tertiary education	Scores in the National Upper Secondary Exam (<i>Exame Nacional do Ensino Médio</i> , ENEM) are used for tertiary education admission. SAEB is not used.	Allowing students' scores in the SAEB in the three years of upper secondary education to be used for tertiary education admission. ENEM scores would still be used.
Alignment and comparability	Structure, methods, items, scores and scale cannot be compared with international students assessments.	Strengthening alignment with international students assessments.
Use of the assessment	Policy analyses Accountability (National Education Quality index [<i>Índice de Desenvolvimento da Educação Básica</i> , IDEB])	Policy analyses Accountability (National Education Quality index [<i>Índice de Desenvolvimento da Educação Básica</i> , IDEB]) Pedagogical feedback

* Since 2013, the National Assessment of Literacy (Avaliação Nacional da Alfabetização, ANA) assessment is brought under the SAEB umbrella. In 2019, all three assessments – ANA, National Assessment of Basic Education (Avaliação Nacional da Educação Básica, ANEB) and National Assessment of School Performance (Avaliação Nacional do Rendimento Escolar, ANRESC) – cease to exist and are identified simply as SAEB and its equivalent education level.

Source: (INEP, 2020^[9]), *Inep se prepara para implantação do Novo Saeb em 2021*, http://inep.gov.br/artigo2/-/asset_publisher/GngVoM7TApe5/content/inep-se-prepara-para-implantacao-do-novo-saeb-em-2021/21206?inheritRedirect=false, (accessed on 20 May 2020).

In higher education, Brazil uses the National Examination of Student Performance (*Exame Nacional de Desempenho dos Estudantes*, ENADE) to assess students' acquisition of knowledge and skills as well as graduates' assumed learning gains in relation to their entry level. Education experts, as well as the OECD *Review of Quality Assurance in Higher Education in Brazil*, have highlighted some of its design and implementation weaknesses (see Box 3.1).

Box 3.1. ENADE, a national test in higher education

Brazil has a unique approach to testing in higher education. Each year, students completing undergraduate programmes take a mandatory competency assessment, ENADE. Its objective is to assess students' acquisition of knowledge and skills specified in National Curriculum Guidelines (*Diretrizes Curriculares Nacionais*, DCNs) as well as their understanding of some broader social issues. The results of ENADE feed into a composite indicator of quality for each programme: the Preliminary Course Score (*Conceito Preliminar de Curso*, CPC). This also includes scores for the profile of the teaching staff, student feedback and an indicator of assumed learning gain (*Indicador de Diferença entre os Desempenhos Observado e Esperado*, IDD).

While this approach is innovative, with few international parallels, there are technical difficulties in the design and implementation of ENADE. The general knowledge component of the tests is unrelated to the content of the programmes it is supposed to evaluate. Test items are not standardised, so they are not of equivalent difficulty between years and subjects and there are no explicit quality thresholds for "good" performance. Results for students in each programme are standardised to generate a score on a scale of one to five, but this is a relative measure of average student performance, not an indication of the level of their knowledge and skills. Finally, the IDD, while conceptually interesting, is based on questionable assumptions about the influence of programmes on student performance.

In response, the OECD *Review of Quality Assurance in Higher Education in Brazil* recommends that the objectives, costs and benefits of large-scale student testing be reviewed, with the objective of making ENADE a more useful tool for teachers and institutions. Programme quality might also be assessed using an "indicator dashboard", with a broader range of disaggregated indicators, including measures of student dropout and graduate employment outcomes.

Source: (OECD, 2018^[10]), *Rethinking Quality Assurance for Higher Education in Brazil*, *Reviews of National Policies for Education*, <https://doi.org/10.1787/9789264309050-en>.

Results from SAEB are used to calculate IDEB, an index of education quality

Since 2007, SAEB results have been used, alongside a measure of school performance based on the flow of students through schools (i.e. based on repetition and approval rates), to calculate the national education quality index (*Índice de Desenvolvimento da Educação Básica*, IDEB). This biannual index provides performance averages on a ten-point scale at the school, municipality, state and national level for each cycle of education: initial years (Years 1-5), final years (Years 6-9) and upper secondary education (Grades 1-3/4). Since 2005, Brazil has used IDEB to set targets for actors across the system, from the school to the national level. Target 7 of the PNE sets the following national targets for the 2021 cycle of IDEB: 6.0 for the initial years; 5.5 for the final years; 5.2 for Grades 3 or 4 of upper secondary education (Ministério da Educação, 2014^[11]). These targets were calculated based on the quality of education systems in OECD countries benchmarked through a comparison between PISA and SAEB scores (INEP, 2019^[3]). IDEB is widely acknowledged as having increased public awareness of school quality issues, encouraged improvement efforts, supported greater transparency and accountability, and informed the design and implementation of education policies, as well as the allocation of resources at the national and sub-national levels (OECD, 2014^[12]). However, its design and use have raised some concerns, first and foremost, because the index is overly simplified. For example, IDEB does not take into account socio-economic differences across schools and school networks nor factors that influence learning outcomes outside the formal education system. Another concern is that despite these limitations, IDEB has increasingly high-stakes consequences for stakeholders, especially with regard to funding allocations. Efforts to develop a

more comprehensive and balanced set of indicators to address such criticisms have stalled. Other concerns that have been voiced in Brazil relate to the use of IDEB to produce rankings, or for political and electoral purposes

Sub-national standardised student assessments aim to inform policies and classroom practices

In recent years, most states and several municipalities have developed their own standardised student assessments. These assessments vary according to their primary purpose, subjects, testing population (i.e. sample or census), grade levels, and other design features (Grupo de Trabalho de Avaliação do CONSED, 2018^[13]). In many cases, however, these sub-national instruments replicate SAEB, often with the aim of providing information on students' performance more quickly that can be used by policymakers and school leaders for planning purposes and by teachers in the classroom to monitor and support the learning progress of individual students. The duplication of effort is potentially very wasteful.

Policies to improve outcomes

Efforts at the federal level to raise student outcomes: setting the direction and offering support

Target 7 of the PNE is to “promote the quality of Brazil’s basic education at all stages and modalities, with better progression rates and learning outcomes” and it sets targets for learning outcomes in the schooling system in terms of the IDEB, explained above (Ministério da Educação, 2014^[11]). The PNE sets – mostly in broad terms – approaches and initiatives for how these targets are to be achieved (see Table 3.2).

Table 3.2. Selection of strategies supporting Target 7 of the PNE (2014-2024) and São Paulo’s State-level Education Plan (PEE) (2016-2026)

Target 7 PNE		Target 7 PEE of the state of São Paulo	
Strategy 7.1	“Establish and implement, by means of an inter-federative agreement, pedagogical guidelines for basic education and the national common curricular base with rights and objectives for the learning and development of students for each year of primary, lower secondary and upper secondary, respecting regional, state and local diversity.”	Strategy 7.2	“Ensure the articulation between curriculum and assessment, and the use of results in reorienting pedagogical practice.”
Strategy 7.2.b	“Ensure that in the last year of this PNE, all primary, lower secondary and upper secondary students have achieved a sufficient level of learning in relation to the rights and objectives of learning and development established to their year of study, and at least 80% reach the desirable level.”	Strategy 7.10.b	“In the last year of the PEE, all primary, lower secondary and upper secondary school students have achieved a sufficient level of learning in relation to the rights and objectives of learning and development of their year of study and at least 80% (eighty percent) of the desirable level”.
Strategy 7.3	“To establish, in collaboration between the Union, the States, the Federal District and the Municipalities, a national set of institutional assessment indicators on the infrastructure conditions of schools, the pedagogical resources available, the management characteristics and other relevant dimensions, considering the specificities of the different education modalities. All of this based on the profile of students and the body of education professionals.”	Strategy 7.11	“To establish, in collaboration between the Union, the States, the Federal District and the Municipalities, a national set of institutional assessment indicators on the infrastructure conditions of schools, the pedagogical resources available, the management characteristics and other relevant dimensions, considering the specificities of the different education modalities”.
Strategy 7.4	“Induce a continuous self-assessment process in basic education schools through the establishment of assessment instruments that guide the dimensions to be strengthened, with emphasis on the preparation of	Strategy 7.7	“Induce a continuous self-assessment process in basic education schools through the establishment of assessment instruments that guide the dimensions to be strengthened, with emphasis on the preparation of

strategic planning, the continuous improvement of educational quality, the continuous development of education professionals and the improvement of democratic management.”	strategic planning, the continuous improvement of educational quality, the continuous development of education professionals and the improvement of democratic management.”
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Note: There are 36 strategies set under Target 7 but only a few of them are presented in the table above.

Source: (Ministério da Educação, 2014^[11]); *Plano Nacional de Educação - Lei N° 13.005/2014* [National Education Plan - Law No. 13.005/2014], <http://pne.mec.gov.br/18-planos-subnacionais-de-educacao/543-plano-nacional-de-educacao-lei-n-13-005-2014> (accessed on 24 August 2020).

Although their implementation has been largely decentralised to states and municipalities, several federal programmes aim to support learning, including:

- The National Literacy Policy (*Política Nacional de Alfabetização*, PNA), established in 2019, aims to support early literacy by developing high-quality pedagogical resources, offering specific training on literacy development to teachers as part of their initial teacher education, developing diagnostic and assessment instruments and encouraging family-based reading habits (Presidência da República, Secretaria-Geral, 2019^[14]). Two connected family literacy initiatives *Conta pra mim*, and *Tempo de Aprender* have been described in Chapter 2.
- A federal Technical Assistance Network (*Rede de Assistência Técnica*) helps states and municipalities develop, monitor and assess their education plans, in line with the PNE (MEC, n.d.^[15]).
- The Support Programme for the New Upper Secondary Education (*Programa de Apoio ao Novo Ensino Médio*, ProNem) offers technical and financial support to states to implement the new upper secondary education model and curriculum standards (MEC, n.d.^[16]) discussed in Chapter 2.
- The Support Programme for the Implementation of the New Curricular Standards (*Programa de Apoio à Implementação da Base Nacional Comum Curricular*, ProBNCC) offers technical support to states and municipalities to develop, revise and implement their curricula in line with the new national curricular standards (MEC, n.d.^[16]).
- The Interactive PDDE (Direct Money to School Programme) Platform (*Plataforma PDDE Interativo*) is an online tool that supports school planning and management. Schools can develop an action plan for improvement based on an initial diagnosis of its strengths and weaknesses (MEC, n.d.^[16]).
- The National Programme of Educational Material and Books (*Programa Nacional do Livro e do Material Didático*, PNLD) involves distribution of pedagogical, literary and other materials to support the work of public school teachers (FNDE, 2017^[17]).
- The Full-Time Upper Secondary Education (*Ensino Médio em Tempo Integral*, EMTI) offers financial support to states that provide full-time school days (FNDE, 2017^[18]). This programme has been associated with a decline in grade repetition, as discussed in Chapter 2.

States and municipalities not only implement policies to improve learning, but set their own agenda and strategic orientation

As in many other large federal countries, in Brazil, states, municipalities and the Federal District can take the initiative to shape and define education policy and lead improvement efforts. First, following the national framework determined in the PNE, states, municipalities and other sub-national entities establish or adapt their own strategic plans for how they intend to achieve the set targets (see Table 3.2). State- and municipal-level governments often establish their own strategies (e.g. the Strategic Plan 2019-22 for the State of São Paulo, *Plano Estratégico 2019-22*), laying out medium-term objectives and policy plans (Secretaria de Educação, 2019^[19]).

[publica-do-pais/](#) (accessed on 19 November 2020); (Candido, 2020^[26]), *Qual o segredo de Goiás para liderar o melhor ensino público do país? [What is Goiás' to lead the best public education in the country?]*, <https://www.uol.com.br/ecoa/ultimas-noticias/2020/09/18/qual-o-segredo-de-goias-para-liderar-melhor-ensino-publico-do-pais.htm> (accessed on 19 November 2020); (Instituto Unibanco, 2019^[27]), *Como Goiás Superou Meta do Ideb no Ensino Médio [How Goiás Overcame Ideb's Goal in High School]*, <https://www.institutounibanco.org.br/aprendizagem-em-foco/45/> (accessed on 19 November 2020).

In recent years, some states and municipalities have recorded impressive progress in terms of learning outcomes, partly as a result of decentralised initiatives, but also more equitable funding allocations (see Chapters 1 and 4). Studies suggest that many of the states making the greatest progress in improving education results are those that work most closely with their municipal school systems (Bruns, Evans and Luque, 2012^[7]). Box 3.2 offers some noteworthy examples of state-level initiatives from Brazil and other federal countries.

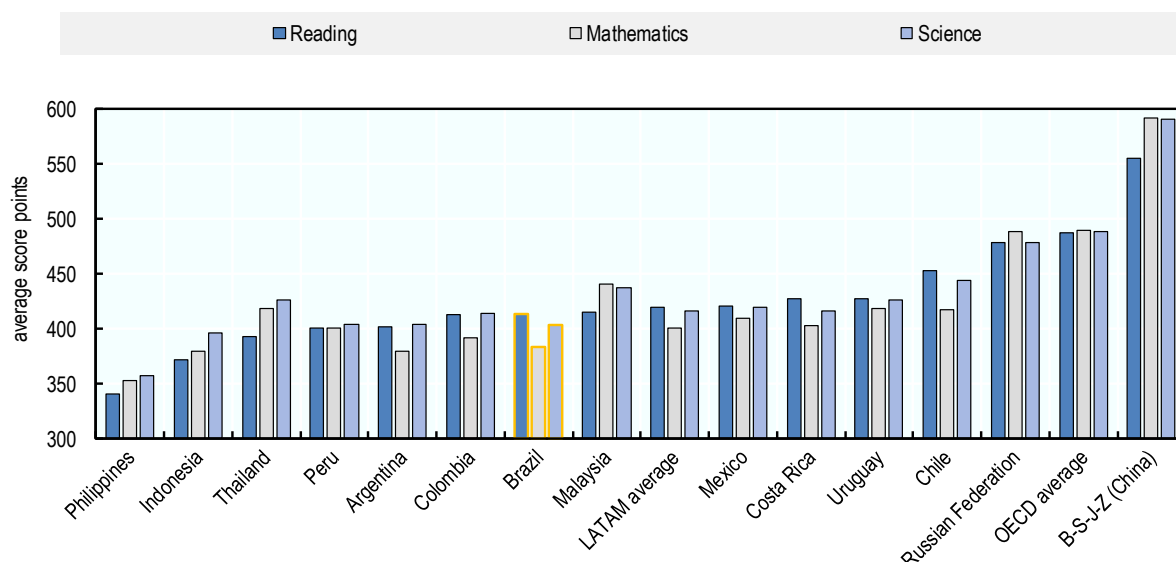
Learning outcomes: how Brazil compares

The overall performance in Brazilian schools is well below the OECD average

In PISA 2018, Brazil's outcomes remain quite a long way behind the OECD average and most benchmark countries across all subjects (see Figure 3.2). Students in Brazil scored on average 413 points in reading, 384 points in mathematics and 404 points in science (OECD, 2019^[6]). The OECD averages in these three domains were 487, 489 and 489 score points, respectively. Brazil is well behind high-performing emerging economies, such as the Russian Federation and B-S-J-Z (China). Brazil's performance is quite similar to that of its Latin American (LATAM) neighbours, although weaker than that of Chile, Costa Rica, Mexico and Uruguay.

Figure 3.2. Performance of 15-year-olds in reading, mathematics and science, PISA 2018

Score points



Notes: As per Brazil's PISA scores compared to LATAM countries, in Reading: the Brazil-Colombia score difference is not statistically significant; in Mathematics: the Brazil-Argentina score difference is not statistically significant; in Science: the Argentina-Brazil and Peru-Brazil score difference is not statistically significant.

B-S-J-Z (China) is an acronym for the four Chinese provinces that participated in PISA 2018: Beijing, Shanghai, Jiangsu and Zhejiang.

Countries are presented in ascending order from the lowest reading mean score average to the highest.

Source: (OECD, 2019^[6]), *PISA 2018 Results (Volume I): What Students Know and Can Do*, <https://doi.org/10.1787/5f07c754-en>.

StatLink  <https://stat.link/uwq5cz>

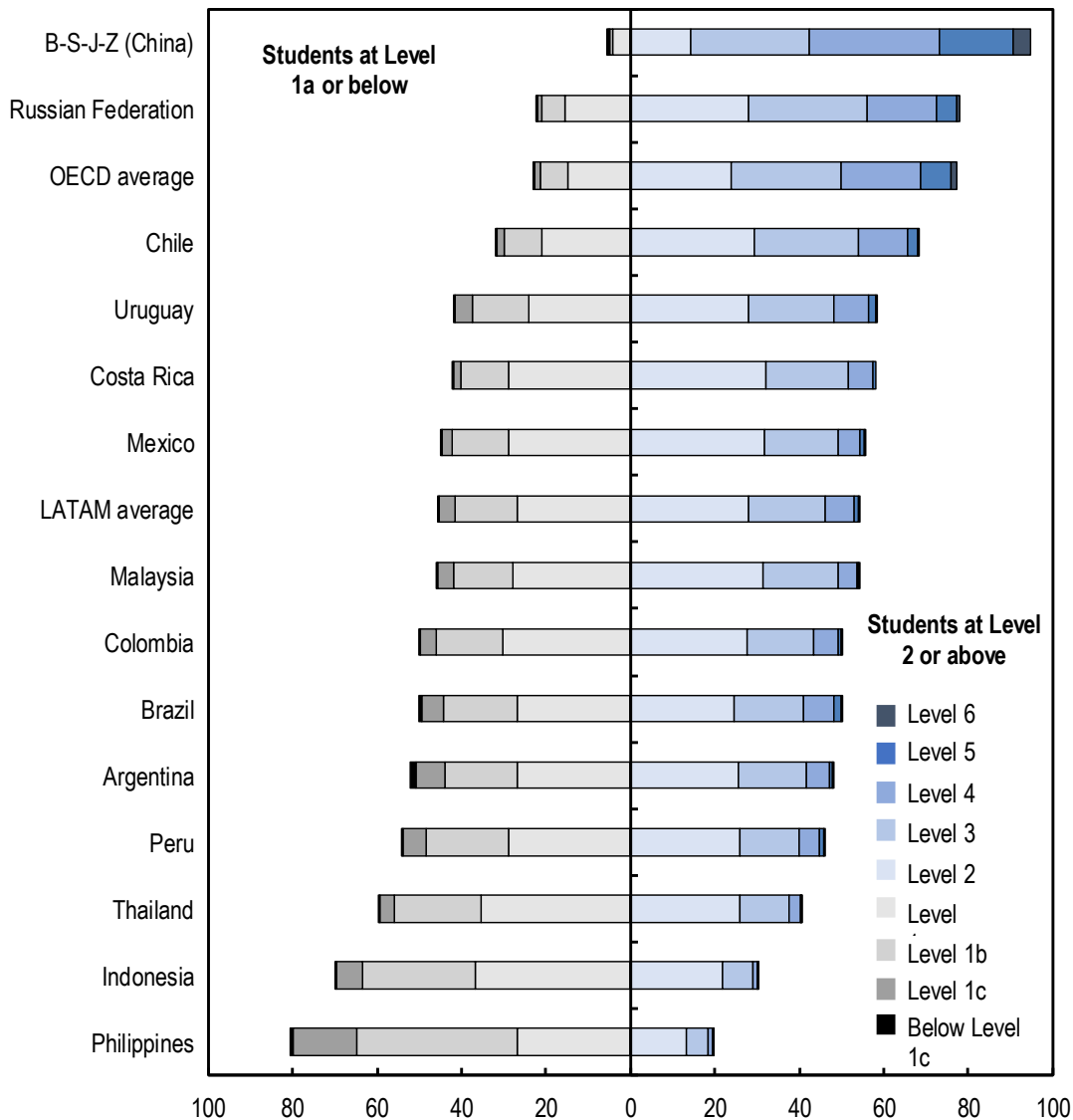
In Brazil, half of students fail to obtain a baseline level of proficiency

In addition to presenting student results as score points, PISA 2018 also classifies student performance across proficiency levels. Each proficiency level is associated with what students at that level are expected to know and be able to do. According to PISA, in reading, students need to master the skills associated with Level 2 performance (equivalent to scoring at least 407 points) in order to be successful in further studies or the workplace. Students below Level 2 are classified as low performers and can only complete basic tasks (e.g. evaluating the literal meaning of simple sentences). At the other end of the spectrum, students who perform at Levels 5 and 6 (equivalent to scoring 626 and 698 points, respectively) are classified as top performers and are able to complete difficult tasks (e.g. inferring neutrality or bias in a text) (OECD, 2019^[6]).

Results from the latest PISA cycle reveal that half of Brazilian students failed to reach the minimum threshold of performance in reading (50%) (see Figure 3.3). The share of students who do not demonstrate basic proficiency levels is even higher in mathematics and science (68% and 55%, respectively). In comparison, high-performing countries and economies — such as some parts of China — have well under 10% of their students classified as low performers in reading (B-S-J-Z (China): 5.2%). On average, OECD countries have just over one in five (22%) of 15-year-olds below Level 2.

Figure 3.3. Students' reading proficiency levels, PISA 2018

Percentage of students by proficiency level in reading



Note: B-S-J-Z (China) is an acronym for the four Chinese provinces that participated in PISA 2018: Beijing, Shanghai, Jiangsu and Zhejiang.

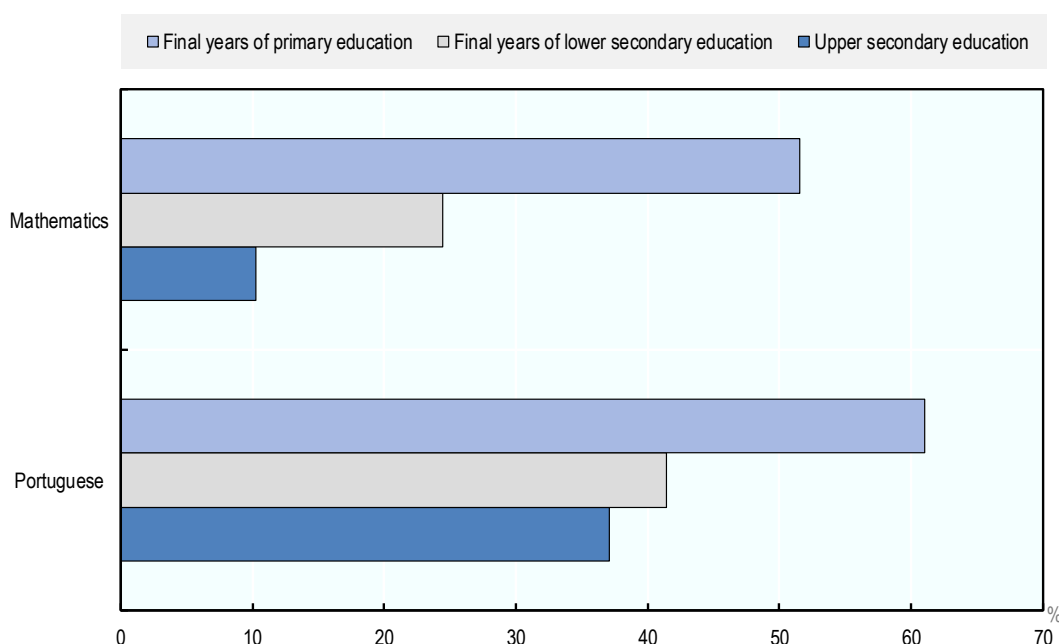
Source: Adapted from (OECD, 2019^[6]), *PISA 2018 Results (Volume I): What Students Know and Can Do*, <https://doi.org/10.1787/5f07c754-en>.

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National assessments indicate that underperformance at the age of 15 has its roots earlier in students' academic lives. In 2016⁴, only around 45% of pupils in Year 3 had an adequate level of reading in the National Assessment of Literacy (*Avaliação Nacional da Alfabetização*, ANA – now under the SAEB umbrella)⁵, and a similar proportion (45.5%) had an adequate level of mathematics (Todos Pela Educação, 2020^[28]). This share gets progressively smaller after Year 5 as students advance in education, notably in mathematics Figure 3.4).

Figure 3.4. Percentage of students reaching adequate levels of learning according to SAEB latest results, 2019

Data refer to final years of primary education (Year 5, ISCED 1), final years of lower secondary education (Year 9, ISCED 2) and upper secondary education (Grade 3, ISCED 3)



Source: (MEC, 2020^[29]), SAEB Resultados, <https://www.gov.br/inep/pt-br/areas-de-atuacao/avaliacao-e-exames-educacionais/saeb/resultados> (accessed on 22 November 2020); (Todos Pela Educação, 2020^[30]), *Em 10 anos, aprendizado adequado no ensino médio segue estagnado, apesar dos avanços no 5º ano do fundamental* [In 10 years, adequate learning in high school remains stagnant, despite advances in the 5th year of elementary school], <https://todospelaeducacao.org.br/noticias/meta-3-em-10-anos-aprendizado-adequado-ensino-medio-segue-estagnado-avancos-5-ano-fundamental/>, (accessed on 6 August 2020).

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Few Brazilian students acquire higher-order skills

At the other end of the spectrum, very few 15-year-olds in Brazil demonstrate the highest levels of proficiency, as measured by PISA. In 2018, only 1.8% scored above Level 5 in reading, and less than 1% in mathematics and science. While these results are similar to other LATAM countries, in OECD countries, 9% of 15-year-olds scored above Level 5 in reading, 11% in mathematics and 7% in science.

The fact that Brazilian students struggle to tackle anything beyond the most basic tasks can be partly explained by the practices Brazilian teachers use in their classrooms. PISA results suggest that certain practices that research shows are more effective at supporting learning such as adaptive instruction are not as common in Brazil as in OECD countries (see Chapter 5 for a full discussion). These practices are particularly important for developing higher-order skills that students require to perform at the highest levels.

Strategies that students use to learn also matter. In PISA for example, students who often use memorisation techniques are more likely to correctly answer easy questions whereas those who use more elaborate strategies, such as trying to connect new concepts to what they already know, have a greater chance to correctly answer more difficult items. In Brazil however, students opt predominantly for

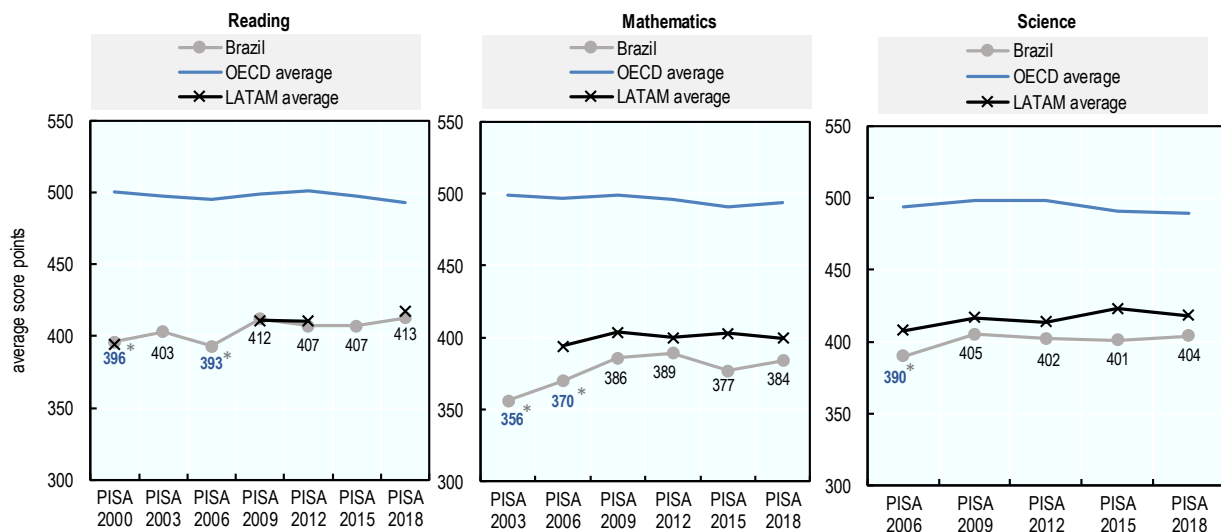
memorisation and drill strategies over more elaborate learning strategies, which are unlikely to help them with the more advanced tasks (OECD, 2016^[31]).

Change in learning outcomes: evidence from PISA and other sources

PISA results suggest improvements in learning outcomes, once accounting for expansion in participation

Modest improvements have been realised in Brazil's PISA scores since 2003, mostly in mathematics⁶ (see Figure 3.5). However, Brazil's average scores may mask a more positive trend. As discussed in Chapter 2, higher enrolment rates in Brazil have meant that the proportion of 15-year-olds covered by the PISA sample increased from about 55% in 2003 to 65% in 2018 (OECD, 2019^[6]). A slight improvement in average performance in the context of a rapid expansion in access represents a considerable achievement. An estimation by the OECD, which focused on the 25% of better performers who are unlikely to be affected by changes in participation rates, suggested that Brazil's performance in PISA has been improving by roughly ten score points every three years in the case of mathematics, and slightly less in the case of science. The results of this estimation for reading skills were not statistically significant (Figure 3.5) (OECD, 2019^[6]).

Figure 3.5. Trends in PISA performance in reading, mathematics and science, PISA 2000-2018



Notes: Values in blue and with an asterisk indicate mean-performance estimates that are statistically significantly above or below PISA 2018 estimates for Brazil. Comparisons between PISA 2018 scores and previous assessments can only be made to when the subject first became a major domain or later assessment cycles. As a result, comparisons of mathematics and science performance between PISA 2000 and PISA 2018, for example, are not possible.

The blue line indicates the average mean performance across OECD countries with valid data in all PISA assessments. The black line indicates the average mean performance across LATAM countries with valid data in all PISA assessments (respecting the threshold of at least five countries with data available). The grey line indicates mean performance in Brazil.

Source: (OECD, 2019^[4]), *Programme for International Student Assessment: Results from PISA 2018: Brazil*, https://www.oecd.org/pisa/publications/PISA2018_CN_BRA.pdf (accessed on 24 August 2020).

StatLink  <https://stat.link/k3rq0z>

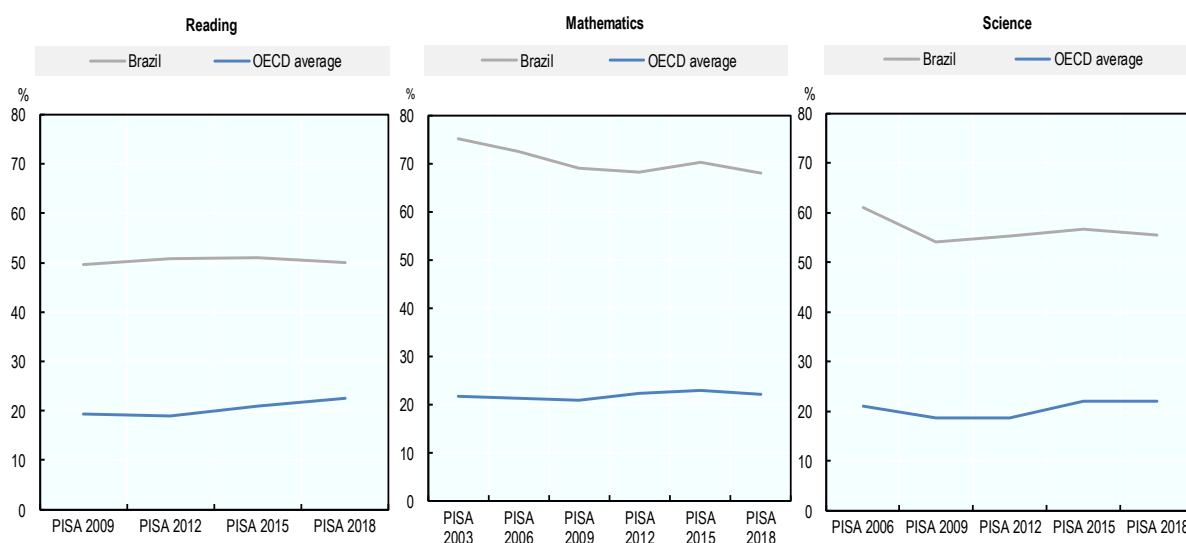
Disaggregated results show that the country's improvement in mathematics is mostly attributed to improvements in performance at the bottom of the distribution (below Level 2)⁷. The share of low-

performers in mathematics declined by 7 percentage points between 2003 and 2018, and in science by 5.6 percentage points between 2006 and 2018 (see Figure 3.6). This not only means that a larger share of 15-year-olds are acquiring the basic skills and knowledge needed in life and work, but that performance gaps among students have reduced.

Moreover, while Brazil did not report state-level scores in 2018⁸, results from previous cycles seem to suggest that much of Brazil's improvement has been localised in a few states in the North and Northeast regions, notably Amazonas, Ceará, Maranhão and Pernambuco (see Annex 1). These states have managed to improve their results from a very low base and are increasingly closing the gap with the national average.

Figure 3.6. Trend in the share of low performers in PISA major domains, PISA 2003-2018

Share of 15-year-old students performing below Level 2 in reading, mathematics and science



Notes: Differences are statistically significant for:

1. Reading: Brazil, none; OECD, PISA 2009-PISA 2018; PISA 2012-PISA 2018.
2. Mathematics: Brazil, PISA 2003-PISA 2018; PISA 2006-PISA 2018; OECD, none.
3. Science: Brazil, PISA 2006-PISA 2018; OECD, PISA 2009-PISA 2018, PISA 2012-PISA 2018.

Comparisons between PISA 2018 scores and previous assessments can only be made to when the subject first became a major domain or later assessment cycles. As a result, comparisons of mathematics and science performance between PISA 2000 and PISA 2018, for example, are not possible.

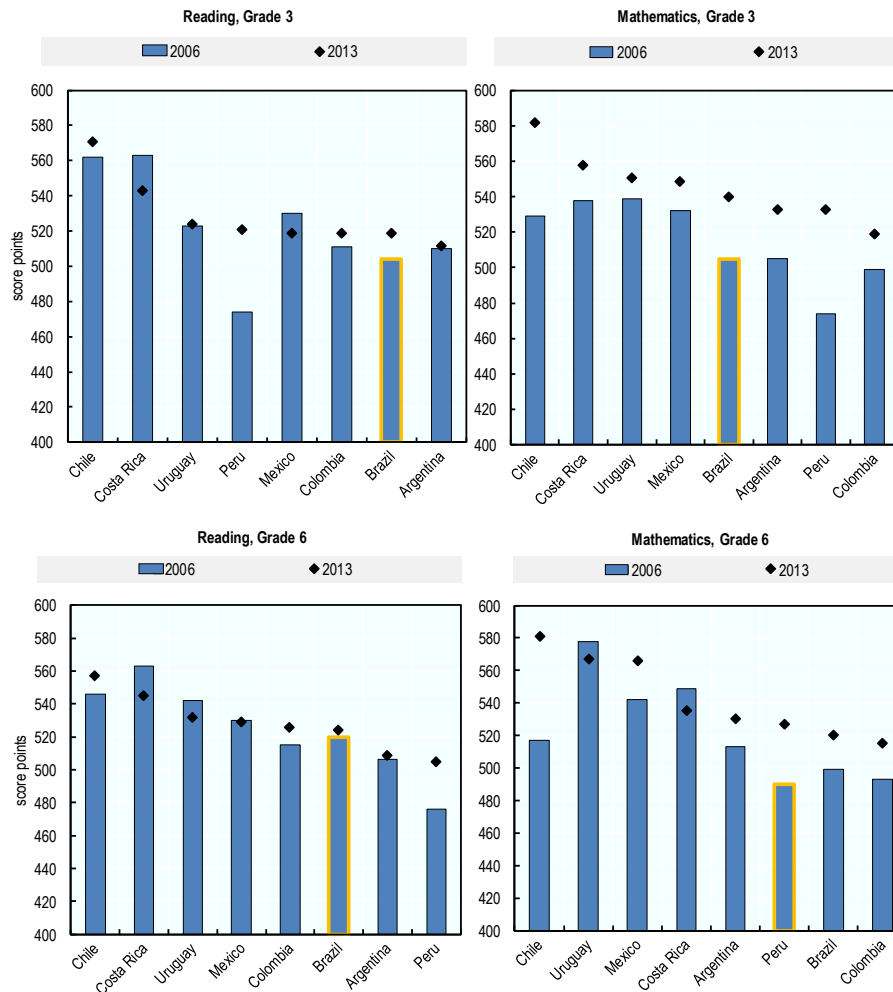
Source: (OECD, 2019^[6]), *PISA 2018 Results (Volume I): What Students Know and Can Do*, <https://doi.org/10.1787/5f07c754-en>.

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Other data sources also suggest improvement

Data from surveys undertaken across Latin America by LLECE suggest that Brazil has made progress in the first years of education, most notably in mathematics scores in Grade 3. The scores increase from 505 in 2006 to 540 in 2013. Some other Latin American countries however reported even stronger increases (see Figure 3.7).

Figure 3.7. Countries' average performance in reading and mathematics in SERCE 2006 and TERCE 2013, in score points



Notes: This figure compares Second Regional Comparative and Explanatory Study (SERCE) undertaken in 2006 and Third Regional Comparative and Explanatory Study (TERCE) undertaken in 2013 to compute improvements in the scores in tests which are designed to be comparable. For Brazil, the score-point difference between SERCE and TERCE is significant for scores in reading at Grade 3, and in mathematics for both Grade 3 and 6.

Countries are organised in descending order from highest scores in 2013 to lowest.

Source: (UNESCO, 2014^[32]), *Comparación de resultados del Segundo y Tercer Estudio comparativo y explicativo: SERCE y TERCE, 2006-2013*, <https://unesdoc.unesco.org/ark:/48223/pf0000244239> (accessed on 24 August 2020).

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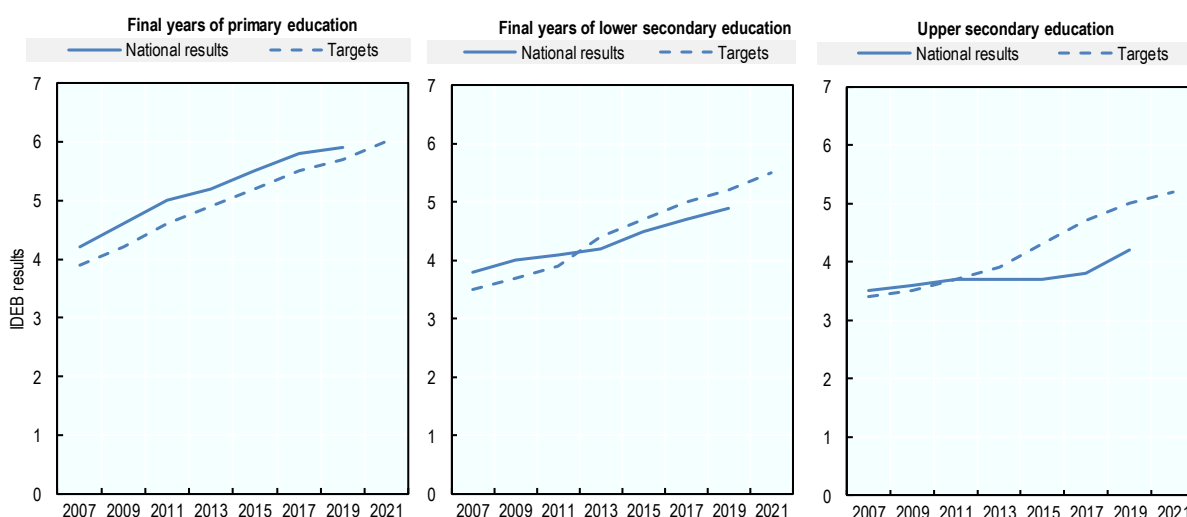
Similarly, national evidence from SAEB shows that between 2007 and 2019, the percentage of students in Year 5 reaching adequate levels of learning grew from 28% to 61% in Portuguese, and from 24% to 52% in mathematics (Todos Pela Educação, 2020^[28]; MEC, 2020^[29]). Progress has also been made in Year 9 according to SAEB. During the same time period, the share of students reaching adequate learning outcomes in Portuguese doubled from 20% to 41%, while for mathematics, the share increased from 14% to 24% (Todos Pela Educação, 2020^[28]; MEC, 2020^[29]). Upper secondary education has seen a significant progress in Portuguese, with the share of students in Grade 3 reaching adequate learning outcomes increasing from 24% to 37%; while for mathematics there was virtually no change (9.8% to 10.2%) (Todos

pela Educação, 2020^[33]). Given that secondary education expanded rapidly during this period, as with the PISA results, the apparent lack of progress in scores may reflect the expanded student population.

These learning gains translate into progress towards national targets in Brazil

In addition to targets for 2024, the PNE has set intermediary annual targets, as measured by IDEB. At the national level, targets for the initial years of basic education have not only been consistently met, but even surpassed. However, achievements in the final years of basic education and in upper secondary education have been below the national targets since 2013 (see Figure 3.8). This lack of progress not only reflects slow improvements in learning outcomes, but also persistently low approval rates (discussed in Chapter 2). Disaggregated results also show considerable variation between entities at the sub-national level, with states in the North and Northeast regions falling significantly behind others and national targets.

Figure 3.8. IDEB national results compared to their respective targets for each year, 2007-21



Sources (INEP, 2020^[34]), *Ideb - Resultados e Metas [Ideb - Results and Targets]*, <http://ideb.inep.gov.br/resultado/> (accessed on 15 May 2020); (INEP, 2019^[33]), *O que são as metas de qualidade educacional [What are educational quality goals]*, <http://portal.inep.gov.br/educacao-basica/ideb/metas> (accessed on 20 April 2020); (INEP, 2020^[35]), *Resumo Técnico Resultados do Índice de Desenvolvimento da Educação Básica, Versão Preliminar [Technical Summary Results of the Basic Education Development Index, Preliminary Version]*, http://download.inep.gov.br/educacao_basica/portal_ideb/planilhas_para_download/2019/resumo_tecnico_ideb_2019_versao_preliminar.pdf (accessed on 22 November 2020).

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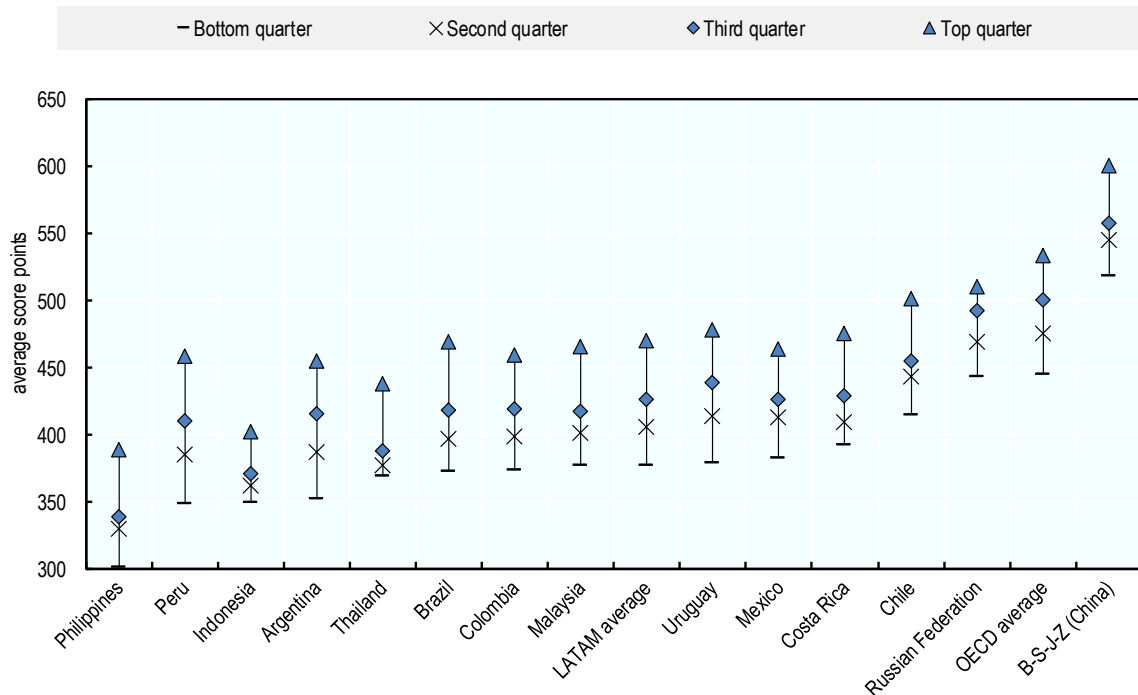
Factors related to student and school performance

Disadvantaged students show poorer learning outcomes

In Brazil, like many other countries, student performance is closely linked to socio-economic background. In PISA, socio-economic background is defined in relation to an index of economic, social and cultural status (ESCS — explained in the note to Figure 3.9). Across PISA-participating economies, socio-economically advantaged students tend to outperform students from disadvantaged backgrounds. In Brazil, the performance gap between students in the top and bottom national quarters of socio-economic status is equivalent to 97 score points in reading, above the OECD average (89 score points) (Figure 3.9).

Figure 3.9. Mean performance in reading by 15-year-olds, by socio-economic status (ESCS), PISA 2018

By students' national quarter of socio-economic status (as measured by ESCS)



Notes: The PISA ESCS index was created on the basis of: the International Socio-Economic Index of Occupational Status (ISEI); the highest level of education of the student's parents, converted into years of schooling; the PISA index of family wealth; the PISA index of home educational resources; and the PISA index of possessions related to "classical" culture in the family home.

The performance gap between students in the top and bottom national quarters of socio-economic status is not statistically significantly different between the OECD and Brazil, or Brazil and Latin American countries.

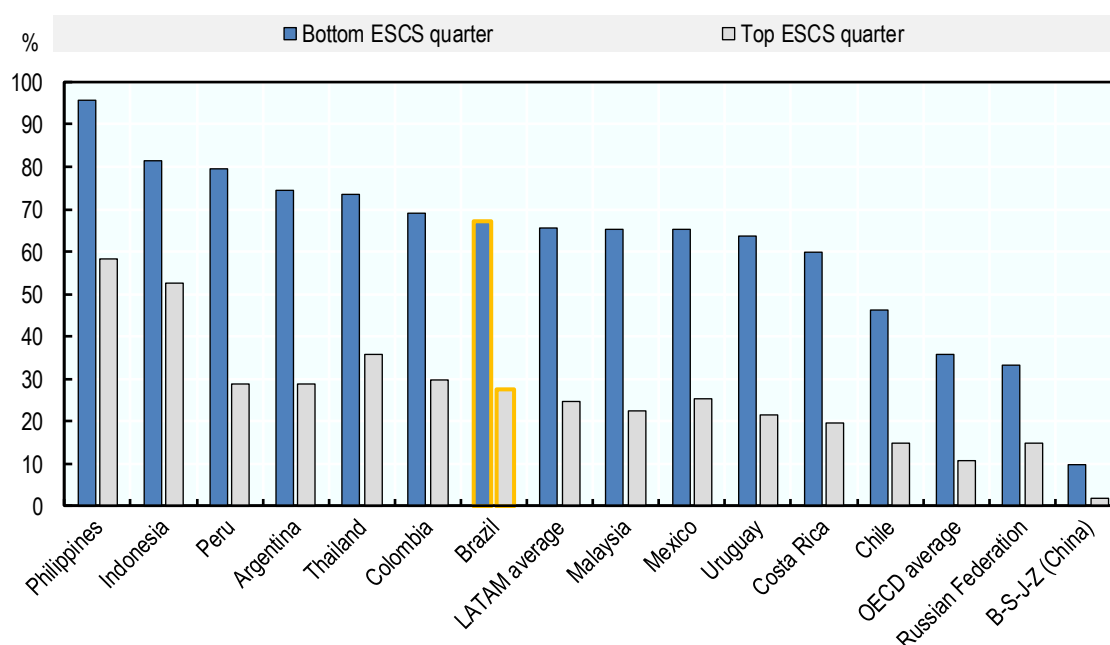
B-S-J-Z (China) is an acronym for the four Chinese provinces that participated in PISA 2018: Beijing, Shanghai, Jiangsu and Zhejiang.

Source: (OECD, 2019^[36]), *PISA 2018 Results (Volume II): Where All Students Can Succeed*, <https://doi.org/10.1787/b5fd1b8f-en>.

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In many respects the association between socio-economic background and learning outcomes is stronger in Brazil and in Latin American emerging economies than in most OECD and benchmark countries. Two-thirds (67.3%) of 15-year-olds in the bottom ESCS quarter in Brazil failed to reach Level 2 in reading literacy, compared to just over 27.6% of those in the highest ESCS quarter (see Figure 3.10). For OECD countries, the equivalent figures are 36% and 11% on average. Very similar patterns are found in the mathematics and science domains.

Figure 3.10. Percentage of 15-year-olds scoring below Level 2 in reading, by ESCS, PISA 2018



Note: B-S-J-Z (China) is an acronym for the four Chinese provinces that participated in PISA 2018: Beijing, Shanghai, Jiangsu and Zhejiang.

Source: (OECD, 2019^[36]), *PISA 2018 Results (Volume II): Where All Students Can Succeed*, <https://doi.org/10.1787/b5fd1b8f-en>.

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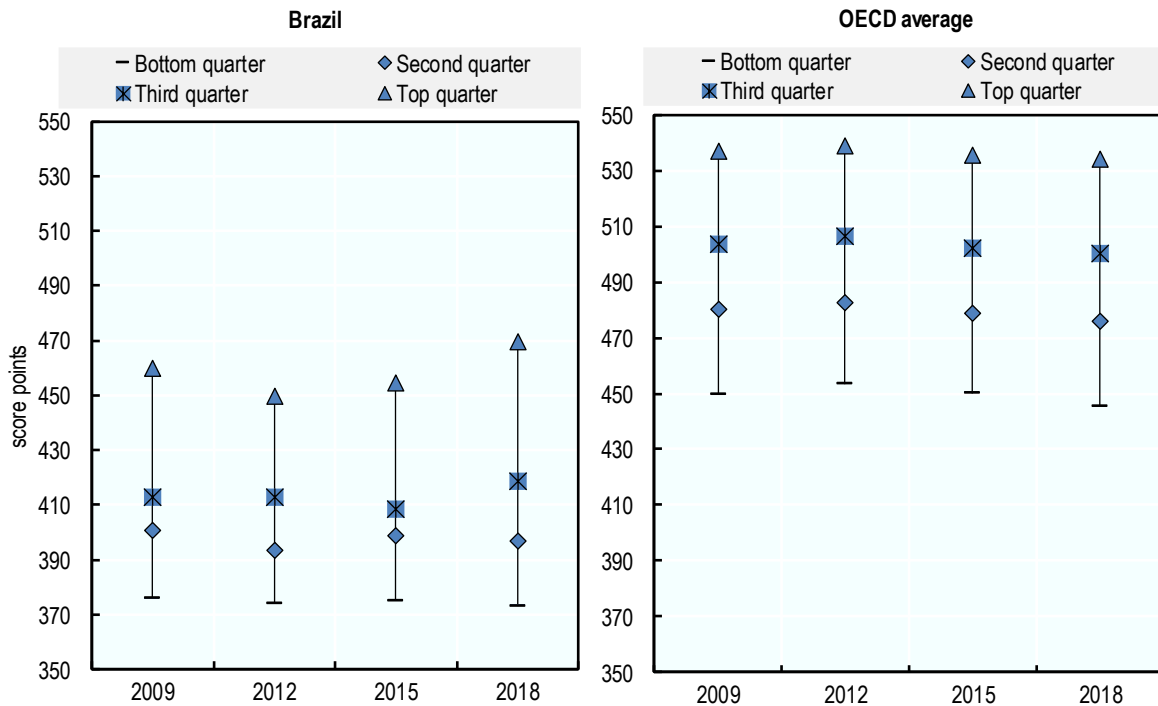
The impact of socio-economic background in Brazil is also visible from the earliest years. ANA 2016 data show that in primary school, and using a seven-group indicator of schools' socio-economic status⁹, only 23% of the students from the lowest socio-economic group achieved adequate levels of literacy in reading, 40% in writing and 25% in mathematics – compared to 68%, 86% and 70% of the students in the highest socio-economic group, respectively (Todos Pela Educação, 2020^[28]).

And they seem to be falling further behind

Figure 3.11 shows that students in the highest ESCS quarter have seen statistically significant performance improvements in reading in the latest cycles of PISA, whereas the most disadvantaged students (from the lowest ESCS quarter) have seen no improvements.

Figure 3.11. Trends in reading performance by students' socio-economic status, PISA 2009-2018

Average 15-year-olds' reading performance in reading (score points), by national quarter of students' socio-economic status (as measured by ESCS)



Notes: Brazil score difference is statistically significant between PISA 2012-PISA 2018 at the top ESCS level and between the top-bottom score difference gap, and between PISA 2015-PISA 2018: between the top-bottom score difference gap.

OECD score difference is statistically significant between PISA 2012-PISA 2018 at the bottom ESCS level and between the top-bottom score difference gap, and between PISA 2015-PISA 2018: between the top-bottom score difference gap.

Source: (OECD, 2019^[36]), *PISA 2018 Results (Volume II): Where All Students Can Succeed*, <https://doi.org/10.1787/b5fd1b8f-en>.

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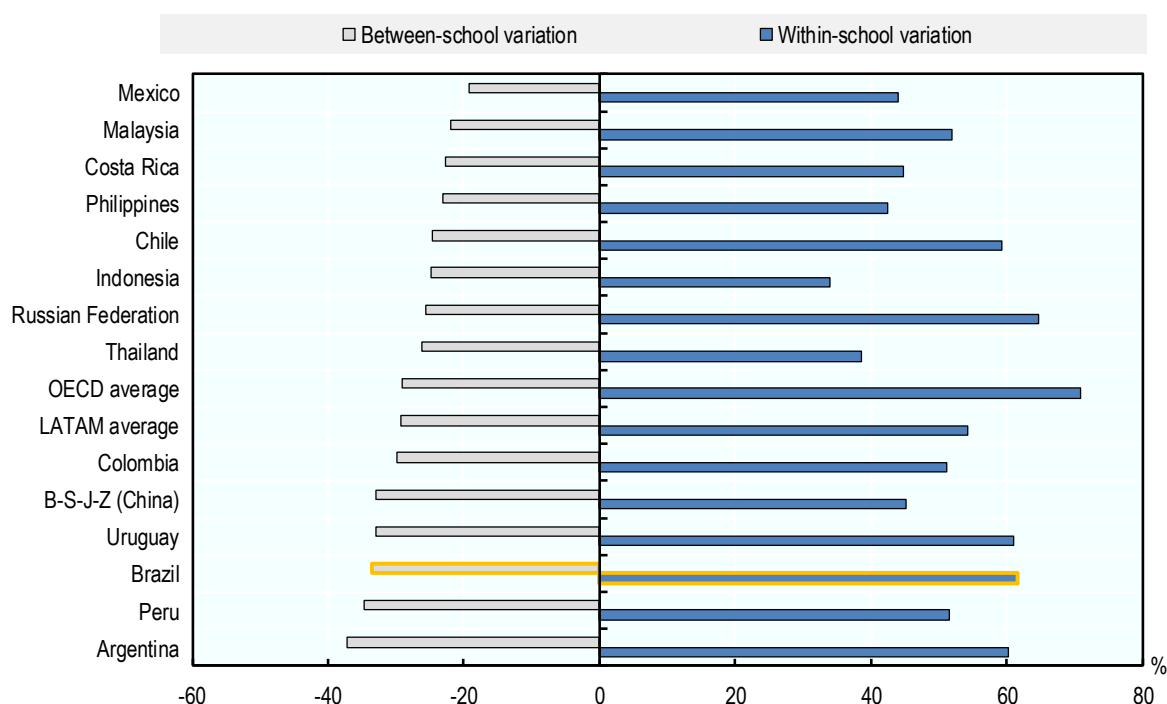
This is a concerning trend, as it means that the achievement gap between the most advantaged and disadvantaged students is increasing, with the least advantaged falling even further behind. In 2009, this difference was at 84 score points, and has increased to 97 in 2018. Across the OECD, the achievement gap between the most advantaged and disadvantaged has also increased recently, but at a lower level, from 87 in 2009 to 89 in 2018.

While reliable data on the impact of school closures and distance education on Brazilian students' learning outcomes as a result of the COVID-19 pandemic are not available yet, studies predict that disadvantaged students will have fallen even further behind their wealthier peers. Prolonged episodes of school closures can increase inequalities if governments do not effectively implement measures to ensure every child has sufficient resources to learn in good conditions, particularly in countries where non-school factors play a strong role in learning outcomes (Gouëdard, Pont and Viennet, 2020^[37]; Saavedra, 2020^[38]), as is the case in Brazil.

Differences between schools show that where students enrol matters for their performance

PISA 2018 results show that 34% of Brazil's variation in reading performance was observed between schools (OECD average: 29%) and 62% of Brazil's variation was accounted for by differences within schools (OECD average: 71%) (see Figure 3.12). Internationally, in countries where there is substantial variation between schools, like Brazil, students tend to be grouped in schools in which other students perform at levels similar to their own. One implication is that, at the system level, there is less consistency with regards to performance, meaning that where parents enrol their children can have important implications on their future performance.

Figure 3.12. Variation in reading performance between and within schools, PISA 2018



Notes: The total length of both bars is indicative of the total amount of variance of a country (relative to the OECD average, which sums up to 100%).

B-S-J-Z (China) is an acronym for the four Chinese provinces that participated in PISA 2018: Beijing, Shanghai, Jiangsu and Zhejiang.

Countries are ordered in ascending order from the lowest between-school variation to the highest.

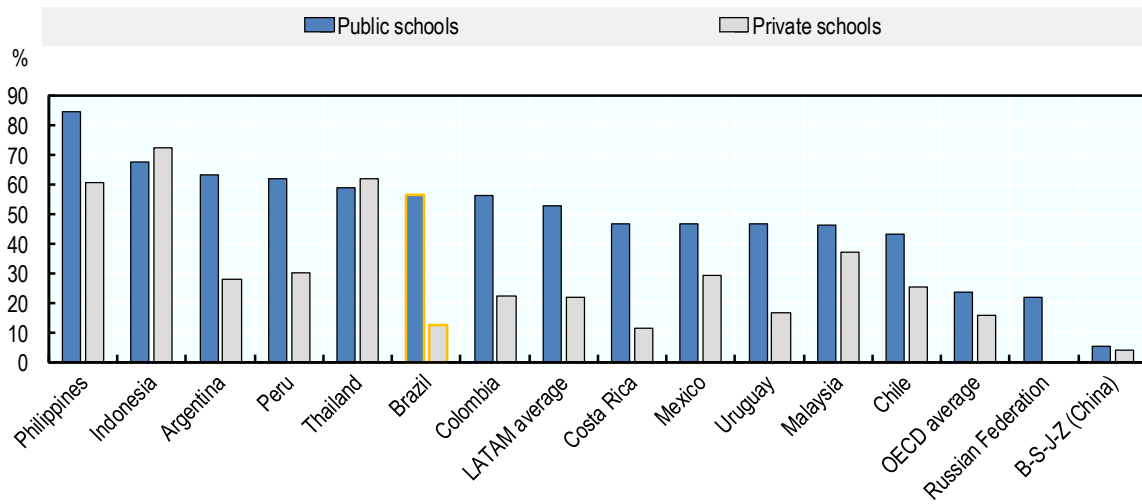
Source: (OECD, 2019^[36]), *PISA 2018 Results (Volume II): Where All Students Can Succeed*, <https://doi.org/10.1787/b5fd1b8f-en>.

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Performance of public school pupils lags far behind those attending private schools

Internationally, students in private schools tend to perform better in PISA than those in public schools. The performance gap found in Brazil is however particularly large. Students from public schools in Brazil score below Level 2 on reading literacy over four times more often than students from private schools (57% as opposed to 13%). In Latin America the equivalent ratio is between 2 and 3; in the OECD it is only 1.5 (see Figure 3.13). National data from Brazil also show large performance differences between students in public and private schools at all levels of education (see Figure 3.14).

Figure 3.13. Percentage of 15-year-old students scoring below Level 2 in reading in public and private schools, PISA 2018



Notes: B-S-J-Z (China) is an acronym for the four Chinese provinces that participated in PISA 2018: Beijing, Shanghai, Jiangsu and Zhejiang. Countries are ordered in descending order from the highest percentage of 15-year-old students scoring below Level 2 in reading in public schools to the lowest.

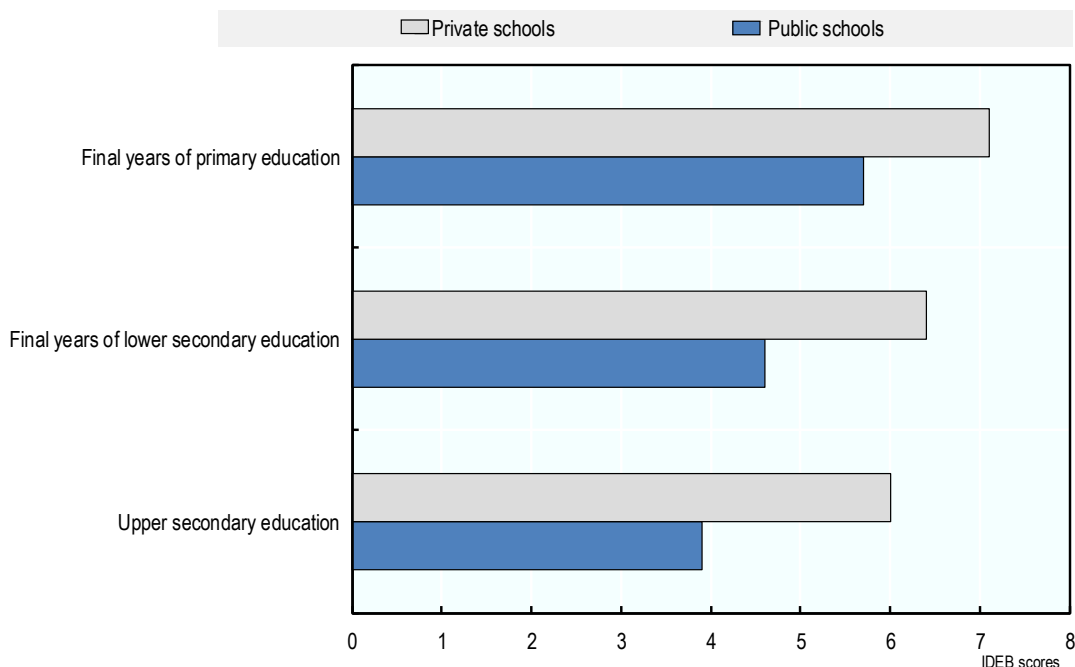
Source: (OECD, 2019^[39]), *PISA 2018 database*, <https://www.oecd.org/pisa/data/> (accessed on 26 August 2020).

StatLink  <https://stat.link/sclix7>

As discussed in Chapter 1, this gap is explained in part by differences in the intake of students between the public and private sector. Students in private schools tend to come from more advantaged socio-economic backgrounds (average ESCS: 0.2) according to the ESCS index than their peers in the public sector (average ESCS: -1.3). After taking into account the differences between students' socio-economic background in the two sectors, the performance advantage of private schools in reading scores declines from 113 points to 32 points (OECD average: from 27 to -12.5).

Figure 3.14. IDEB scores in public and private schools, 2019

Data refers to final years of primary education (Year 5, ISCED 1), final years of lower secondary education (Year 9, ISCED 2) and upper secondary education (Grade 3, ISCED 3)



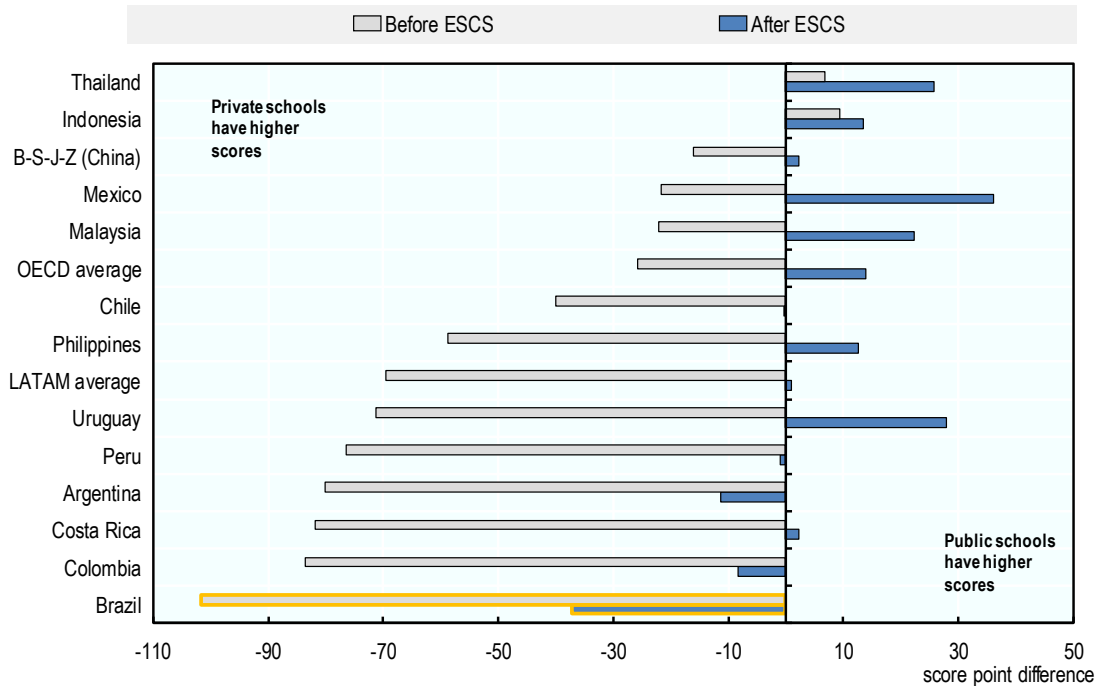
Source: (INEP, 2020^[34]), *Ideb - Resultados e Metas [Ideb - Results and Targets]*, <http://ideb.inep.gov.br/resultado/> (accessed on 23 November 2020); (INEP, n.d.^[40]), *Resultados [Results]*, <http://inep.gov.br/educacao-basica/ideb/resultados>, (accessed on 23 November 2020).

StatLink  <https://stat.link/plbahw>

However, even accounting for differences in school intake, a substantial and statistically significant difference remains between private and public schools in Brazil (see Figure 3.15). This contrasts with other LATAM countries, such as Chile, Colombia, Costa Rica and Peru, where there are no statistically significant differences in reading scores between private and public schools once ESCS is taken into account. This suggests that, once selection effects are taken into account, private schools in most LATAM countries do not deliver better quality education than public schools (OECD, 2011^[41]), whereas in Brazil the evidence suggests real differences in quality between the two sectors, consistent with the findings of some researchers (Medeiros, 2016^[42]). This means that parents who can afford to enrol their children in private schools can give them a learning advantage, which contributes to ensuring that socio-economic advantages are passed on to their children.

Figure 3.15. Performance disparities between public and private schools, PISA 2018

Score-point differences of 15-year-olds in reading, before and after accounting for students' and schools' ESCS



Notes: B-S-J-Z (China) is an acronym for the four Chinese provinces that participated in PISA 2018: Beijing, Shanghai, Jiangsu and Zhejiang. Countries are ordered in ascending order from the lowest score-point difference before ESCS to the highest.

Source: (OECD, 2020^[43]), *PISA 2018 Results (Volume V): Effective Policies, Successful Schools*, <https://doi.org/10.1787/ca768d40-en>.

StatLink  <https://stat.link/wd046s>

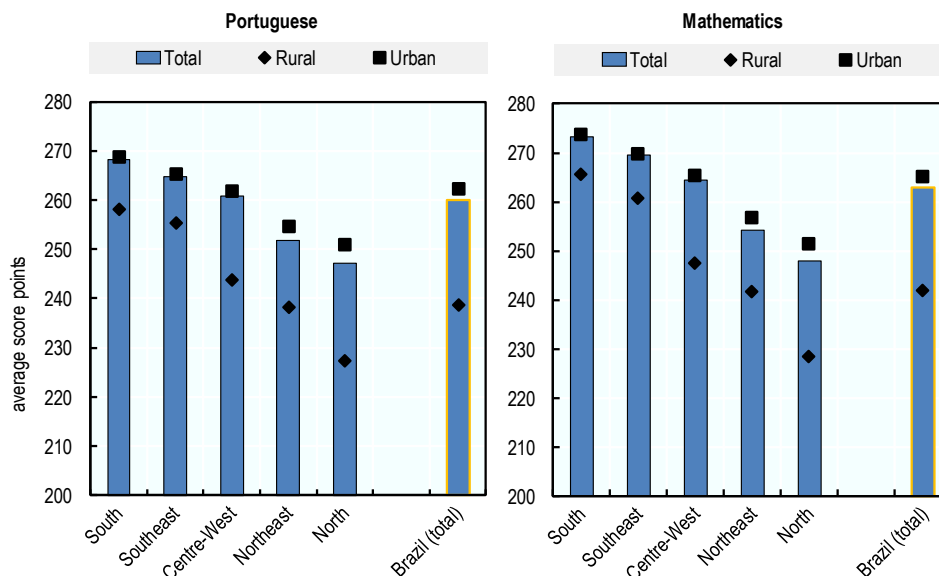
There are large regional variations in performance.

National and international assessments reveal large regional variations in performance. In PISA 2018, Brazil did not report state-level scores¹⁰, but results from previous cycles revealed significant disparities. In PISA 2015, the state of Espírito Santo scored 435 points in science, similar to Uruguay, whereas the state of Alagoas scored 360 points, below Albania and Kosovo. Such disparities are also reflected in national data. In the North and Northeast regions, average performance in SAEB was lower than the national average and lower than in the South and Southeast regions (see Figure 3.16). The gap between urban and rural locations are also significant, and particularly wide in the North, Northeast and Centre-West regions. This is most probably, at least in part, associated with the socio-economic and ethnic differences between schools and students across Brazil, whereby in schools in the North and Northeast states there are more disadvantaged students, and more students from minority backgrounds (see Chapter 1).

Seemingly, there is also a performance gap in PISA results between rural and urban schools in Brazil. However, once the socio-economic background of students is accounted for, this difference disappears or in fact suggests that rural schools, taking account of their student make-up do better. The score-point difference drops from around 80 points to the advantage of urban students to 33 points to the advantage of rural students, after accounting for ESCS (OECD, 2019^[39]).

Figure 3.16. National assessment results, by region and location, 2019

SAEB score-point averages of Grade 9 students in Portuguese and mathematics



Note: Regions are ordered from the highest to lowest percentage of students reaching adequate level of reading.

Source: (MEC, 2020^[29]), *SAEB Resultados [SAEB Results]*, <https://www.gov.br/inep/pt-br/areas-de-atuacao/avaliacao-e-exames-educacionais/SAEB/resultados> (accessed on 22 November 2020).

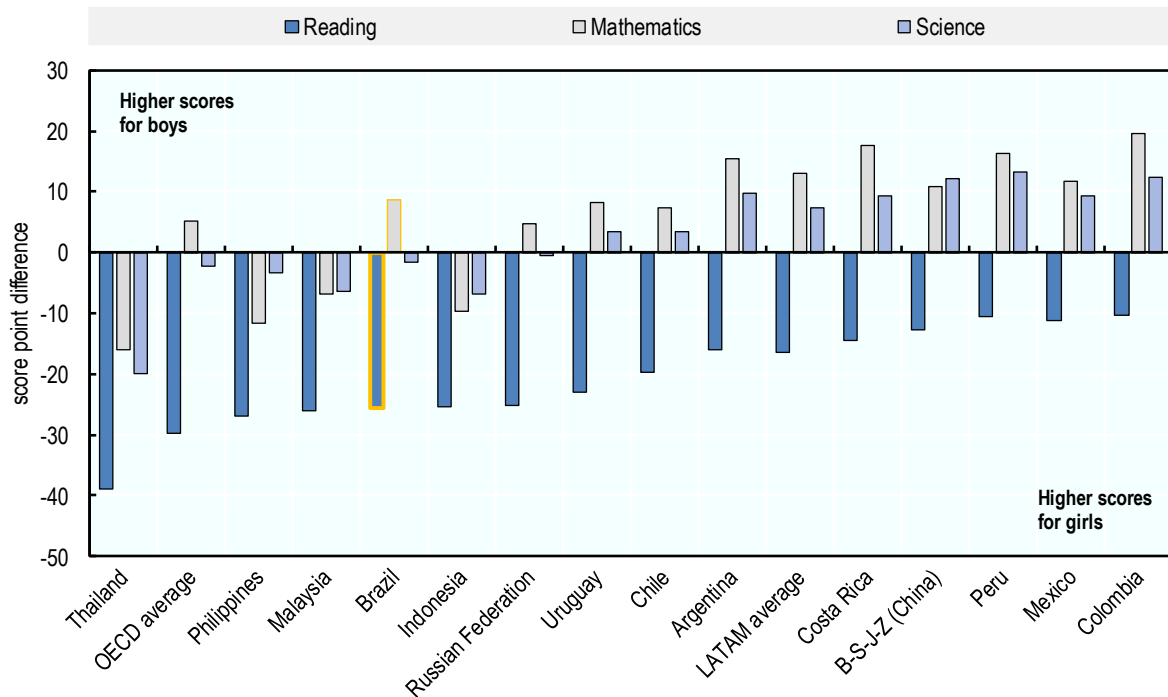
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Gender is associated relatively weakly with school performance, but strongly with career aspirations

In Brazil, at age 15, girls are ahead of boys in reading by 26 score points, slightly behind boys in mathematics (9 score-point difference), and about the same level in science (1 score-point difference¹¹) (see Figure 3.17). It is noteworthy that the gaps in favour of boys in mathematics and science observed in Brazil are much lower, whereas the advantage of girls in reading is much higher than in many LATAM countries, although similar to the average across OECD countries.

Figure 3.17. Gender disparities in PISA 2018

Score-point difference between 15-year-old boys and girls in reading, mathematics and science



Notes: B-S-J-Z (China) is an acronym for the four Chinese provinces that participated in PISA 2018: Beijing, Shanghai, Jiangsu and Zhejiang. Countries are ordered according to reading results. For Brazil, score difference between boys and girls in science is not statistically significant. Source: (OECD, 2019^[36]), *PISA 2018 Results (Volume II): Where All Students Can Succeed*, <https://doi.org/10.1787/b5fd1b8f-en>.

StatLink  <https://stat.link/evzh1f>

As in many other countries, there are large differences in career aspirations between boys and girls in Brazil. In OECD countries, more than three times as many boys as girls expect a career in engineering or computing (OECD, 2012^[44]); conversely girls are three times more likely than boys to expect to work as doctors, veterinarians, nurses or other health professionals (OECD, 2017^[45]). A similar pattern was observed in Brazil: among high-performing students in mathematics or science, about one in three boys in Brazil expects to work as an engineer or science professional at the age of 30, while only one in five high-performing girls expect to do so, but two in five of these girls expect to work in health-related professions (OECD, 2019^[4]).

Students in VET tracks outperform their peers in academic tracks

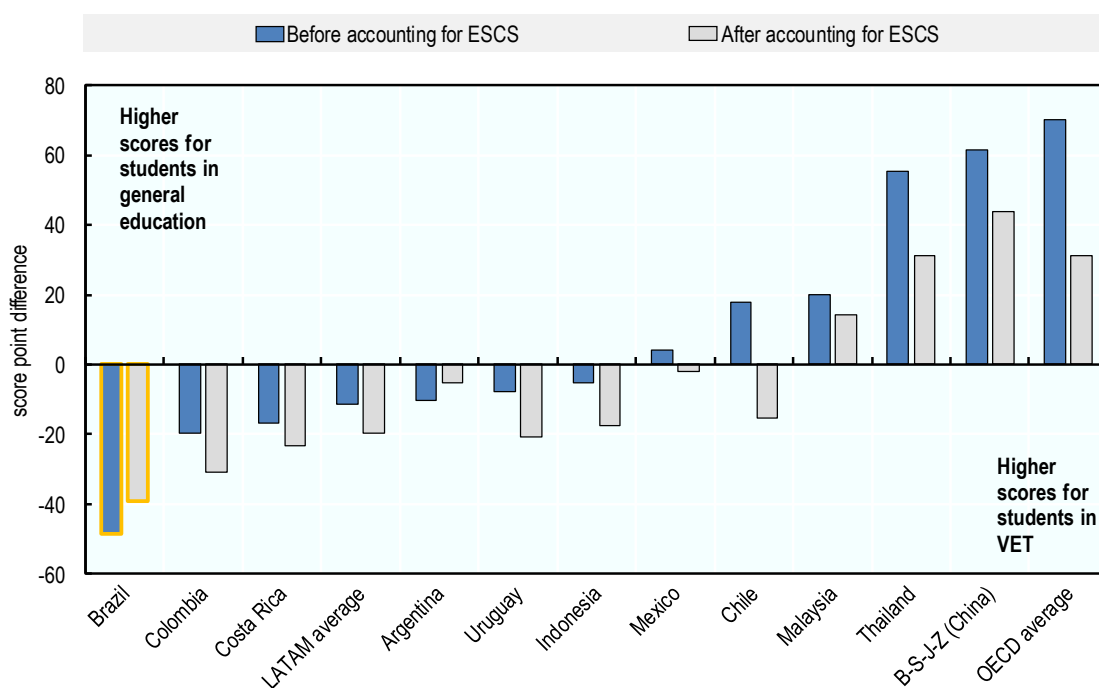
Unlike most PISA-participating countries, in Brazil, as in many other Latin American countries, students in pre-vocational or vocational programmes scored higher in reading than students in general or modular programmes. The difference is equivalent to 48 score points before accounting for students' socio-economic background and 39 score points after accounting for it, which is significantly higher than in neighbouring countries and among the highest across PISA-participating countries (see Figure 3.18).

This disparity may be partly explained by the fact that Brazil's vocational education and training (VET) systems have been, as discussed in Chapters 1 and 2, academic in focus and have attracted higher-performing students.

While the current reform to Brazil's upper secondary education is expected to increase enrolment in VET programmes, this could have implications for student performance. International experience shows that the stigmatisation of lower status pathways (and this is often how vocational programmes are seen), can lead teachers to assign slower-paced and more fragmented instruction to students in these programmes. As a result, students adjust their expectations and efforts, leading to even lower performance. To counter such stigmatisation, it is crucial to maintain high expectations for *all* students by ensuring that all tracks offer an appropriately challenging curriculum and high-quality instruction.

Figure 3.18. Disparities between students in general and VET programmes, PISA 2018

Difference between mean score points in reading of 15-year-old students enrolled in general and VET education (general-vocational), before and after accounting for students' socio-economic background (ESCS)



Notes: B-S-J-Z (China) is an acronym for the four Chinese provinces that participated in PISA 2018: Beijing, Shanghai, Jiangsu and Zhejiang. This analysis is restricted to schools with the modal ISCED level for 15-year-old students. Results may thus differ from those estimated on the entire sample of 15-year-old students.

Source: (OECD, 2019^[39]), *PISA 2018 database*, <https://www.oecd.org/pisa/data/> (accessed on 26 August 2020).

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Race is also correlated with learning outcomes

National data reveal how race is linked to learning outcomes. White Brazilians generally perform better than average, mixed-race Brazilians around the average, and black Brazilians well below the average. For example in the 2017¹² Portuguese assessment for Year 9 (lower secondary education), around 52% of white Brazilians reached adequate learning levels, compared with 36% of mixed Brazilians, and 29% of black Brazilians (Todos pela Educação, 2020^[33]). In mathematics, 32% of white Brazilians reached the expected standard, compared with 18% of mixed Brazilians and only 13% of black Brazilians (Todos pela Educação, 2020^[33]). While these disparities are widely recognised, there seems to be limited research and few targeted policies that explicitly address this issue.

Labour market outcomes

Education improves labour market outcomes

Internationally and in Brazil, labour market returns from education include both a better chance of getting a job and higher earnings once in work. These returns reflect, in part, greater productivity of individuals with more knowledge and skills, gained through education. The raw returns are also partly attributable to the “signalling” effect of education credentials, rather than to the additional knowledge and skills delivered by the associated education programme. Employers often use education qualifications as screening measures to identify the knowledge, skills and personality traits that granted individuals entry to an education programme and helped them successfully complete the programme, rather than the qualities developed through the education programme. Such signalled qualities include intelligence, self-control and persistence. Brazil does not yet participate in the OECD Survey of Adult Skills (PIAAC), which would offer a perspective on the actual levels of literacy, numeracy and digital literacy skills associated with higher levels of educational attainment.

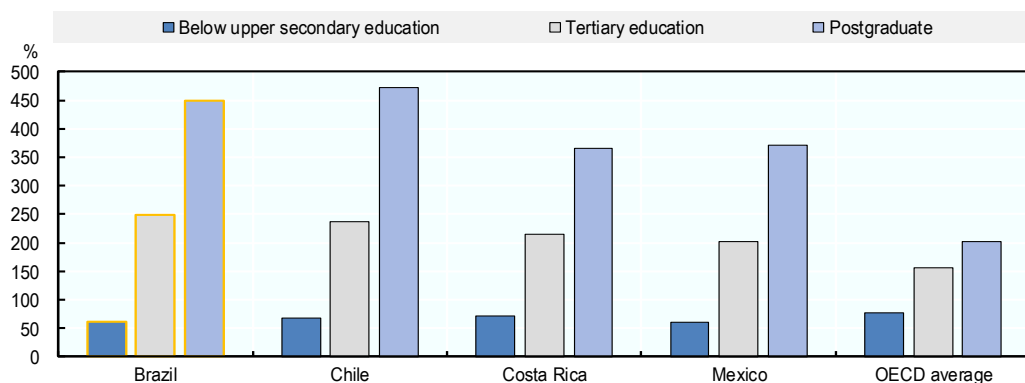
Strong labour market returns from education in Brazil suggest bottlenecks in supply

In Brazil, the returns from educational attainment are high, and while similar to other LATAM countries, they are much higher than in OECD countries on average (Figure 3.19). In Brazil, those with bachelor's degrees earn, on average, more than twice as much as those with upper secondary qualifications. In OECD countries on average, those with bachelor's degrees earn only half as much as those with upper secondary education (OECD, 2020^[46]). The returns are even higher in Brazil for those with a master's or doctoral degree who on average have earnings more than four times higher than those with upper secondary education, much larger than the OECD average (twice as high) (OECD, 2020^[46]).

One explanation for these comparatively high returns by international standards is the strong demand for, and weak supply of highly-qualified individuals (see Figure 3.20). Chapter 2 explained how the Brazilian labour market is increasingly demanding higher-level skills. At the same time, tertiary attainment levels, especially at the master or doctorate level, remain low by international standards.

Figure 3.19. Earnings of full- and part-time workers relative to upper secondary education, by level of education, 2015

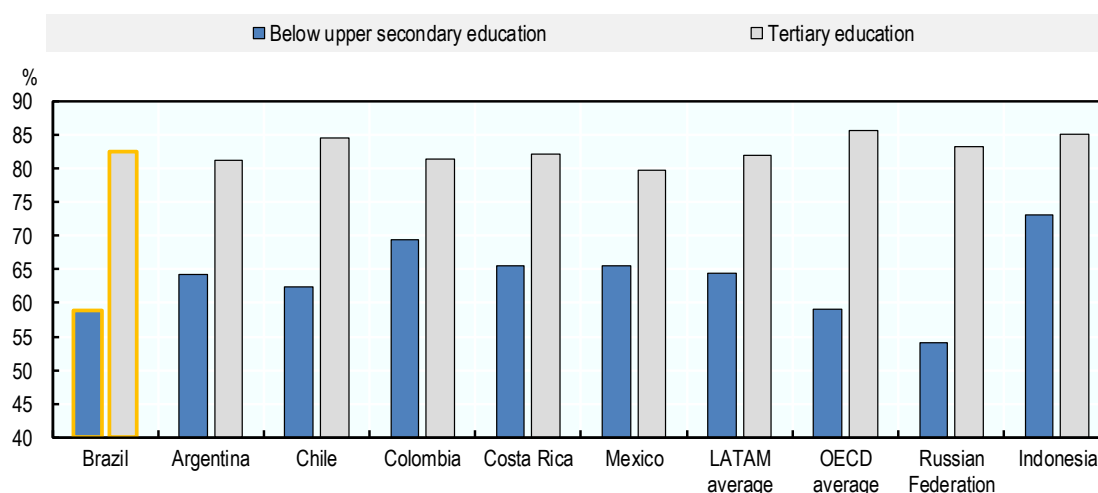
Population aged 25-64, earnings of upper secondary graduates = 100



Source: (OECD, n.d.^[47]), *Education and Training / Education at a Glance*, <https://stats.oecd.org/> (accessed on 22 November 2020).

Research also shows that the probability of informality decreases significantly with educational attainment (Mello and Santos, 2009^[48]). The same authors also find that those whose first jobs are informal are more likely to remain in that condition for an extended period. This may result in long-term challenges, since informal jobs offer no protection against unemployment, sickness and old age. For the government, informality means that much economic activity is unregistered, unregulated and untaxed (OECD, 2014^[12]).

Figure 3.20. Employment rates by educational attainment among 25-64 year-olds, 2019



Note: For Argentina, Brazil and the Russian Federation, the reference year for the data presented in the right graph (employment rates by educational attainment) is 2018, while for Chile and Indonesia it is 2017.

Source: (OECD, n.d.^[47]), *Education and Training / Education at a Glance*, <https://stats.oecd.org/> (accessed on 22 November 2020).

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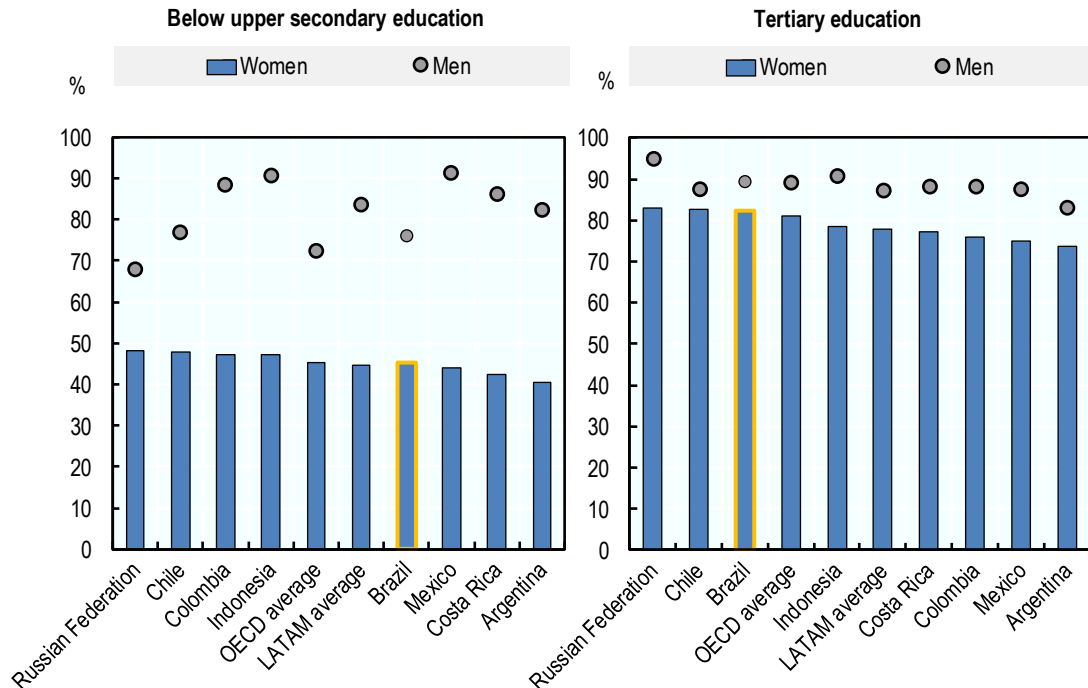
Women are particularly disadvantaged in the labour market, at all education levels

As described in Chapter 2, Brazilian women have higher participation and completion rates than men. As a result, young women are now more likely to have completed upper secondary education or a tertiary degree. Similarly to what is observed internationally, women's employment prospects improve considerably with better qualifications. However, it is noteworthy that, irrespective of their level of qualification, upon leaving education, women still face on average worse labour market prospects than their male peers:

- **The prospects of employment rise more sharply for women with better qualifications than for men.** In Brazil, in 2018, under half (45%) of young women with less than upper secondary qualifications were employed, compared with over three-quarters (77%) of their male counterparts. At tertiary level the comparable figures were 81% and 90% (see Figure 3.21) (OECD, n.d.^[47]). While the male-female gap in employment chances narrows at higher levels of educational attainment, data suggest that a relatively high share of well-educated women remain inactive or unemployed. This represents an important untapped resource for the country.
- **Women are more likely to be unemployed.** According to data from 2018, in Brazil, the unemployment rate is 19% among young women with less than upper secondary education, compared with only 12% for males. Among the tertiary-educated, the comparable figures are considerably lower at 9% for women and 7% for men (OECD, n.d.^[47]).
- **Despite wage returns from education, women still earn less than their male peers at all qualification levels.** In 2015, women's earnings were 69% of men's earnings, among those with below

upper secondary education. Among those with upper secondary and tertiary qualifications, women's earnings were equivalent to 65% of men's (OECD, 2017^[49]). Discriminatory barriers in the labour market may explain at least part of these gaps (OECD, 2014^[12]).

Figure 3.21. Employment rates by gender and level of education attainment, 25-34 years-old, 2019



Notes: Countries are ordered by highest to lowest employment rates among women. For Argentina, Brazil and the Russian Federation, the reference year for the data presented is 2018, while for Chile and Indonesia it is 2017.

Source: (OECD, n.d.^[47]), *Education and Training / Education at a Glance*, <https://stats.oecd.org/> (accessed on 22 November 2020).

StatLink  <https://stat.link/fnh2ya>

In Brazil, one-quarter of young adults are not in education, employment or training

Young people who are neither in employment nor in education or training – commonly referred to as NEETs (*jovens nem-nem* in Portuguese) – are at greater risk of becoming socially excluded, with income below the poverty line and poor career prospects. In OECD countries, around 11% of young adults (aged 15-24) were in this category in 2019, but in Brazil, as in many other developing countries, rates are much higher. In 2018¹³, in Brazil, nearly one-quarter of individuals in this age group were NEET (24%). The pattern is similar across Latin America: in Colombia 24% of 15-24 year-olds were NEET, as were 20% in Argentina and in Costa Rica (OECD, n.d.^[47]).

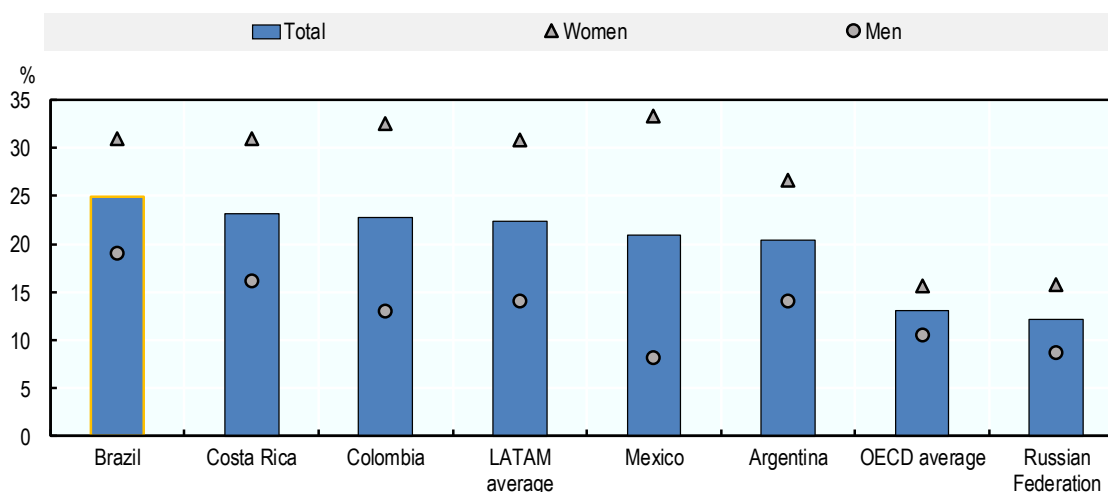
NEET rates are strongly associated with individual's education, socio-economic status, gender and ethnicity.

- In 2018, almost half (47%) of those aged 18-24 and NEET had not completed basic education (ISCED 1 and 2). This suggests that many of those who drop out early on from school end up in the NEET category.
- Unlike the majority of OECD countries, in Brazil, NEET is primarily a female phenomenon often attributed to early pregnancy, housework, childcare or other family responsibilities (OECD, 2014^[12]). In 2018, nearly a third of young Brazilian women (aged 15-29) (31%) were classified as NEET,

12 percentage points higher than for men (19%) (see Figure 3.22). While the gap between men and women has decreased since the early 2010s, this is primarily due to a large increase in NEET rates among men rather than in any change of female NEET rates (OECD, 2014^[12]). In 2012, an estimated 20% of Brazilian women aged 15-29 were NEET, almost twice the rate for young men (12%). In OECD countries, female NEET rates in 2018 (on average 16%) are only a little higher than those for men at 11% (see Figure 3.22).

- Of those who are NEET, 42% were in the lowest household income quintile, while only 7% come from the richest quintile (IBGE, 2019^[50]).
- Black or mixed women are the most likely to be NEET (32%), compared to 22% of white women, 20% of black or mixed men and 15% of white men (IBGE, 2019^[50]).

Figure 3.22. Rates of 15-29 year-olds not in education, employment or training (NEET), by gender, 2018



Note: Countries are ordered in descending order by highest to lowest total percentage of 15-29 year-olds not in education, employment or training.

Source: (OECD, n.d.^[47]), *Education and Training / Education at a Glance*, <https://stats.oecd.org/> (accessed on 22 November 2020).

StatLink  <https://stat.link/npc01g>

Race and ethnicity are also key determinants of earnings

In 2018, white people earned on average 74% more than mixed and black people (IBGE, 2019^[50]). In addition, mixed and black individuals are concentrated in economic sectors with low wages (e.g. domestic services and construction) (IBGE, 2019^[50]). Even after taking into account educational attainment, the earnings of mixed and black Brazilians lag behind those of whites, with larger gaps at higher attainment levels. Earnings of the tertiary-educated white population were 45% higher than those of their mixed and black counterparts with the same level of qualification (IBGE, 2019^[50]).

Conclusion

Ensuring that everyone takes part in education is only the beginning. Students also need access to quality education, where they are able to learn and develop knowledge and skills of value for the labour market and beyond. However, this is often not the case in Brazil. Low levels of skills can not only undermine individuals' career opportunities, but also slow Brazil's development and growth.

This chapter highlighted four main issues that Brazil faces:

- **First, relatively low outcomes in PISA at the age of 15 reflect a school trajectory where students are progressively falling behind.** Results from national and international assessments show that students' underperformance has its roots in the early years of schooling. Without mastering foundational skills, students are unable to progress and accumulate more advanced skills, falling increasingly behind expectations. Children from disadvantaged backgrounds are more vulnerable to this vicious cycle, having often entered school ill-prepared for the demands of formal education (World Bank, 2018^[1]).
- **Second, despite improvements, many students leave school without the skills and knowledge they need for their future careers and lives.** Brazil's expansion in access to education and school enrolments has been accompanied by improvements in terms of learning outcomes. While this is a significant achievement, student performance, as measured by PISA, remains well behind OECD countries. Prolonged school closures and distance learning models put in place during the COVID-19 pandemic may also lead to learning losses. Sustaining and accelerating progress will become increasingly challenging as participation in education continues to rise, and larger numbers of disadvantaged students, who are more likely to have fallen behind in school, stay on in education. But national and international evidence has shown that this is not an unsurmountable challenge.
- **Third, performance gaps between the private and public sectors risk further accentuating socio-economic disparities.** At present, Brazil's education system does not offer a level playing field for children and young adults. Families that can afford to enrol their children in private schools are able to offer them better academic and professional prospects. Those from less well-off backgrounds, on the other hand, do not have the same opportunities and tend to attend lower-quality public schools. This damages their life chances, as measured by their employment status and earnings, both reflecting and compounding inequalities in the country. The COVID-19 pandemic and its socio-economic consequences add greatly to this challenge for the current youth cohort.
- **Fourth, Brazil still faces important gender gaps.** In education, girls and women are more likely to be enrolled in school and progress to more advanced levels than boys. In the labour market, however, the trend reverses. Women show lower levels of employment and face a significant wage penalty, relative to men. More research should focus on the potential barriers women face to join and progress in the labour market (e.g. lack of high-quality and affordable childcare; scarcity of full-day schooling; discrimination in the labour market; unawareness of labour market opportunities for women; etc.). Overcoming these barriers would help Brazil make fuller economic use of its female working population and ensure women are able to successfully enter and remain in the labour market, realising their full potential.

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Annex 3.A. PISA reading, mathematics and science scores in Brazilian states and regions, 2003-2018

Annex Table 3.A.1. PISA scores in Brazilian states and regions, reading, 2003-2018

		PISA 2003	PISA 2006	PISA 2009	PISA 2012	PISA 2015	PISA 2018
Brazil		403	393	412	407	407	413
North	Acre		356	383.2	383	407	
	Amapá		390	390.4	396.2	385	
	Amazonas		343	386.6	381.7	407	
	Pará		387	383.4	387.3	395	
	Rondônia		415	398.7	400.1	393	
	Roraima		388	383.6	377.1	403	
	Tocantins		374	390.7	380.6	376	
	North (average)		377				392
Northeast	Alagoas		373	371.8	355.4	362	
	Bahia		384	396.8	388	372	
	Ceará		366	385.1	396.9	409	
	Maranhão		272	369.9	368.9	377	
	Paraíba		395	390.8	411.4	385	
	Pernambuco		352	387.7	376.3	394	
	Piauí		378	380.9	402.6	381	
	Rio Grande do Norte		386	385.2	393.2	384	
	Sergipe		408	387.9	397.2	379	
	Northeast (average)		359				389
Southeast	Espírito Santo		403	423.6	427.3	441	
	Minas Gerais		413	432.1	427.2	431	
	Rio de Janeiro		427	419.8	407.9	400	
	São Paulo		392	425.1	421.6	417	
	Southeast (average)		404				424
South	Paraná		418	423	421.9	433	
	Rio Grande do Sul		412	436.3	432.9	410	
	Santa Catarina		431	439	422.6	419	
	South (average)		419				432
Centre-West	Distrito Federal		429	449.4	427.9	430	
	Goiás		387	413.1	393.4	416	
	Mato Grosso do Sul		375	414.2	427.6	411	
	Mato Grosso		372	399.6	381.6	402	
	Centre-West (average)		388				425

Source: (INEP, n.d.^[51]), *Ações Internacionais, Pisa: Resultados*, <http://portal.inep.gov.br/acoes-internacionais/pisa/resultados> (access 23 July 2020).

Annex Table 3.A.2. PISA scores in Brazilian states and regions, mathematics, 2003-2018

		PISA 2003	PISA 2006	PISA 2009	PISA 2012	PISA 2015	PISA 2018
Brazil		356	370	386	389	377	384
North	Acre		346	350	358.7	377	
	Amapá		344	365.3	360.2	354	
	Amazonas		298	353.2	355.8	378	
	Pará		348	362.8	359.8	363	
	Rondônia		378	379.1	381.9	364	
	Roraima		353	358.8	361.8	373	
	Tocantins		341	363.4	365.5	350	
	North (average)		339				366
Northeast	Alagoas		341	354.3	342	339	
	Bahia		339	371.3	373.2	343	
	Ceará		349	363.9	378.3	382	
	Maranhão		270	344.6	343.2	343	
	Paraíba		355	376.7	395.3	357	
	Pernambuco		335	368.3	363.4	360	
	Piauí		343	366.6	385.3	355	
	Rio Grande do Norte		349	360.8	380.4	353	
	Sergipe		385	363.9	384	354	
	Northeast (average)		333				363
Southeast	Espírito Santo		385	397.3	414.2	405	
	Minas Gerais		386	408.9	403.1	398	
	Rio de Janeiro		391	392.9	388.8	366	
	São Paulo		370	391.3	403.6	386	
	Southeast (average)		378				392
South	Paraná		400	401.8	403.5	406	
	Rio Grande do Sul		405	411.7	407	385	
	Santa Catarina		413	412.7	415.3	398	
	South (average)		405				401
Centre-West	Distrito Federal		431	424.8	415.8	396	
	Goiás		378	385.5	379.1	380	
	Mato Grosso do Sul		363	389.7	408.3	377	
	Mato Grosso		353	379.7	370.2	373	
	Centre-West (average)		378				396

Source: (INEP, n.d.[51]), *Ações Internacionais, Pisa: Resultados*, <http://portal.inep.gov.br/acoes-internacionais/pisa/resultados> (access 23 July 2020).

Annex Table 3.A.3. PISA scores in Brazilian states and regions, science, 2003-2018

		PISA 2003	PISA 2006	PISA 2009	PISA 2012	PISA 2015	PISA 2018
Brazil			390	405	402	401	404
North	Acre		366	379	379.8	399	
	Amapá		364	378.2	382	381	
	Amazonas		349	373	376	399	
	Pará		380	381.8	376.9	386	
	Rondônia		396	397.7	389.1	387	
	Roraima		384	384.6	375.1	398	
	Tocantins		362	392.2	378.5	372	
	North (average)		372				384
Northeast	Alagoas		366	365.2	345.9	360	
	Bahia		364	389.6	390.4	368	
	Ceará		367	390.1	386.4	401	
	Maranhão		317	367.6	359.3	369	
	Paraíba		389	389	411.8	380	
	Pernambuco		355	383.7	374.2	383	
	Piauí		375	382.6	402.7	380	
	Rio Grande do Norte		364	370.5	387.4	377	
	Sergipe		402	385.7	394.2	375	
	Northeast (average)		359				383
Southeast	Espírito Santo		403	421.3	428.2	435	
	Minas Gerais		406	429.8	419.9	422	
	Rio de Janeiro		411	411.5	400.6	392	
	São Paulo		385	412.5	417.4	409	
	Southeast (average)		396				414
South	Paraná		422	421.3	415.6	425	
	Rio Grande do Sul		424	430.9	419.2	411	
	Santa Catarina		427	435.5	418.4	418	
	South (average)		424				419
Centre-West	Distrito Federal		447	442.6	422.8	426	
	Goiás		398	409.5	396.3	409	
	Mato Grosso do Sul		377	408.7	414.8	403	
	Mato Grosso		370	391.6	380.9	396	
	Centre-West (average)		396				415

Source: (INEP, n.d.^[51]), *Ações Internacionais, Pisa: Resultados*, <http://portal.inep.gov.br/acoes-internacionais/pisa/resultados> (access 23 July 2020).

Notes

¹ Brazil, like many Latin American countries, takes part in regional assessments of younger children, coordinated by the UNESCO Regional Bureau of Education for Latin America and the Caribbean, and the Latin-American Laboratory for Assessment of the Quality of Education (Laboratorio Latinoamericano de Evaluación de la Calidad de la Educación, LLECE). The First Regional Comparative and Explanatory Study (Primer Estudio Regional Comparativo y Explicativo, PERCE) was implemented in 1997 in 13 countries. Nine years later, in 2006, the Second Study (Segundo Estudio Regional Comparativo y Explicativo, SERCE) tested students in 16 countries plus one Mexican state. The Third Study (Tercer Estudio Regional Comparativo y Explicativo, TERCE) was implemented in 2013 in 15 countries and the same Mexican state. PERCE, SERCE and TERCE have measured learning outcomes of reading and mathematics of children in Grades 3, 4 (only in 1997) and 6. Brazil has participated in all rounds of the studies. Brazil also takes part in the International Civic and Citizenship Study (ICCS). Their participation in these assessments was until very recently one of the reasons why Brazil had not undertaken PIRLS and TIMSS. However, the Brazilian government recently announced that Brazil will take part in PIRLS 2021 and TIMSS.

² This refers to PISA Coverage Index 3, which represents the coverage of the national 15-year-old population. This estimates the proportion of the national population of 15-year-olds covered by the non-excluded portion of the student sample. The index is below 1.0 to the extent that 15-year-olds were excluded, or not enrolled in Grade 7 or higher. For further information on Brazil's student sample in PISA, please access: <https://www.oecd.org/pisa/data/pisa2018technicalreport/>

³ A proposal to reform the SAEB had been put forward in early 2021, but will no longer be rolled out as planned. The government still plans to implement many of the proposed changes, albeit under a different timeline. A forthcoming OECD report provides insights to this discussion.

⁴ In the most recent, 2019 edition of SAEB, Year 2 students were assessed in literacy for the first time. Previously, SAEB assessed Year 3 students. This change reflects Brazil's new common curricular base, which establishes that students should be literate by the end of Year 2. However, given that the assessment of the Year 2 was sample-based, rather than census-based, the authors have chosen not to include these results in the graph.

⁵ Up until 2016, Grade 3 students who reached Levels 3 and 4 in ANA were considered to have adequate proficiency levels in literacy. However, the federal government has not explicitly defined adequate proficiency levels for other grades or subjects for SAEB 2019. The OECD has opted to use the approach that other national stakeholders (such as Todos Pela Educação) take, whereby: in Portuguese, students in Years 5, 9 and in Grade 3 or 4 of upper secondary education who reach Level 4 on the SAEB proficiency scale are considered to have adequate levels of learning; in mathematics, students in Years 5 and 9 who reach Level 5, and students in Grade 3 or 4 of upper secondary education who reach Level 6 are considered to have adequate levels of learning.

⁶ The data show improvements in reading performance between the PISA 2000 cycle and the PISA 2018 cycle.

⁷ Only for reading was there a statistically significant increase in the share of high achievers between 2012 and 2018

⁸ PISA 2018 results allow however a comparison across regional averages. Results show, as discussed, that the South, Southeast and Centre-West regions have higher scores across all subjects than the North and Northeast regions.

⁹ This refers to the National Institute of Educational Studies and Research Anísio Teixeira (Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira, INEP) indicator of socio-economic level, which is based on data obtained from students' responses to contextual questionnaires. Students are categorised into eight socio-economic levels, with Level 1 being the lowest and Level 8 the highest on the scale. Schools are then categorised by their students' socio-economic profile, ranging from 1 to 6 (1 to 7 until 2016). Schools at Level 1 have the highest concentration of students from the lowest socio-economic backgrounds and schools at Level 6 have the highest concentration of students from the highest socio-economic background (Todos pela Educação, 2019^[52]).

¹⁰ PISA 2018 results allow however a comparison across regional averages. Results show, as discussed, that the South, Southeast and Centre-West regions have higher scores across all subjects than the North and Northeast regions.

¹¹ The difference is not statistically significant

¹² SAEB 2017 instead of SAEB 2019 results were used in this paragraph because at the time of the draft of this publication, the microdata for SAEB 2019 with information disaggregated by race for example, was not yet available.

¹³ Most recent year with available data for Brazil in the OECD statistics database.

4. Funding and resources for education

This chapter examines the use of financial, material and human resources, focusing on Brazil's overall expenditure levels, the allocation of resources across education levels and recent trends. The analysis looks at two overarching issues: the levels of equity and the efficiency of funding and resource allocation in Brazil's education system.

Introduction: setting priorities in education funding and resource use

The context in which this chapter examines education funding is exceptionally challenging. At the time of writing, in the second half of 2020, Brazil is facing a major health and economic crisis, adding to the pressures on an economy that had only recently begun to recover from a long and deep recession (OECD, 2020^[1]). Many young people have had their education interrupted, and face increasing challenges entering the labour market as a result of the economic and health crisis. Schools and tertiary education providers have had to rapidly adapt to ensure continuity of learning, and now face new challenges to manage re-opening in disrupted institutional settings (Todos Pela Educação, Instituto Unibanco, 2020^[2]). The education system therefore badly needs additional resources to cope with new pressures at a time in which resources are unusually constrained. Hard decisions on optimising and allocating resources will be needed. At the same time, this crisis may spur new ideas on how to govern, distribute and manage resources more effectively and equitably, and may stimulate difficult but much-needed reforms.

This chapter examines financial, human and material resources, covering how they are governed, used and allocated. Key questions for Brazil, explored in the following sections of this chapter, are:

- Is the overall expenditure on education at the right level to effectively support learning and equity?
- Does the distribution of resources across different regions, localities and institutions support learning and equity?
- Does the allocation of resources between different levels of education – early childhood education and care (ECEC), primary, secondary and tertiary education, and other subsectors, such as adult learning and vocational education and training – support equity?
- Are the mechanisms for raising, spending and distributing funding effectively organised?

Funding sources and resource allocation in Brazil

Funding is divided between three layers of government

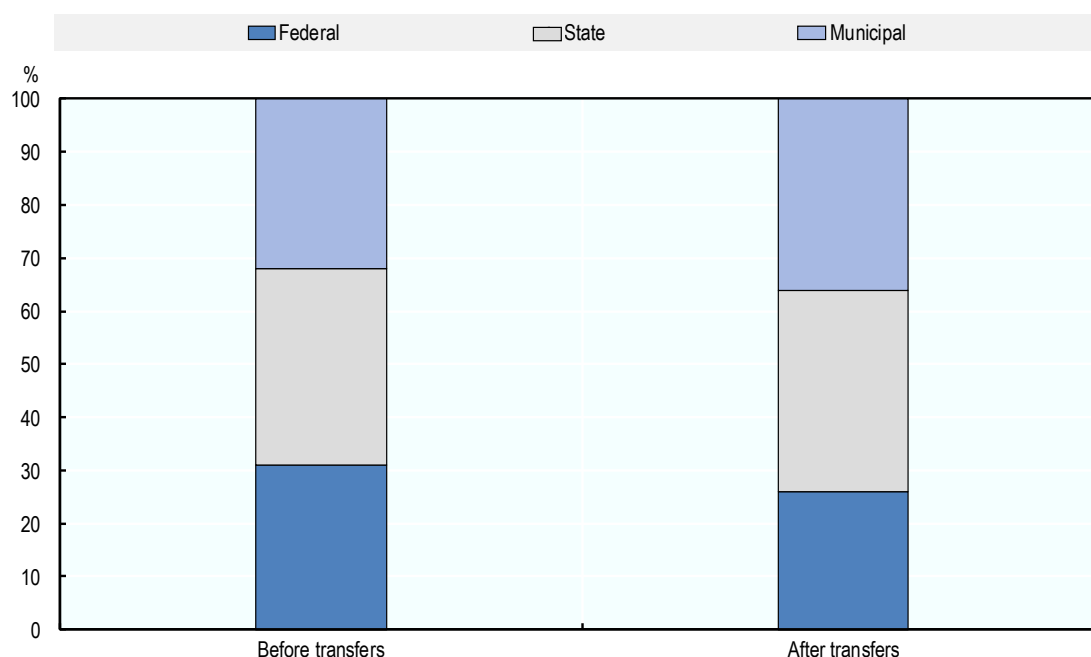
As described in Chapter 1, municipalities are primarily responsible for funding and managing ECEC; municipalities and states share responsibility for primary and lower secondary education; and states are responsible for upper secondary education. The federal government takes primary responsibility for funding and managing postsecondary and tertiary education. The Brazilian Federal Constitution requires states and municipalities to devote at least one-quarter of their tax revenues, and transfers from central government, to the “maintenance and development of education”, including teacher salaries, school buildings and equipment (Presidência da República, Casa Civil, 2020^[3]). The federal government contributes 25% of public funding devoted to primary through tertiary education, with states contributing 38% and municipalities 37%, after transfers¹ (see Figure 4.1).

Table 4.1 summarises the funding structure of education in Brazil, per type of funding mechanism and per level of government. The structure has not suffered substantial alterations since 2010.

In federal countries, it is relatively common for the federal level to play a large role in tertiary education, either through financial support for tertiary students or through institutional funding. For example in the United States, after transfers, the federal government contributes 53% of public funding for tertiary education, but only 1% of public funding for lower levels of education. Similarly, in Brazil, the federal government has by far the largest role at the tertiary level, contributing 75% of public funding, but a much smaller role in lower levels of education, where federal funding covers only 14% (before transfers) of the overall costs (OECD, 2020^[4]).

Figure 4.1. Distribution of sources of total public funds devoted to education by level of government, before and after transfers, 2017

Percentage of public funding for primary to tertiary education from different public sources



Note: Transfers are net transfers of funds, designated for education, from one level of government to another (usually lower) level of government.

Source: (OECD, 2020^[4]), *Education at a Glance 2020: OECD Indicators*, <https://doi.org/10.1787/69096873-en>.

StatLink  <https://stat.link/yqpo0z>

Table 4.1. Funding structure of Brazil's basic education, per level of government, 2010

Revenue sources	Federal government	State governments	Municipal governments
Budget revenue	• Ordinary budget • 18% of tax revenues to MDE	• 25% of tax revenues to MDE • FUNDEB (sub-funding)	• 25% of tax revenues to MDE • FUNDEB (sub-funding)
Social contributions	• 1/3 of the Educational Allowance (<i>Salário-educação</i>) • Net profit contribution • Social security contribution • Forecasted gross revenue	• 2/3 of the Educational Allowance (<i>Salário-educação</i>)	
Mixed/transfers	• Poverty eradication fund (FECF)	• Federal quote of the Educational Allowance • Federal budget • Federal quota and other FNDE sources of investments of the Educational Allowance	• Federal quote of the Educational Allowance • State quote of the Educational Allowance • Federal budget • State budget • Federal quota and other FNDE sources of investments of the Educational Allowance

Other revenue	• Credit operations • Net revenue of federal lottery • Revenue of autonomous bodies • Federal quota and other FNDE sources of investments of the Educational Allowance • Own-source revenues • Miscellaneous	• Own-source revenues • Credit operations • Miscellaneous	• Own-source revenues • Credit operations • Miscellaneous
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Notes: Acronyms refer to the following:

FECP: State Fund to Combat and Eradicate Poverty (*Fundo Estadual de Combate e Erradicação à Pobreza*)

FNDE: National Education Development Fund (*Fundo Nacional de Desenvolvimento da Educação*)

FUNDEB: Basic Education Maintenance and Development Fund (*Fundo de Manutenção e Desenvolvimento da Educação Básica*)

MDE: Maintenance and Development of Education (*Manutenção e Desenvolvimento do ensino*)

The educational allowance (*Salário-educação*) is a social contribution extracted from 2.5% of companies' monthly payroll. It was created in 1964 and since then has undergone several reforms. Today, as set in the Law nº 10.832/2003, 10% of the net revenue of the educational allowance goes to FNDE, and 90% is automatically distributed among the three entities, in the proportion of 1/3 to the federal government and 2/3 to state and municipal governments. The 2/3 is shared according to enrolment numbers, with the objective of financing education programmes, projects and actions (art. 212, §6º of the Federal Constitution).

Source: (de Castro, 2011^[5]), *Financiamento da Educação Pública no Brasil: Evolução dos Gastos* [Financing of Public Education in Brazil: Evolution of Spending],

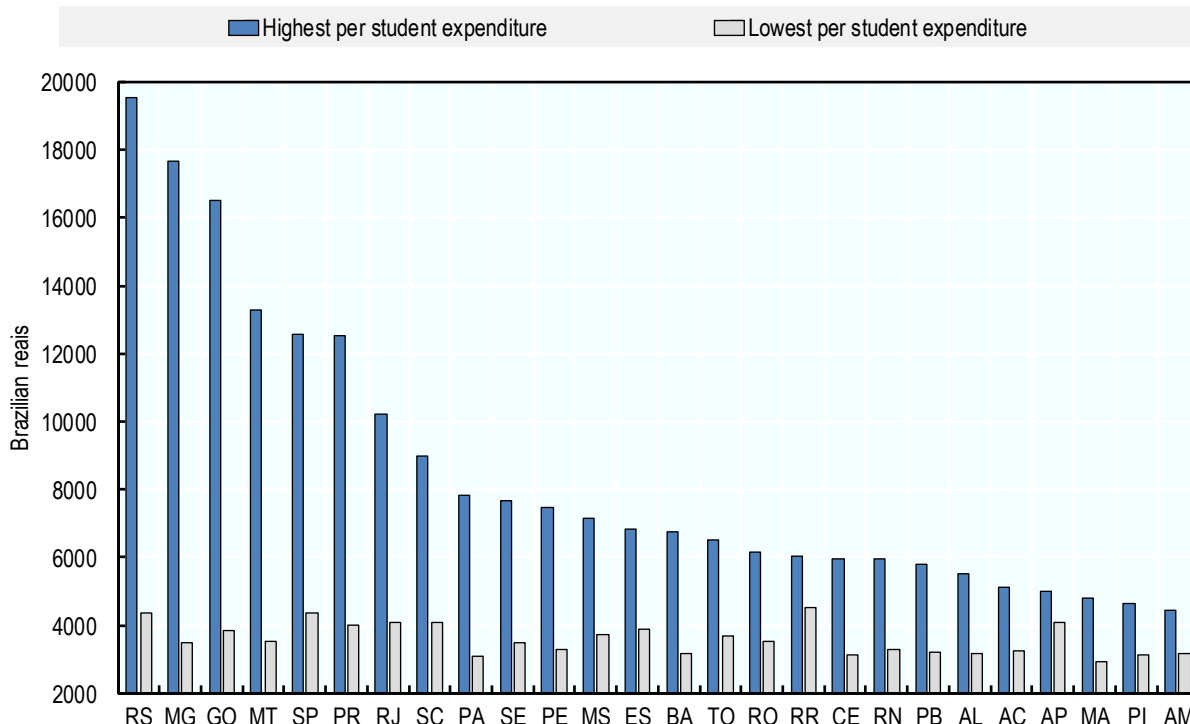
http://repositorio.ipea.gov.br/bitstream/11058/8437/1/Financiamento%20da%20educa%C3%A7%C3%A3o%20p%C3%BAblica%20no%20Brasil_evolu%C3%A7%C3%A3o%20dos%20gastos.pdf (accessed on 15 January 2021).

FUNDEB is central to addressing large disparities in educational funding across sub-entities

Brazil's decentralised governance structure, in combination with the country's wide regional disparities (discussed in Chapter 1), are associated with large expenditure differences between and within states. Figure 4.2 shows how wealthier states (and municipalities) – most of which are located in the South, Southeast and Central regions – are able to invest more per student. Expenditure inequalities have been significantly reduced since the introduction of the Primary and Lower Secondary Education Maintenance, Development and Teacher Promotion Fund (*Fundo de Manutenção e Desenvolvimento do Ensino Fundamental e de Valorização do Magistério*, FUNDEF), which was later replaced by the Basic Education Maintenance and Development Fund (*Fundo de Manutenção e Desenvolvimento da Educação Básica*, FUNDEB)² (MEC, 2018^[6]). Some estimates suggest that without FUNDEB, disparities in per-student expenditure across municipalities would be as high as 10 000%, in comparison to 564% with FUNDEB (Todos pela Educação, 2018^[7])³.

Figure 4.2. Public expenditure per student across states, 2015

Highest and lowest municipal per student public expenditure rates, across states, in Brazilian reais (BRL)



Note: The Federal District is not included in the graph. Abbreviations of Brazilian states: AC=Acre; AL=Alagoas; AP=Amapá; AM=Amazonas; BA=Bahia; CE=Ceará; ES=Espírito Santo; GO=Goiás; MA=Maranhão; MT=Mato Grosso; MS=Mato Grosso do Sul; MG=Minas Gerais; PA=Pará; PB=Paraíba; PR=Paraná; PE=Pernambuco; PI=Piauí; RJ=Rio de Janeiro; RN=Rio Grande do Norte; RS=Rio Grande do Sul; RO=Rondônia; RR=Roraima; SC=Santa Catarina; SP=São Paulo; SE=Sergipe; TO=Tocantins.

Source: Adapted from (Todos pela Educação, 2018^[7]), *Propostas para Aprimoramento nos Mecanismos de Financiamento da Educação Básica* [Proposals for Improvement in Basic Education Financing Mechanisms], <https://www.todospelaeducacao.org.br/uploads/posts/258.pdf> (accessed on 15 September 2020).

StatLink  <https://stat.link/I0awkx>

As the main financing mechanism for basic (pre-primary, primary and secondary) education, FUNDEB requires each state and municipality to contribute 20% of the revenue they receive from certain taxes⁴, contributions and transfers to a state-managed education fund. The federal government then tops up this fund for states that have not reached the established minimum national level of funding per student (a national threshold calculated annually by the federal government). While this funding and redistribution mechanism allows wealthier states and municipalities to continue spending more than minimum requirements on their education systems, it also provides critical financial support to education systems in poorer regions that would otherwise have more limited funding available. Estimates suggest that in over nine out of ten Brazilian municipalities, FUNDEB resources made up over half of the total amount invested in education (Moderna, 2020^[8]). Changes to FUNDEB brought by the Constitutional Amendment No. 108 (2020) are expected to further reduce regional disparities, and offer greater support to poorer states, and to poorer municipalities within states (Todos pela Educação, 2020^[9]; OECD, forthcoming^[10]).

Mechanisms for allocating resources to schools differ across the country

Some Brazilian states and municipalities allocate resources to schools using a funding formula based on student enrolment rates. While details of each funding formula vary across the country, OECD research has found that simple per-capita funding models – that do not reflect variations in school types and populations – provide little financial incentive for improving inclusiveness and learning outcomes (OECD, 2017^[11]). For example, allocation systems that narrowly focus on inputs (e.g. total student enrolment) may dissuade schools from trying to reduce the rate of grade repetition, or channel resources to help the most vulnerable students through to completion. While schools may pursue equity and improvement regardless of incentives, it can be helpful to align financial allocations with policy objectives (OECD, 2017^[11]). One notable example at the federal level is the Direct Money to School Programme (*Programa Dinheiro Direto na Escola*, PDDE), where schools can apply for additional funding from the federal government to support improvements in a school's physical and pedagogical infrastructure. The Ministry of Education (*Ministério da Educação*, MEC) is currently rolling out the “Time to Learn” programme (*Tempo de Aprender*), which will offer performance-based financial incentives for teachers and school leaders who promote improvements in student learning outcomes, as measured by the Basic Education Assessment System (*Sistema de Avaliação da Educação Básica*, SAEB) (MEC, n.d.^[12]).

Some states and municipalities are already pursuing innovative approaches to these challenges. For example, in Sobral, in the state of Ceará, the highest-performing schools are rewarded with additional financial resources. These resources are used to hire specialised teachers and experts to work in schools with the greatest needs. As a result, high-performing schools gain from the status of the reward, while low-performing schools gain more directly from the additional staff (Schleicher, 2019^[13]). However, not all sub-entities in Brazil have mechanisms in place that encourage school improvement and high levels of performance.

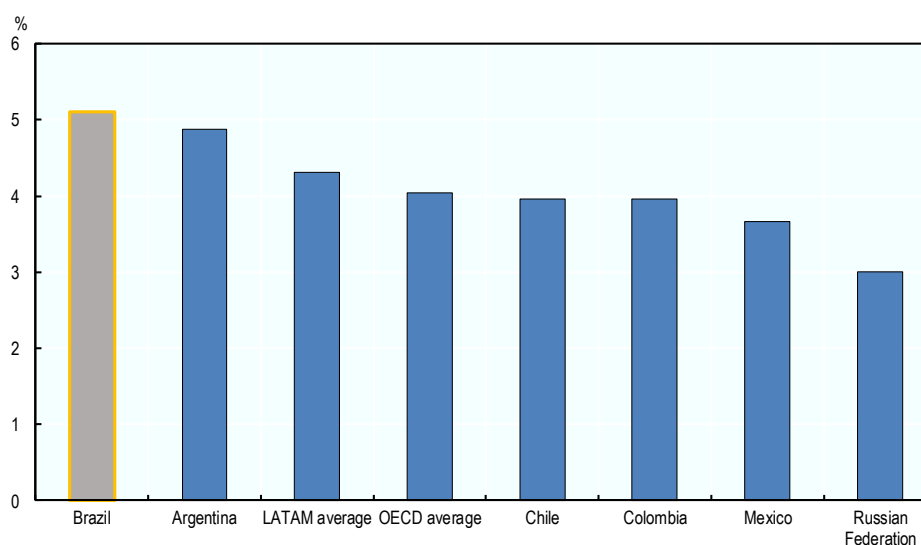
Financial resources

The Brazilian government spends heavily on education

The Brazilian government spends a large share of the national income on education. In 2017, public spending on education institutions (primary to tertiary education) comprised 5.1% of Brazil's Gross Domestic Product (GDP), compared with the average of 4.3% in Latin American (LATAM) countries and 4% in OECD countries⁵ (see Figure 4.3). Brazil's National Education Plan (*Plano Nacional da Educação*, PNE) includes a target that government investment in public education should reach 10% of GDP by 2024 (Ministério da Educação, 2014^[14]). As mentioned earlier, the Federal Constitution mandates minimum levels of education expenditure by states and municipalities. Until 2017, the federal government was also required to invest at least 18% of its revenues in education. While these types of financial goals and requirements have helped raise investment levels in education and other social sectors, Brazil's focus on expenditure targets, independently of what the expenditure should deliver in terms of learning outcomes, may be contributing to resource inefficiencies.

Between 2000 and 2015, the share of public expenditure on primary to tertiary education, as a percentage of total government expenditure, grew from 9.1% to 14.3% (OECD, n.d.^[15]). Following an intense debate in the context of an economic crisis, a 2016 constitutional amendment was passed, limiting non-interest spending across the public sector. In addition, a floor was established for expenditure on education⁶ and health – equivalent to 2017 spending levels, indexed to inflation, which is expected to stabilise expenditure in the sector in coming years (see Box 4.1). In light of demographic developments, the real value of education expenditure per student will likely increase.

Figure 4.3. Government expenditure on educational institutions (primary to tertiary) as a percentage of GDP, 2017



Notes: For this indicator (C.2.2 from EAG, see below), data refer to government expenditure on private and public institutions. Data for Brazil however, refer to government expenditure on public institutions only. Countries are ordered from highest to lowest expenditure.

Source: (OECD, n.d.^[15]), *Education and Training / Education at a Glance*, <https://stats.oecd.org/> (accessed on 26 November 2020).

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Box 4.1. Constitutional amendment Nº 95/2016

In 2016, the Brazilian government introduced a constitutional amendment (also known as EC 95, the expenditure ceiling, or *teto de gastos*) which imposed limits on the primary public spending of all branches of government, excluding interest payments. The amendment aimed to control real public spending, which has grown significantly over the past two decades mostly due to mandatory spending rules, and in turn, to ensure the sustainability of public accounts in light of high public debt.

This expenditure ceiling was meant to force a political discussion about government rules and programmes, with a view towards improving spending efficiency. So far, it has failed to generate the expected political momentum for reform. Nevertheless, it has improved market confidence, leading to lower interest rates and helping to reduce Brazil's interest payments, which had been historically very high, even exceeding public spending on education. This in turn has helped reduce financing costs across the economy.

Looking ahead and against the backdrop of the COVID-19 crisis, there will be a growing need to address budget inflexibilities and review spending to changing priorities both within education, and – even more so – between education and other government functions.

The education sector: built-in enforcement mechanisms and safeguards protect but could also limit increases in spending

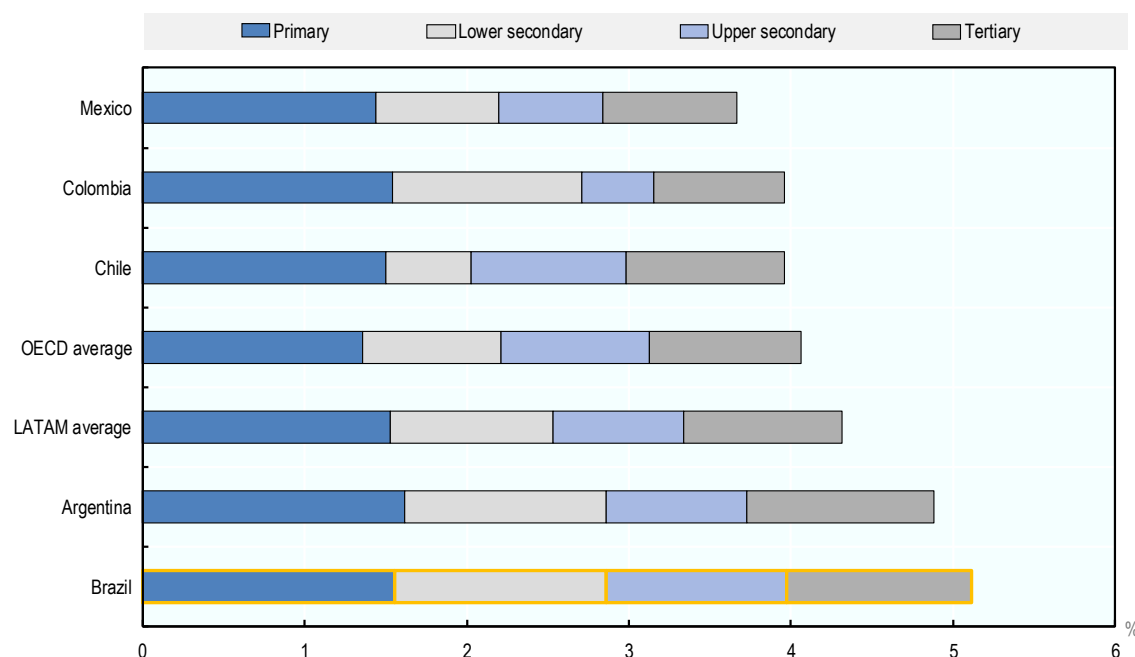
The ceiling amendment exempts the federal government's contribution to FUNDEB and protects the current real value of other education expenditures until 2036 through an education-specific spending floor equivalent to 2017 levels, adjusted for inflation. In light of demographic developments, this implies a real increase in per-student spending, but there may still be a need to raise investment in education even more. Target 20 of the PNE for example, aims to expand public investment in public education to at least 10% of GDP by 2024. However, the expenditure ceiling implies that an increase in education spending beyond the guaranteed floor (plus inflation) would need to be financed through cutting expenditures elsewhere, rather than raising taxes. There is a growing recognition that Brazil has significant room for reducing current expenditures without detriment to legitimate policy objectives, for example in the areas of subsidies and public payroll expenses, as discussed in the 2020 OECD *Economic Survey of Brazil*. That said, building the necessary political consensus for expenditure cuts will be a challenging process, and until it is reached, fiscal challenges are likely to stand in the way of more investment in public education as established by the PNE, threatening the successful achievement of its goals and strategies.

Source: (Senado Federal, 2016^[16]), *Promulgada Emenda Constitucional do Teto de Gastos Públicos* [Enacted Constitutional Amendment of Public Expenditure Ceiling], <https://www12.senado.leg.br/noticias/materias/2016/12/15/promulgada-emenda-constitucional-do-teto-de-gastos> (accessed on 10 September 2020); (Amaral, 2017^[17]), *Com a PEC 241/55 (EC 95) haverá prioridade para cumprir as metas do PNE (2014-2024)?* [With PEC 241/55 (EC 95) will there be priority to meet the goals of the PNE (2014-2024)?], <http://dx.doi.org/10.1590/S1413-24782017227145>; (Agência Brasil, 2016^[18]), *Relator da ONU diz que PEC do Teto terá impacto "severo" nos mais pobres* [UN rapporteur says that Ceiling PEC will have a "severe" impact on the poorest], <https://agenciabrasil.ebc.com.br/politica/noticia/2016-12/relator-da-onu-diz-que-pec-do-teto-tera-impacto-severo-e-recomenda-debate> (accessed on 10 September 2020); (OECD, 2020^[11]), *OECD Economic Surveys: Brazil 2020*, <https://doi.org/10.1787/250240ad-en>.

Brazil's sectoral distribution of education expenditure is similar to many countries

The allocation of public expenditure in Brazil across different levels of education is similar to other countries (see Figure 4.4). The biggest shares of expenditure go to primary and lower secondary education, the two largest sectors of the education system. National data reveal that between 2000 and 2015, expenditure on every sector of education grew (see Figure 4.5), but growth was concentrated in early childhood (from 0.4% to 0.7% of GDP), upper secondary (0.6% to 1.1%), and tertiary (0.9% to 1.3%) education. These spending trends reflect political priorities of the time and increasing enrolment in these levels of education (see Chapter 2).

Figure 4.4. Government expenditure per education level as a percentage of GDP, 2017



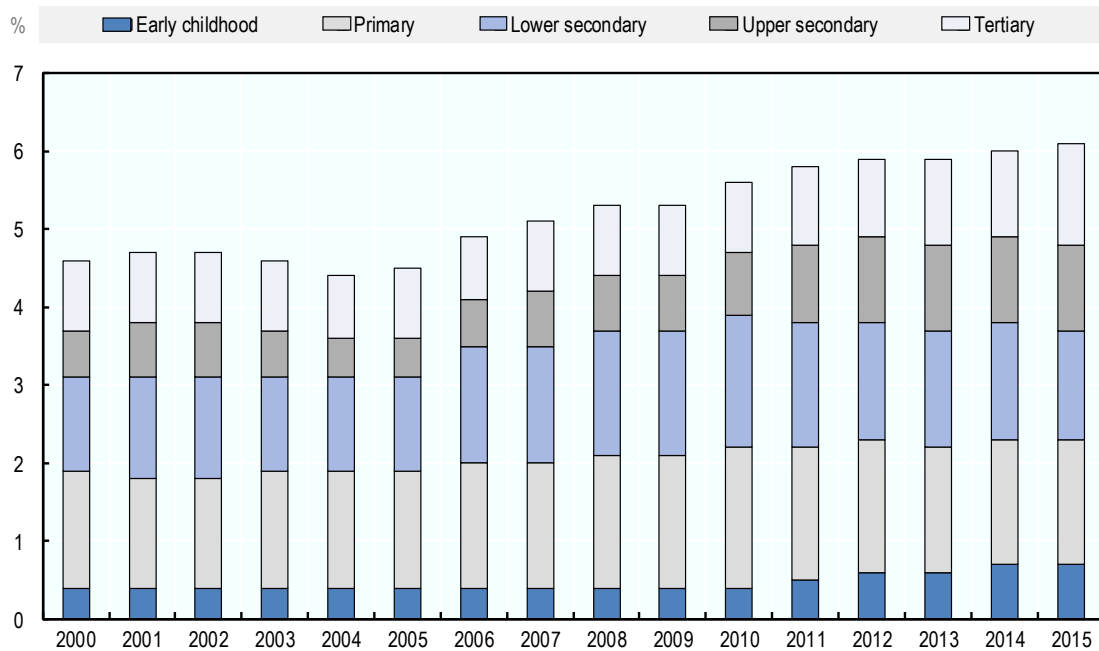
Notes: Accounts for direct expenditure only. Data for pre-primary education are not available. For this indicator data refer to government expenditure on private and public institutions. Data for Brazil however, refer to government expenditure on public institutions only. Countries are ordered by lowest to highest total expenditure on education.

Source: (OECD, n.d.^[15]), *Education and Training / Education at a Glance*, <https://stats.oecd.org/> (accessed on 26 November 2020).

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Despite the fact that two years of pre-school are mandatory in Brazil, expenditure on ECEC remains relatively low compared to other sectors, such as tertiary education, which is not compulsory and supports a much smaller share of students (see below). If Brazil is to further expand access to early childhood education – and in particular to disadvantaged students to help address inequality, as recommended by the OECD (OECD, 2020^[11]) – increased spending at this level will be necessary.

Figure 4.5. Estimated percentage of total public investment in education as a percentage of GDP by level of education, 2000-2015



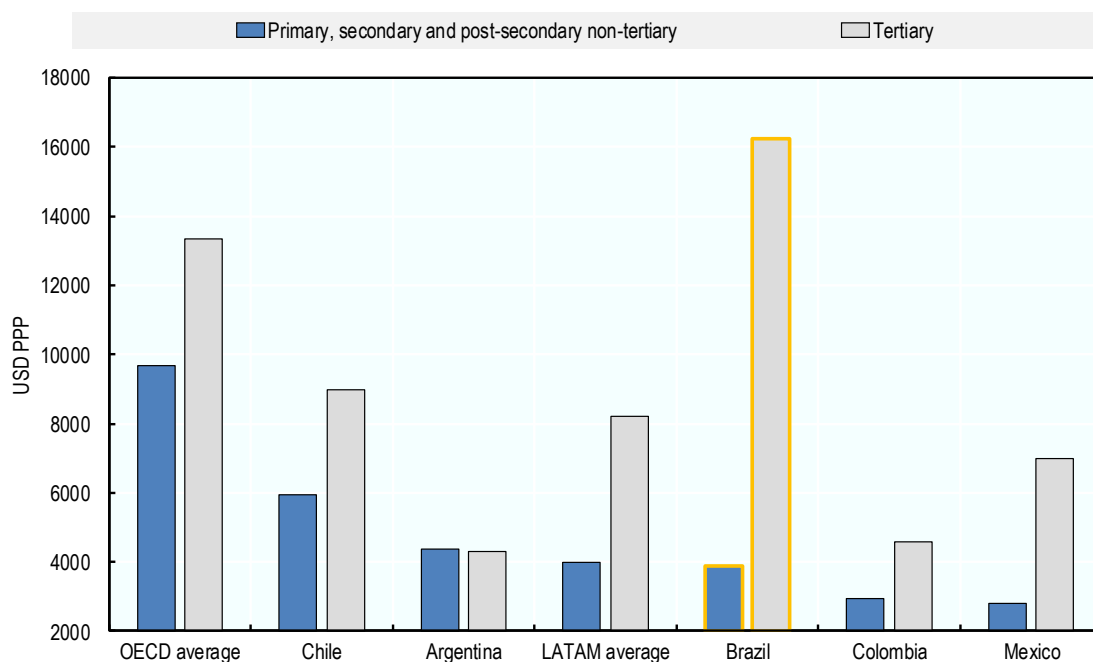
Source: (INEP, 2020^[19]), *Indicadores Financeiros Educacionais* [Educational Financial Indicators], <http://inep.gov.br/indicadores-financeiros-educacionais> (accessed on 1 July 2020).

StatLink  <https://stat.link/lqufwh>

Per-student expenditure on compulsory education has been increasing but still lags behind most OECD countries

Until recently in Brazil, overall education expenditure had been increasing, both as a share of GDP and total public expenditure. This trend, combined with demographic changes (discussed in Chapter 1), contributed to an estimated 10% rise in spending per student – as a percentage of GDP per capita – in primary and lower secondary public schools between 2002 and 2014 (World Bank, 2017^[20]). Nevertheless, while Brazil's per-student spending on compulsory education (excluding pre-primary) is similar to other LATAM countries, it remains lower than the OECD average (see Figure 4.6). This reflects the fact that Brazil's per capita GDP is lower than OECD countries on average.

Figure 4.6. Government direct expenditure on public educational institutions per full-time equivalent student in US dollars purchasing power parity (USD PPP) by education level, 2017



Note: Countries are ordered by highest to lowest per-student spending in primary education.

Source: (OECD, n.d.^[15]), *Education and Training / Education at a Glance*, <https://stats.oecd.org/> (accessed on 26 November 2020).

StatLink  <https://stat.link/zpk81x>

OECD evidence suggests that without further increases in funding, it will be harder for Brazil to improve educational outcomes. This highlights the importance of protecting the country's existing levels of education investment, especially in times of economic downturn.

There is scope for more effective expenditure and allocation of resources

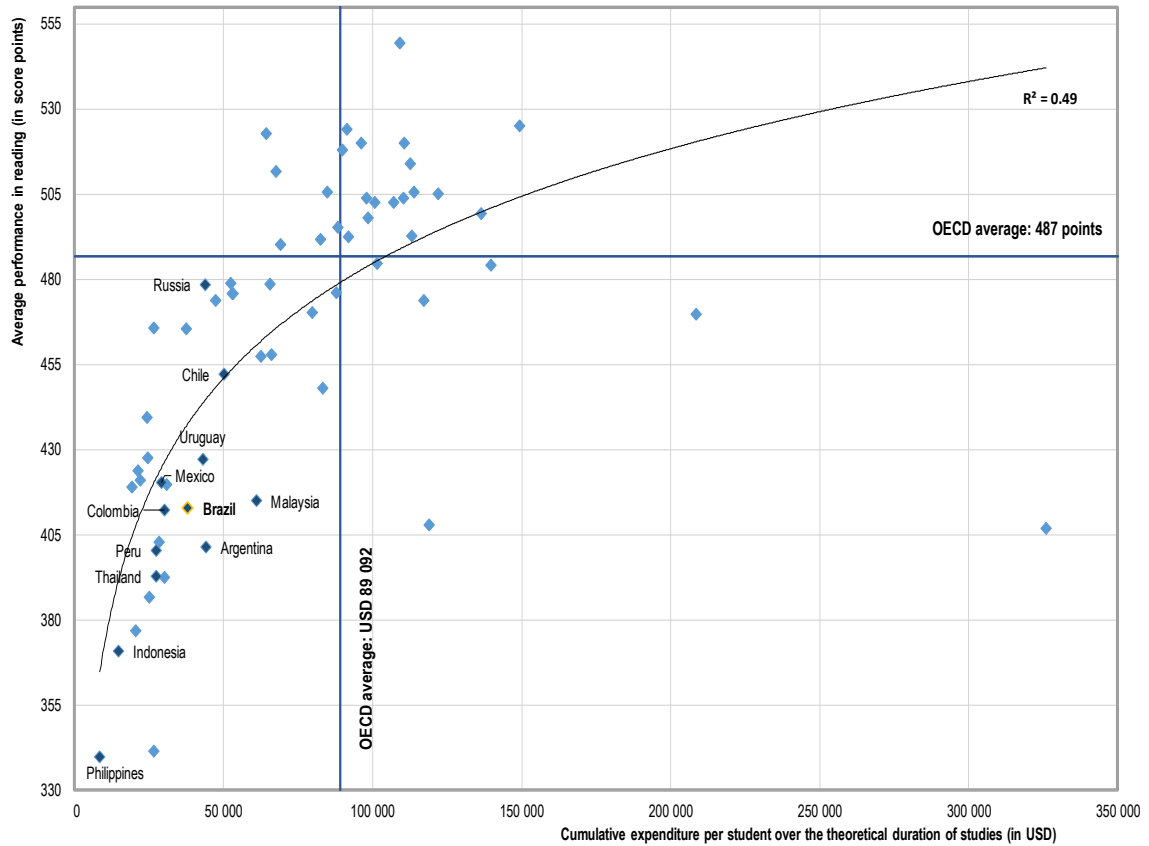
Despite increases in education spending over the years, Brazil has only seen limited improvements in national and international assessments (see Chapter 3), suggesting there are ways in which to achieve better results with resources that are already available. Mexico, for example, obtains higher PISA reading scores than Brazil, with a lower level of educational investment (see Figure 4.7). Even some sub-entities within Brazil are able to attain relatively high scores in the national education quality index (*Index de Desenvolvimento da Educação Básica*, IDEB) despite low spending levels (World Bank, 2017^[20]). This was the case of the municipality of Mucambo in Ceará, in the Northeast region, which obtained one of the highest IDEB scores in the country in 2019 (9.4 in the initial years) despite having a budget lower than BRL 4 500 (2015) (Saldaña and Palhares, 2020^[21]).

This is an important consideration since Brazil may not be able to increase per-student spending significantly in the short- or medium-term. Policies designed to introduce more accountability for results and the use of evidence to inform discussions on trade-offs (e.g. funding smaller class sizes versus teacher training or learning/digital resources) could lead to greater resource efficiency in the education sector. The decision to use FUNDEB allocations to incentivise improvements in learning, access and equity is a welcome step, although the details of how this would be carried out have still not been revealed. Box 4.2

describes several factors in the Brazilian system that raise the levels of spending per student, which if addressed could support more effective expenditure.

Figure 4.7. Mean reading performance and spending on education, PISA 2018

Average performance in reading in PISA 2018 (score points) and cumulative expenditure per student over the theoretical duration of studies, in USD



Note: The names of countries which participated in PISA 2018 but that are not part of the group of benchmarking countries selected for this report are not presented in the graph. For the complete graph, please check figure I.4.4 from PISA 2018 Volume I. Link below.

Source: Adapted from (OECD, 2019^[22]), *PISA 2018 Results (Volume I): What Students Know and Can Do*, <https://doi.org/10.1787/5f07c754-en>.

StatLink  <https://stat.link/qjfn10>

Box 4.2. Grade repetition and dropout raise the cost of education per student

The average cost of educating one child from school entry age to the completion of upper (or lower) secondary education are higher in Brazil for three reasons:

- **Grade repetition delays graduation.** As described in Chapter 2, grade repetition is very common in Brazil. As a result, in lower secondary education, over 20% of boys and over 10% of girls are at least two years older than the standard age for their grade, well above LATAM and more than four times higher than OECD countries. A graduating student in Brazil will have spent a comparatively long time in education, and therefore consumed more resources than if they had progressed smoothly through education.
- **Dropout is wasteful.** The wastage, when students fail to complete, is not only a human, but also an economic cost, since education resources will have been committed to the education of students who end up dropping out. As described in Chapter 2, in 2018, Brazil's upper secondary completion rate of 67% is similar to the LATAM average of 64%, but lower than countries such as Chile and Peru (86%).
- **Tertiary students often do not graduate on time.** As discussed in Chapter 2, only a third of bachelor students obtain their degrees within the expected time span of four or five years. Not only does this delay their entry into the labour market and therefore yields an opportunity cost in terms of lost wages and output, but it can also directly increase public and private expenditure.

Source: (UNESCO-UIS, n.d.^[23]), *UIS dataset*, <http://data.uis.unesco.org/> (accessed on 17 November 2020); (OECD, 2019^[24]) *PISA 2018 Results (Volume III): What School Life Means for Students' Lives*, <https://doi.org/10.1787/acd78851-en>.

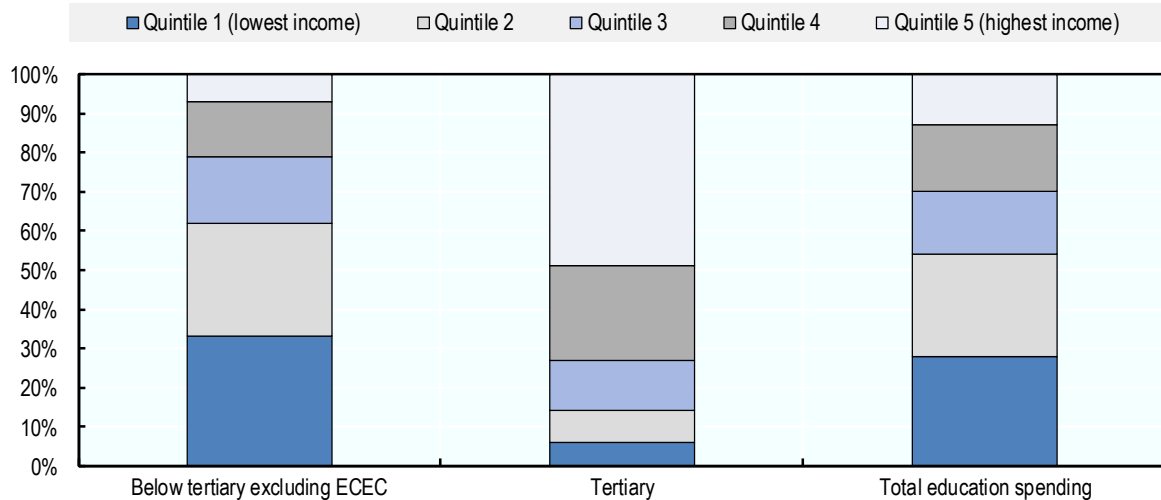
In tertiary education, per student expenditure is higher than in OECD countries on average, raising questions about effectiveness and equity

While Brazil's per-student public expenditure in compulsory education was significantly lower than that of OECD countries in 2017, expenditure per tertiary student (USD PPP 16 232) was higher than the OECD average (USD PPP 13 342), and well above most LATAM countries (see Figure 4.6). However, international comparisons need to consider two particularities of the Brazilian context. First, these data refer exclusively to public spending per student in public institutions, as private institutions do not receive direct public subsidies. The figures thus reflect spending levels that affect fewer than 25% of Brazilian students. Second, the data also include expenditure on research and development, which unlike many OECD countries, are concentrated in public higher education institutions. As a result, it is likely that part of Brazil's per-student expenditure at the tertiary level relates to other activities (e.g. research) of the universities that do not benefit students directly.

The large differences between per-student expenditure in compulsory and tertiary education raise important efficiency and equity questions. As discussed in Chapters 1 and 2, students from wealthier backgrounds are more likely to progress to more advanced levels of education and better able to gain entry into fully-subsidised public higher education institutions (see Table 2.1 in Chapter 2). As a result, nearly half of tertiary funding goes to individuals from the highest income quintile, and less than 10% benefits those from the lowest income quintile (see Figure 4.8). The Quota Law of 2012, (see Box 2.6 in Chapter 2) which imposes quotas on federal universities for the recruitment of students from disadvantaged backgrounds may help address these disparities to a certain extent. However, students from disadvantaged backgrounds will only be able to make effective use of tertiary education opportunities if they have received a strong basic and upper secondary education. It follows that in terms of improving the knowledge and skills of Brazil's youth, it would be more cost-effective and equitable for the Brazilian

government to prioritise investments in earlier years of schooling, where resources can benefit the most disadvantaged students most directly.

Figure 4.8. Percentage of public spending that goes to each quintile of per-capita income, by education level, 2015



Note: World Bank estimates based on the National Household Survey (*Pesquisa Nacional por Amostra de Domicílios*, PNAD).

Source: (World Bank, 2017^[20]), *A Fair Adjustment: Analysis of the efficiency and equity of public spending in Brazil*, <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/643471520429223428/volume-1-overview> (accessed on 1 September 2020).

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Despite the existence of tools that support transparency and accountability, widespread corruption hampers the quality of education and is costly for the system

Financial resources in education can be misused, or become the target of corruption (UNESCO, 2000^[25]; Hallak and Poisson, 2007^[26]). Education is not only a large element in public expenditure, but it also involves devolved provision through multiple local agencies, sometimes with limited or inadequate financial accountability and transparency mechanisms (Burns and Köster, 2016^[27]; OECD, 2018^[28]).

In Brazil, there are a number of tools and processes that record and disseminate information on the planning, allocation and execution of public funding of education. This includes the Monitoring Council and Social Control consultation platform (*Conselho de Acompanhamento e Controle Social*) and the Information System on Public Funds for Education (*Sistema de Informações sobre Orçamentos Públicos em Educação*, SIOPE). Nevertheless, reports from the Brazilian General Comptroller's Office (*Controladoria Geral da União*) and the Brazilian Federal Court of Accounts (*Tribunal de Contas da União*) reveal that education remains a frequent target of corruption, with around 60% of corruption cases in the country being linked to the education and health sectors (Ferraz, Finan and Moreira, 2008^[29]; 2012^[30]). Corruption in education can manifest itself in various forms, such as misappropriation of funds for personal advantage, fraud in procurement, or favouritism in public employment decisions. In Brazil, corruption ranges from highly-publicised scandals involving well-known politicians to small-scale schemes in school leaders' appointments.

In addition to wasting public resources, corruption damages the quality of teaching and learning (Ferraz, Finan and Moreira, 2012^[30]). The diversion of school funds takes away from a school's infrastructure and educational material, and impacts the provision of school meals and teacher training. Delays or cuts in school staff salaries may also lower teacher motivation and impact school running.

National research has revealed that corruption is higher in municipalities with lower Human Development Index (HDI) levels, with more restricted access to information, or that receive a high proportion of federal funds in relation to their own budget. Since the early 2000s, Brazil has been introducing measures to monitor and prevent corruption, including regular and random fiscal accounting, and platforms to make public servants' salaries information available. However, as discussed in Chapter 1, there are concerns that threats to the independence and capacity of anti-corruption agencies will jeopardise Brazil's efforts to fight corruption. Not only is it important the Brazil avoid backsliding on progress achieved, changes to FUNDEB are an opportunity to strengthen oversight and public sector integrity in education (Campos and Castelar, 2014^[32]; Ferraz and Finan, 2011^[33]; Albuquerque and Ramos, 2006^[34]).

Box 4.3. The OECD's anti-corruption efforts: the CleanGovBiz initiative and the Toolkit

The CleanGovBiz initiative

The OECD has a long history of helping governments fight corruption, and has developed the CleanGovBiz initiative under the umbrella of the Declaration on Propriety, Integrity and Transparency in the Conduct of International Business and Finance (PIT Declaration), which was adopted by OECD countries, Brazil and the Russian Federation at the 2010 OECD Ministerial Meeting chaired by Italy. The CleanGovBiz initiative helps governments fight corruption and engage with civil society and the private sector to this end.

The CleanGovBiz Toolkit

Using a systematic approach, the CleanGovBiz Toolkit for Integrity draws together numerous anti-corruption tools under a single umbrella. It brings together not only all of OECD tools but also those of the other most important organisations involved in the fight against corruption: the United Nations, the World Bank, the Financial Action Task Force, Transparency International, the Extractive Industries Transparency Initiative and the World Economic Forum. Each of these organisations has valuable expertise in specific areas and help make CleanGovBiz a truly comprehensive and inclusive initiative. In particular, the Toolkit contains information that could assist states in implementing some provisions of the United Nations Convention against Corruption.

The Toolkit covers four key elements:

- **Healthy governance:** Putting in place healthy systems of laws, rules and institutions to ensure functioning markets and good governance. Such well-designed systems satisfy the needs of citizens and consumers and thus curb incentives for corruption.
- **Effective prevention:** Effective prevention by establishing safeguards, integrity frameworks and scrutiny in risk areas of corruption.
- **Sharp detection:** Strong systems of detection to spot and prevent corruption.
- **Robust prosecution:** Mechanisms of prosecution and recovery to make sure corruption does not pay.

Source: (OECD, n.d.^[31]), *Boosting Integrity, Fighting Corruption*, <https://www.oecd.org/daf/anti-bribery/50350066.pdf> (accessed on 9 December 2020).

Material and human resources

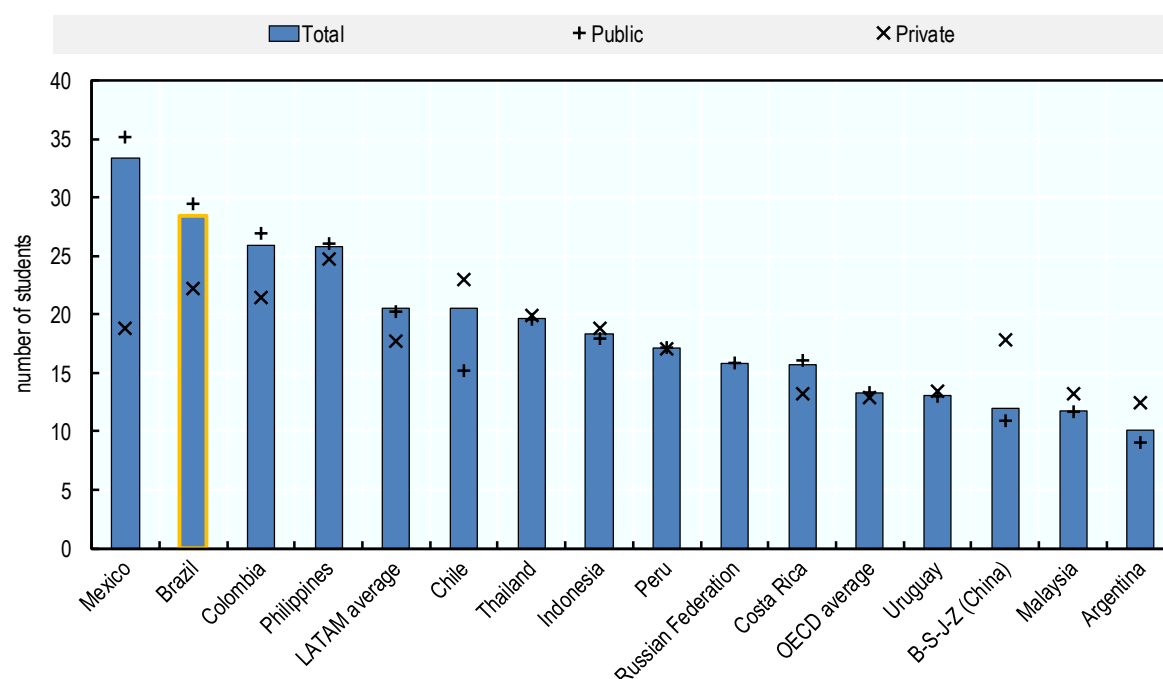
Relatively few principals complain about lack of teaching staff, despite high student-teacher ratios

Teachers are the key learning resource, and are discussed in depth in Chapter 5. Evidence on the impact of student-teacher ratios (and class sizes) on learning outcomes is mixed. For example, a study of Argentina where more teachers were recruited between 2000 and 2012, and teacher-student ratios fell markedly, reports no impact on learning outcomes (de Hoyos, Holland and Troiano, 2015^[35]). Conversely, in a more targeted intervention in Kenya, a randomised controlled trial showed that locally recruited contract teachers introduced into schools to reduce overcrowding significantly improved learning outcomes (Duflo, Dupas and Kremer, 2014^[36]). A simple conclusion would be that the value of additional teaching staff depends very much on their qualities and how they are used.

In Brazil, the ratio of 15-year-old students to teachers in public schools was, at 29.5, more than twice the level of OECD countries (13), and well above the LATAM average of 20 (see Figure 4.9). While lower in private schools where the student-teacher ratio is 22, this remains much higher than in benchmark countries. These ratios are national averages and may mask significant differences depending on school location (i.e. urban or rural, state), and resource level. For example, the student-teacher ratio for public and private schools in rural areas is 24.5, compared to a ratio of 28 in urban areas. Among OECD countries, the gap is slightly smaller, at 12.5 and 13.5, respectively. Across states, there are also important disparities. In Rio Grande do Sul, in the South, in the last years of elementary education, the average student-teacher ratio is 21, the lowest in the country, while Alagoas, in the Northeast, has a ratio of 32, the highest in Brazil (INEP, 2020^[37]).

Figure 4.9. Student-teacher ratio, in the public and private sectors, PISA 2018

The average number of 15-year-old students per teacher, based on principals' reports



Notes: Data regarding private schools are not available for the Russian Federation. Countries are ordered from highest to lowest student-teacher ratio.

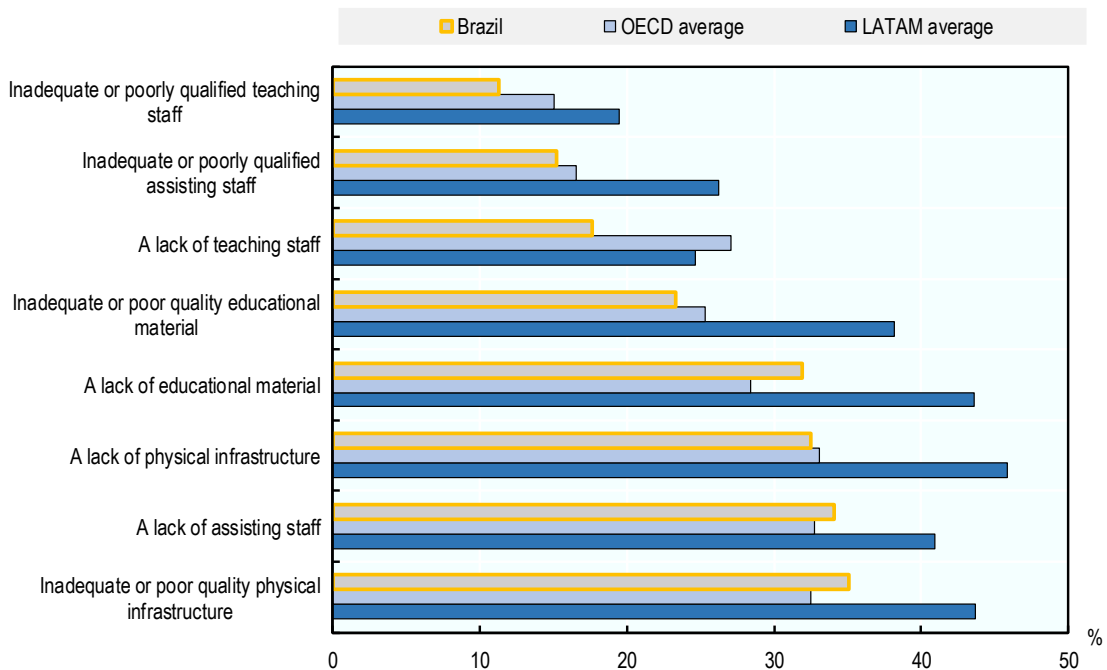
Source: (OECD, 2020^[38]), *PISA 2018 Results (Volume V): Effective Policies, Successful Schools*, <https://doi.org/10.1787/ca768d40-en>.

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The PISA school background questionnaire asked school principals to indicate the availability of resources at their schools. These data need to be interpreted carefully, as they tell us as much about expectations as they do about actual resource levels. When considering only public schools, relatively few principals in Brazil appear concerned by a lack of teaching staff, or with teacher quality — a finding which is surprising given the relatively high student-teacher ratios in Brazil. For example only 21% of public school principals in Brazil felt that a lack of teaching staff held back student performance, compared to 29% of their counterparts in OECD countries and 37% in Costa Rica. (see Figure 4.10). One possibility is that school principals in Brazil are responding in part to falling school enrolment, and expectations that they will continue to fall in the future. While school leaders in Brazil do not seem concerned about staff numbers, they are concerned by teacher absences, with 38% of principals reporting that such absences make the school routine more difficult (INEP, 2020^[39]).

Figure 4.10. Adequacy and availability of material and instructional resources hindering learning, PISA 2018

Share of students in schools whose principals report that school instruction is hindered “a lot” or “to some extent” by different factors, in public and private schools



Source: (OECD, 2019^[40]), *PISA 2018 Database*, <https://www.oecd.org/pisa/data/2018database/> (accessed 2 September 2020).

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School leaders in general do not report concern with the inadequacy or lack of material resources and infrastructure, despite indications that many schools face poor conditions

Despite improvements in the availability of resources in recent years, many schools still lack access to basic material resources and infrastructure (UNESCO, 2019^[41]). Between 3% and 6% of schools lacked water, electricity or sewage services, and over 65% did not have a canteen in 2017. An even larger share reported having poor infrastructure – around 10% of schools said they have ceilings, floors, doors, classrooms and bathrooms in inadequate condition. Only a quarter have green spaces and playgrounds for students. National data from the school census also show that school infrastructure varies between different states, with fewer resources in the North and Northeast, and with weaker infrastructure in the public than in the private sector (INEP, 2020^[42]).

Physical infrastructure will be particularly important as students return to schools while the COVID-19 pandemic continues, and social distancing and personal hygiene will be important in avoiding cross-infection. In this context, the federal government, through the PDDE, has transferred resources directly to schools to help prepare them for face-to-face classes. These resources should help ensure appropriate hygiene measures for teachers, students and staff.

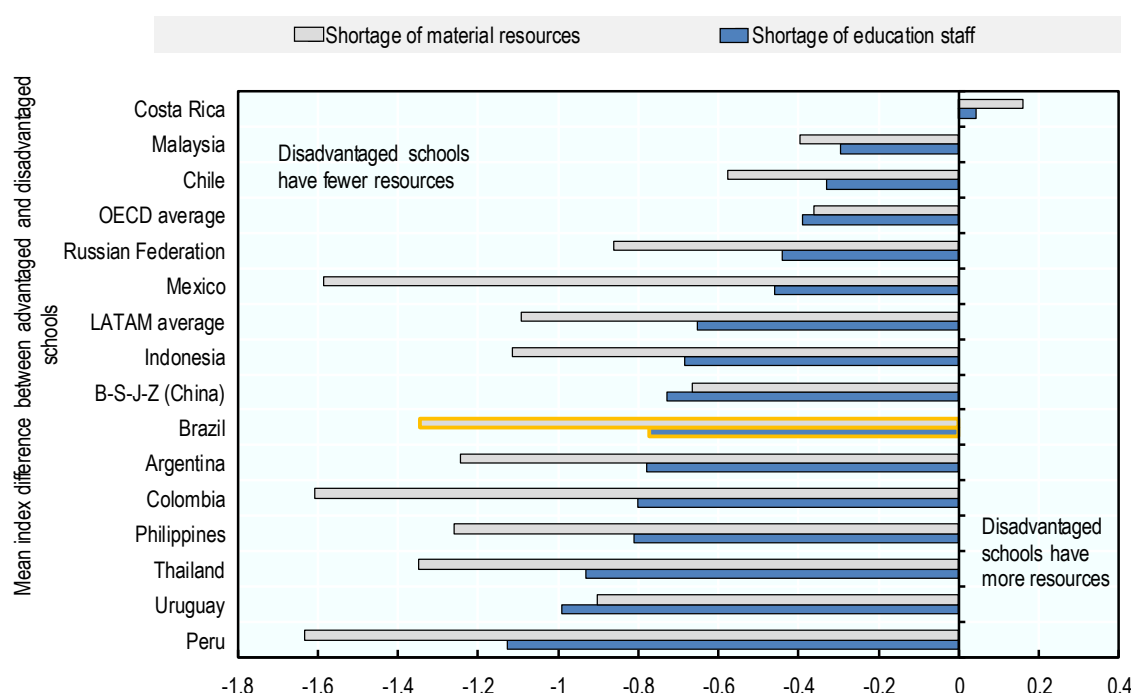
Despite these issues, in Brazil, school leaders from secondary schools voiced around the same level of concern about infrastructure and educational materials as counterparts in OECD countries. Almost a third (32.5%) of secondary school leaders in Brazil felt that instruction was hindered by lack of physical

infrastructure, compared with 33% in OECD countries, but much less than the average for LATAM countries (46%). In addition, 35% of Brazilian school leaders felt that poor quality infrastructure hindered instruction, slightly higher than across the OECD (32.5%), but behind the LATAM average (44%) (see Figure 4.10). One explanation is that Brazilian school leaders may have lower expectations of infrastructure and materials than in OECD and other LATAM countries.

There are large variations in the quality of school infrastructure across the country. For example, while 42% of schools leaders in rural, and 37% in public schools feel that instruction is hindered by the lack of physical infrastructure (OECD average 34% and 25%), only 22% in urban and 7% of school leaders in private schools say the same (OECD average 36% and 22%, respectively) (OECD, 2019^[40]). Disadvantaged schools are also more likely to face shortages of educational resources (e.g. material or education staff) than advantaged schools, as reported by school leaders. While this is also the case across OECD countries, the disparities are particularly large in Brazil and other Latin American countries (see Figure 4.11). PISA results indicate that such shortages are associated with lower student performance, even after taking into account students' and schools' socio-economic profile (OECD, 2020^[38]).

Figure 4.11. Educational resources in advantaged and disadvantaged schools, PISA 2018

Difference between the mean index of shortage of material resources and education staff in advantaged and disadvantaged schools. Results reported by school leaders in public and private schools



Notes: For the index of shortage of education staff, the difference between advantaged and disadvantaged schools is not significant for Chile, Costa Rica and Malaysia. For the index of shortage of material resources, the difference between advantaged and disadvantaged schools is not significant for Costa Rica.

Source: (OECD, 2020^[38]), *PISA 2018 Results (Volume V): Effective Policies, Successful Schools*, <https://doi.org/10.1787/ca768d40-en>.

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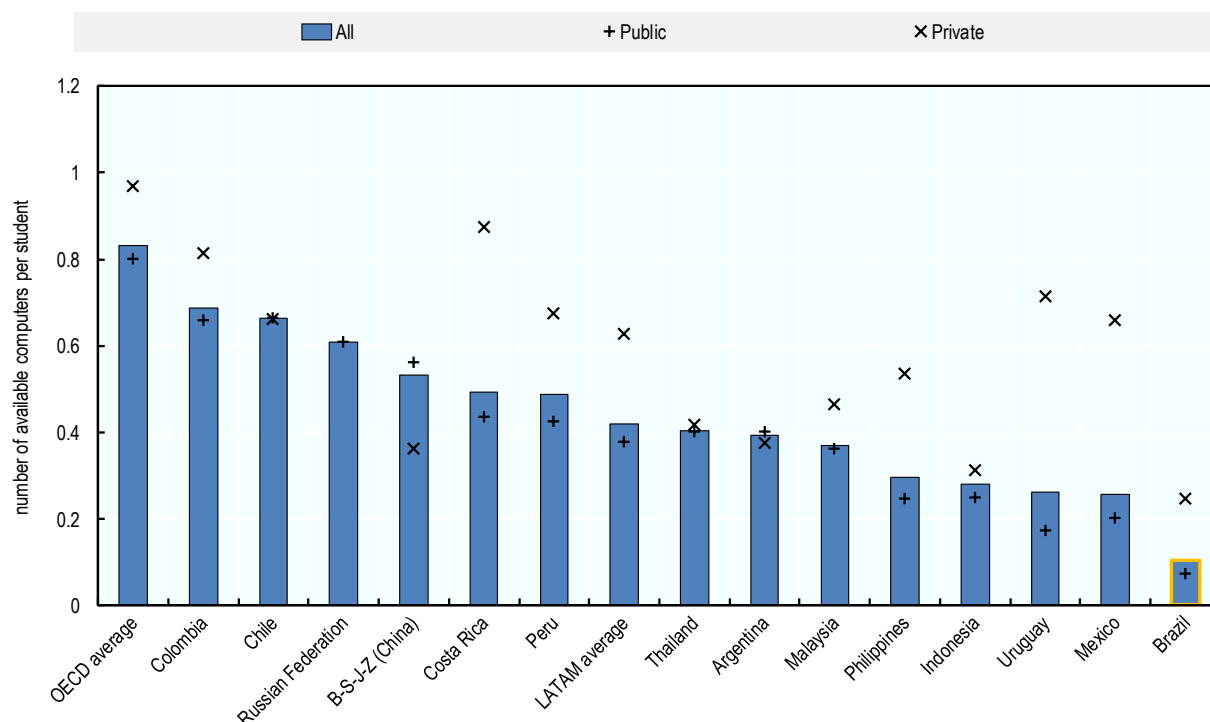
Brazil lags behind OECD and many other LATAM countries in terms of digital resource availability

In recent years, Brazil has invested heavily in computers, Internet connections, software, and other tools of information and communications technology (ICT) in education (Trucano, 2011^[43]). However the availability and access of digital resources remains comparatively low. According to PISA data, there are around ten students for every computer in Brazilian secondary schools (public and private), much higher than the ratios found in OECD (1.2) and LATAM countries (2.4) (see Figure 4.12). Moreover, inadequate Internet bandwidth and speed are widely reported. In Brazilian public schools, only 15% of principals say that Internet bandwidth and speed are sufficient, compared to 23% on average in LATAM countries and 64% in OECD countries. In rural Brazilian schools, only 10% of school principals report adequate Internet, compared with 16% in LATAM and 20% in OECD countries (see Figure 4.13). As expected, private schools in Brazil are better-resourced, with four students for every computer. But even in the presumably well-resourced private school sector in Brazil, computer availability is much lower than in many comparable countries (see Figure 4.12).

These PISA data may be compared with national sources. For example, primary schools run by Brazilian states (representing less than 20% of all primary schools in Brazil) are generally much better-resourced than those run by municipalities. In 2019, 75% of state schools reported that they had desktop computers available for students, compared with only 34% of municipal schools; 57% of state schools reported that they had access to the Internet for students, compared with only 21% of their municipal counterparts (INEP, 2020^[42]). Most probably these figures reflect the better resource base of state primary schools, rather than a different approach to ICT.

Figure 4.12. Number of available computers in schools per 15-year-old student, by type of institution, PISA 2018

In public and private schools, as reported by school leaders



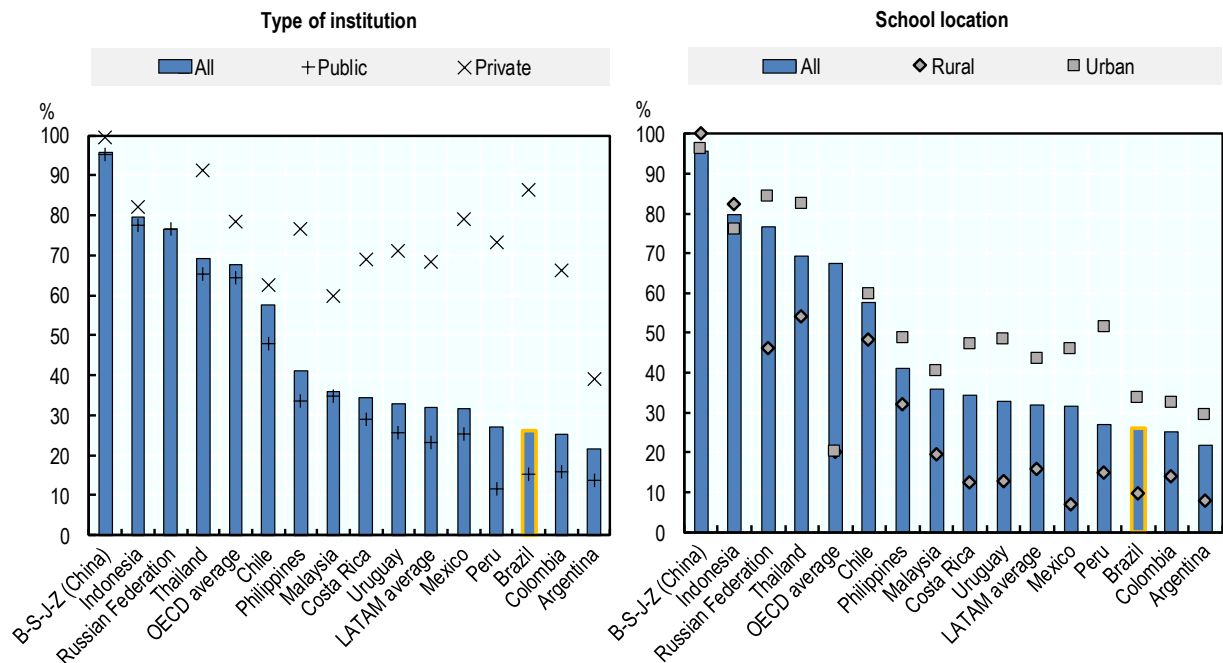
Notes: Data regarding private schools are not available for the Russian Federation. Countries are ordered from highest to lowest number of available computers per student.

Source: (OECD, 2019^[40]), *PISA 2018 Database*, <https://www.oecd.org/pisa/data/2018database/> (accessed 2 September 2020).

StatLink  <https://stat.link/qx2vhk>

Figure 4.13. School Internet connections, by type and location, PISA 2018

Share of students in schools whose principals agree or strongly agree that the school's Internet bandwidth or speed is sufficient, by type of institution and school location



Notes: Data regarding private schools are not available for the Russian Federation. Countries are ordered by highest to lowest share of students in schools whose principals agree or strongly agree that the school's Internet bandwidth or speed is sufficient.

Source: (OECD, 2019^[40]), *PISA 2018 Database*, <https://www.oecd.org/pisa/data/2018database/> (accessed 2 September 2020).

StatLink  <https://stat.link/1phjz9>

International comparisons point to Brazil's need for greater investment in ICT. However, international experience also points to some of the challenges in doing this well. Many countries have invested in hardware that is difficult to integrate and maintain. Others, including Brazil with the "One Laptop Per Child" programme (*Um Computador por Aluno*) have, since 2008, focused on increasing access. Evidence from Latin American countries however shows no significant improvements in learning outcomes as a result of this investment (Santiago et al., 2010^[44]). Data from PISA also show that the relationship between more ICT resources and better learning outcomes is inconclusive. ICT infrastructure needs to be supplemented by investments to support teachers, implement curricula, and pursue other measures to improve teaching and learning. Brazil's Programme of Innovation Connected Education (*Programa de Inovação Educação Conectada*) from 2017 is based on a more holistic approach, focused on expanding access to digital resources and developing the capacity to use them. While this has potential to lead to better outcomes, it is still too early to assess the impacts of this policy (Ministério da Educação, n.d.^[45]).

Conclusion

A range of global and national developments – including the COVID-19 pandemic and a long economic recession – have increased attention to the use and allocation of resources in education. Ensuring that resources are effectively used to support learning and equitably distributed to meet the different needs of sub-entities and students will require attention to three key issues:

- **First, the current allocation of funding is not as equitable and efficient as it might be.** At present, Brazil invests more in tertiary education than in ECEC, despite evidence that access to high-quality ECEC not only contributes to better learning outcomes but can also help reduce inequalities. Even within tertiary education, funding arrangements tend to disproportionately benefit students from advantaged backgrounds, who are more likely to enter free public schools. The World Bank and the International Monetary Fund (IMF) have both argued for introducing fees for public universities – in combination with widely available loans and waivers for students from more modest backgrounds – as a way to improve equity and lower public expenditure (World Bank, 2017^[20]; Karpowicz, 2017^[46]). In addition, despite important improvements, there is still scope to improve equity through more effective distribution of resources across municipalities and states. Changes to FUNDEB are a step in the right direction, but more is needed to tackle this issue.
- **Second, education expenditure is insufficiently linked to expected outcomes, and a challenging fiscal situation will impose limits on additional education spending.** Brazil's difficult economic and budgetary context places education expenditure at risk, although until recently it had been steadily increasing. To sustain improvements to teaching and learning, Brazil will need to retain current levels of education resources. However, there is also significant scope to use resources more effectively and introduce greater accountability in education spending. For example, international data suggest that countries with similar expenditure levels are obtaining much better scores in PISA than Brazil. High rates of grade repetition in Brazil are also very wasteful of resources.
- **Third, data on funding for Brazil are limited.** There are few internationally comparable data on private expenditure on education, and on capital expenditure. Many of the data points are from 2015 and 2016. The comparability, reliability and accessibility of state and municipal level funding data also remain limited. Such gaps severely limit international benchmarking and more fine-grained analysis of funding in Brazil. Better data and greater transparency would be key to inform allocation systems and funding reforms, and fight corruption. Amendments to FUNDEB, which aim to strengthen transparency in funding data, are a step in the right direction.

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Notes

¹ Transfers are net transfers of funds, designated for education, from one level of government to another (usually lower) level of government

² FUNDEB was established in 2007, replacing FUNDEF, which only covered primary and lower secondary education (ISCED 1 and 2). In 2020, FUNDEB's mandate was renewed and has now become a permanent feature of Brazil's education funding system. Moreover, changes to its functioning are expected to help further reduce disparities.

³ These estimates take into account the functioning of FUNDEB before the 2020 amendments, which are expected to further reduce regional disparities in the future.

⁴ Income from the tax over services (Imposto Sobre Serviços de Qualquer Natureza, ISS) or the tax on private urban real state (Imposto Predial e Territorial Urbano, IPTU) are not taken into account by FUNDEB.

⁵ The data refer exclusively to public expenditure in education, and do not capture private spending or public spending on tertiary student support schemes (as opposed to institutional subsidies). As discussed in Chapters 1 and 2, at least 20% of Brazilian students in compulsory education, and 75% of those in tertiary education, are enrolled in private institutions, many of whom receive assistance to cover tuition fees. If these expenditures were accounted for, these figures would be even higher.

⁶ This does not take into consideration expenditure under FUNDEB.

5. Schooling: school leaders and teachers

Two of the most important factors in determining the success of an educational system are teachers and school leaders. Drawing on data from PISA and TALIS, this chapter examines teachers in Brazil, how they are trained, recruited and remunerated, their professional development, the teaching strategies they use, how they are appraised, and how they compare with counterparts in other countries. The chapter looks also at Brazilian school leaders, and their critical role in supporting teaching and learning in schools.

Introduction

Previous chapters have documented how Brazil has successfully expanded participation in education, but has made only halting progress in enhancing learning outcomes, ensuring successful school completion, and improving equity. This suggests that the policy emphasis now needs to shift from expanding access to improving the *quality* of teaching and learning that takes place in schools, with an emphasis on inclusion and equity.

This chapter looks at two of the most important factors in determining the success of an educational system: teachers and school leaders. Research shows that learning outcomes are profoundly dependent on the quality of teachers — their teaching skills, ability to motivate, provide feedback and respond to the needs of individual students (Hattie, 2009^[1]; Hanushek, 2011^[2]). Outcomes are also dependent on effective instructional leadership — whereby school leaders foster the conditions for strong teaching and learning (Pont, Nusche and Moorman, 2008^[3]; OECD, 2016^[4]; OECD, 2019^[5]).

This chapter draws on internationally comparable evidence from the OECD Teaching and Learning International Survey (TALIS) and Programme for International Student Assessment (PISA). As a result the focus is largely on secondary education¹. Section 5.2 looks at the teaching workforce. Section 5.3 then looks at entry into the profession, salaries and attractiveness of the profession, teacher training and induction. Section 5.4 explores how teachers spend their time, and the pedagogical approaches they employ. Section 5.5 concerns the career and professional development of teachers. Section 5.6 describes teacher appraisal. Section 5.7 looks at school leadership in Brazil. Section 5.8 draws conclusions on the challenges faced by the teaching profession.

The teaching workforce

The majority of teachers in Brazil are female and working part-time

While the teaching profession in Brazil shares much with other countries, it also has distinctive features. Brazil is unusual in that slightly more than half of lower secondary teachers work part-time (57%) – the OECD average is only just over 20% (OECD, 2020^[6]). In Brazil, 73% of novice teachers and 55% of experienced teachers work part-time², compared to 28% and 20% respectively in OECD countries. Moreover, one in five Brazilian teachers (20%) work in two schools or more (OECD average: 4%). A national survey also reveals that around one-third of teachers have an additional job to complement their income (see the discussion of teacher salaries below). This is particularly common among those working shorter hours or with a temporary contract (IBOPE Inteligência, 2018^[7]). This can not only hinder attempts to build a cohesive school community and positive stakeholder relationships, but also has important implications for teachers' professional development and students' performance as will be discussed later in this chapter (Elacqua and Marotta, 2020^[8]).

Just over two-thirds (69%) of lower secondary teachers in Brazil are women, very similar to the proportion in OECD countries, and slightly more than in some Latin American (LATAM) countries – for example in Colombia only 55% of lower secondary teachers are female. In upper secondary education, the female share is lower (58%) (OECD, 2019^[5]). National evidence also shows that in 2017, teachers working in Brazil's basic education were mainly white (42%) or mixed-race (25%); 27% did not declare their ethnicity (Louzano et al., 2010^[9]; Nunes, 2015^[10]).

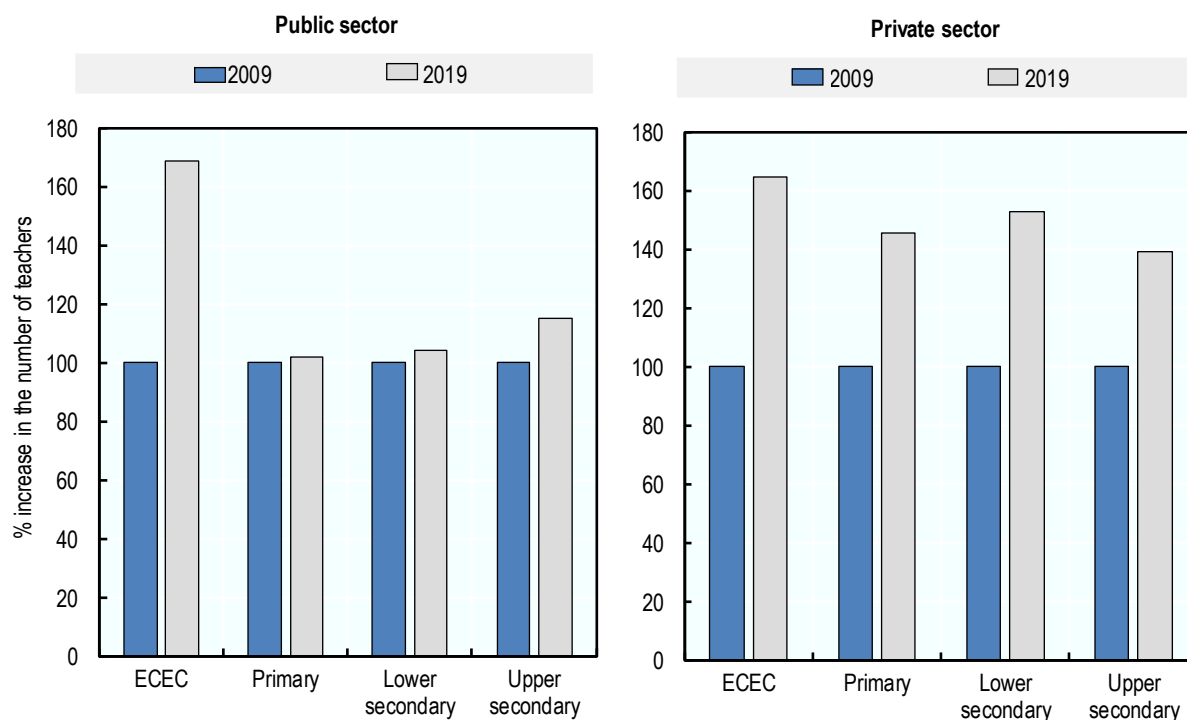
The teacher workforce has expanded

Teacher numbers have been increasing as Brazil, especially in pre-school and upper secondary education, reflecting the expansion of the duration of compulsory education to cover those levels. Much of the growth

in secondary education (ISCED 2 and 3) has been in the private sector (see Figure 5.1). However there are still teacher shortages in certain regions and subjects (e.g. physics, mathematics and chemistry). There is currently no national policy to address this issue, although some states and municipalities have created incentives for teachers to teach in specific localities (World Bank, 2016^[11]). In the medium- to long-term, expected demographic changes (see Chapter 1) will require a rethinking of the size of Brazil's teacher workforce.

Figure 5.1. Increase in the number of teachers, by educational level and sector, 2009-2019

2009=100



Notes: In 2009, 14% of students were enrolled in private institutions, compared to 19% in 2019 (INEP, 2009^[12]; INEP, 2020^[13]).

ECEC stands for early childhood education and care.

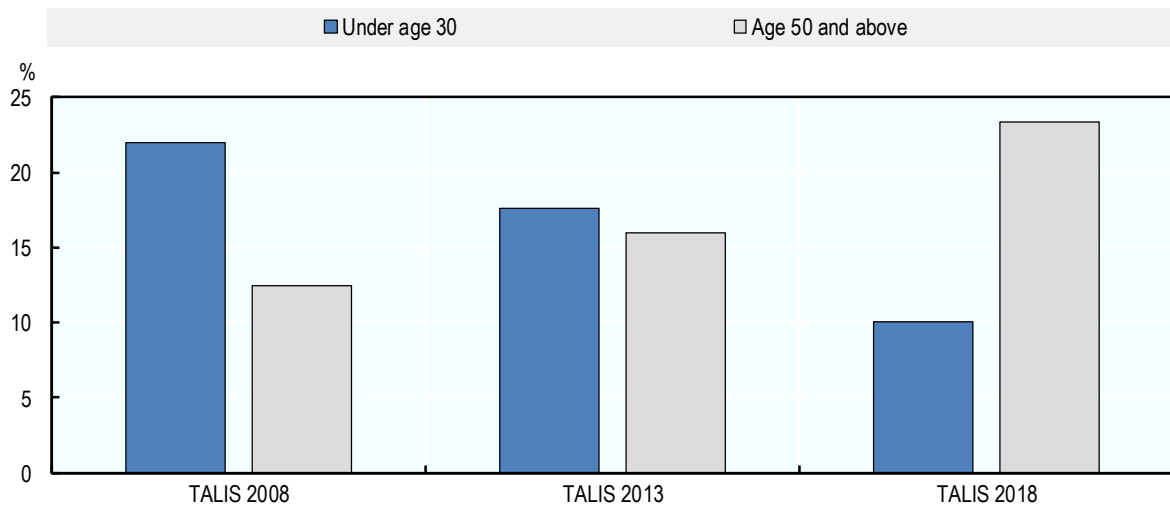
Source: (INEP, 2009^[12]), *Resultados do Censo da Educação Básica 2009* [Census Results of Basic Education 2009], https://download.inep.gov.br/download/centso/2009/TEXTO_DIVULGACAO_EDUCACENSO_20093.pdf (accessed on 14 October 2020); (INEP, 2020^[14]), *Sinopses Estatísticas da Educação Básica*, <http://portal.inep.gov.br/web/guest/sinopses-estatisticas-da-educacao-basica> (accessed on 14 October 2020).

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The teaching workforce has been ageing

In the decade to 2018, the teacher workforce in Brazil has aged, with a nearly 90% increase in the proportion of lower secondary teachers over the age of 50, while the proportion of teachers under 30 more than halved (see Figure 5.2). However, despite an ageing workforce, in 2018 lower secondary teachers in Brazil were still a little younger, 42-years-old on average, than their OECD peers (44-years-old).

Figure 5.2. Percentage of lower secondary teachers in different age groups, 2018



Note: The change in percentage of teachers under age 30, and age 50 and above between TALIS 2008 and TALIS 2018 is statistically significant.

Source: (OECD, 2019^[5]) *TALIS 2018 Results (Volume I): Teachers and School Leaders as Lifelong Learners*, <https://doi.org/10.1787/1d0bc92a-en>.

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Entry to the teaching profession: incentives and obstacles

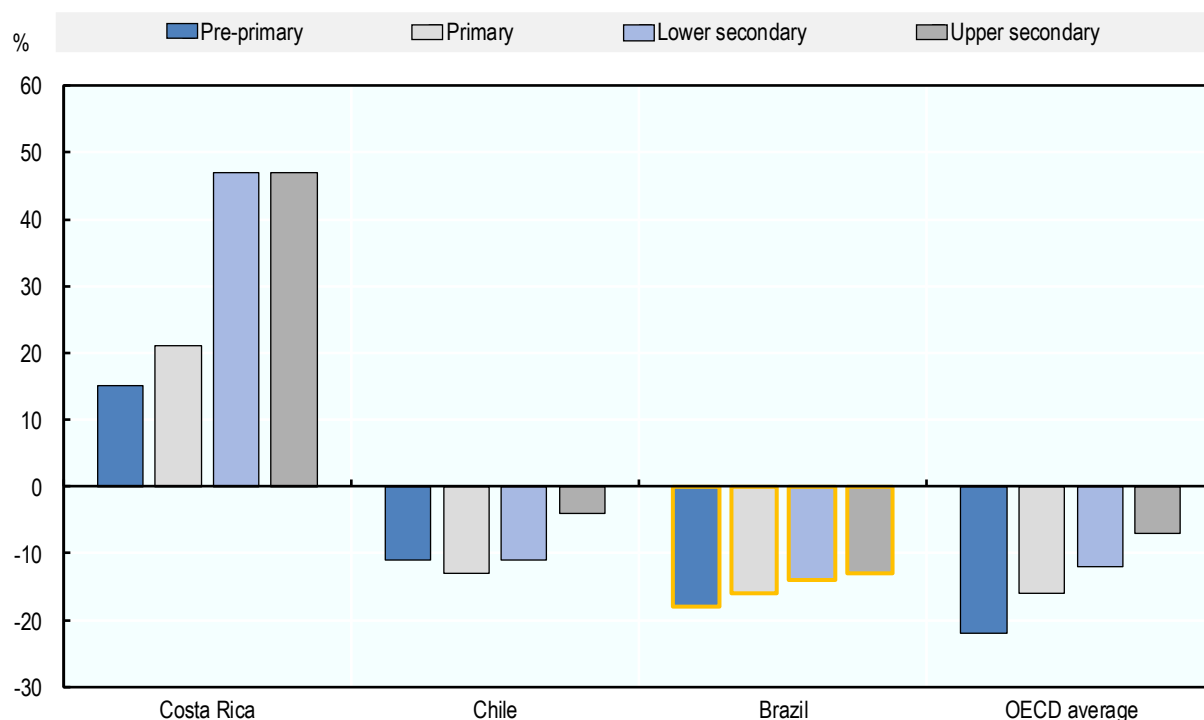
Teachers' salaries are low relative to other tertiary-qualified professions

Reflecting Brazil's lower income levels, teacher statutory salaries are among the lowest of all OECD and partner countries, including other Latin American countries such as Chile, Costa Rica and Mexico (OECD, 2020^[15]). This value (around USD PPP 14 000 [US dollars purchasing power parity]) refers to the minimum statutory salary³ established by the Brazilian legislation⁴. The average salary is higher, though still well below the OECD average. There are significant differences across the country, reflecting variations in income levels and cost of living (INEP, 2017^[16]; Marcondes, Leite and Ramos, 2017^[17]).

Teachers are paid less than other tertiary-educated workers in Brazil (see Figure 5.3), especially in pre-primary and primary education, where salaries are around 80% of the average for tertiary-qualified peers. This contrasts with trends among other emerging LATAM countries, where teacher salaries are on par or above those of other tertiary-educated peers. In addition, data show that upper secondary teachers in OECD countries tend to be relatively better paid than in Brazil, reflecting increased expectations of content mastery.

Figure 5.3. Teacher salaries in public institutions expressed as a percentage of tertiary-educated workers, 2017

Ratio of salary, using annual average salaries (including bonuses and allowances) of teachers and school heads in public institutions relative to the earnings of workers with similar educational attainment (weighted average) and to the earnings of full-time, full-year workers with tertiary education



Notes: Data for Brazil refer to 2015. Countries are in descending order as per level of pre-primary salary. Positive values mean that teachers' actual salaries in the country are higher than the earnings of tertiary educated workers (i.e. in Costa Rica, pre-primary teacher make 15% more than the earning of tertiary-educated workers).

Source: (OECD, 2019^[18]), *Education at a Glance 2019: OECD Indicators*, <https://doi.org/10.1787/f8d7880d-en>.

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Unlike many high-performing education systems, in Brazil, teacher career opportunities have only a weak relationship to performance

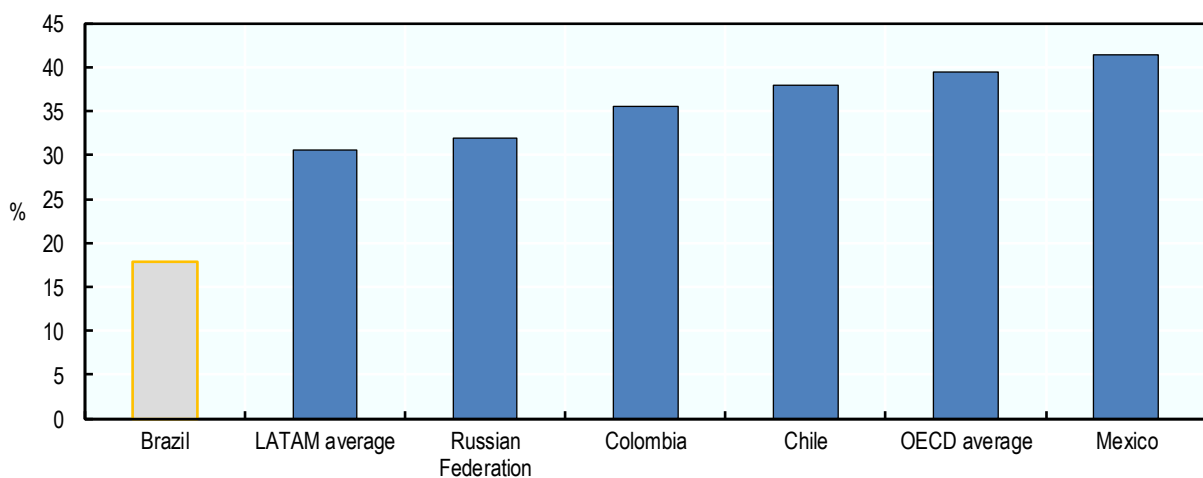
In Brazil, teacher remuneration normally depends on the number of years a teacher has been working for, hours worked, qualification level, where in the country they work, and whether they work in a municipal or state school (Gurgel and Junior, 2013^[19]). The salary scale is relatively flat other than for raises related to seniority or to newly-obtained qualifications. Once in the profession, Brazilian teachers have few financial incentives to seek promotion, as there are often no posts of responsibility available to teachers (e.g. head teacher of a specific subject) (Todos pela Educação, 2020^[20]), other than becoming a school leader, which often implies leaving the classroom entirely. This means that teachers' salaries are not linked to their career progression or their performance, a point that will be pursued below in the Teacher appraisal section.

Relatively low teacher salaries, alongside other factors, may deter the most academically able from joining the profession

Relatively low salaries might help explain why less than 20% of Brazilian teachers reported themselves as satisfied with their salary (see Figure 5.4). Moreover, the levels of satisfaction are lower among Brazilian teachers than on average across OECD countries. In addition, it may be that unappealing working conditions (see Chapter 6) are deterring the most academically able or graduates from wealthier backgrounds from entering the profession (World Bank, 2016^[11]). This may explain why there is a high share of teachers from disadvantaged backgrounds in Brazil (Nunes, 2015^[10]; Louzano et al., 2010^[9]), for whom the professional prospects of a teaching career might be perceived more positively.

Figure 5.4. Salary satisfaction among teachers, 2018

Percentage of lower secondary teachers who agree or strongly agree that they are satisfied with their salary



Source: (OECD, 2019^[21]), TALIS 2018 database, <https://www.oecd.org/education/talis/talis-2018-data.htm> (accessed on 14 October 2020).

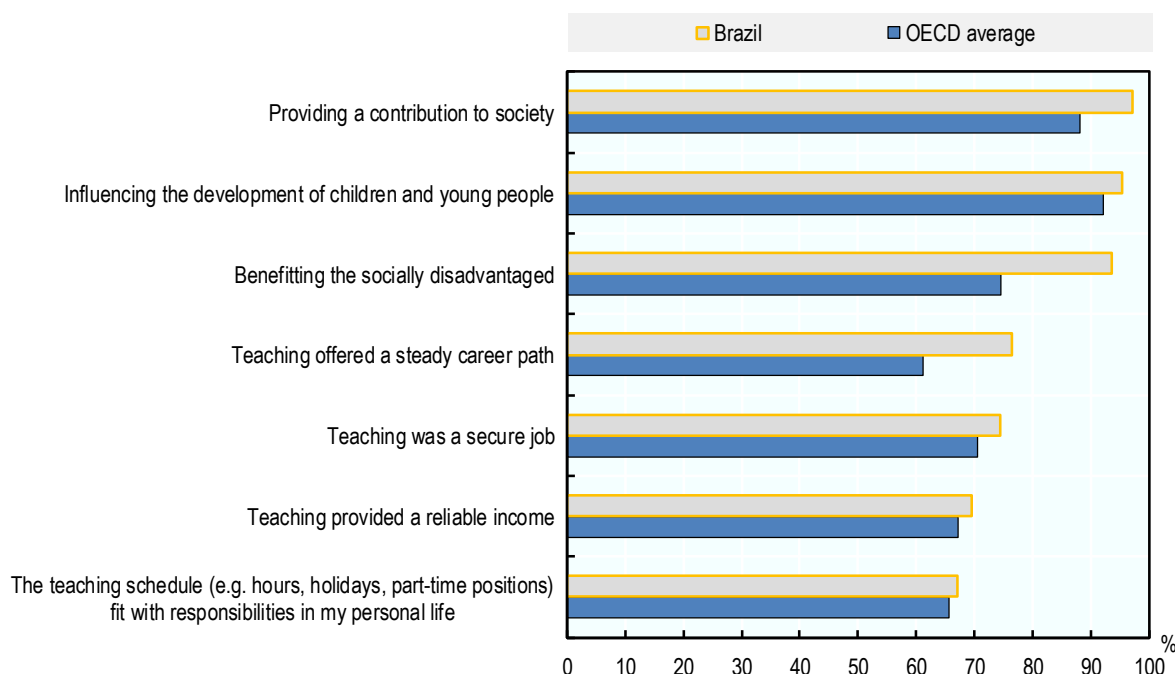
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Teaching is not perceived by teachers to be valued socially

As in other countries, Brazilian teachers report that they entered the profession primarily to contribute to society, benefit the socially disadvantaged, and influence the development of the young (see Figure 5.5). However, teaching is also seen by those entering the profession in Brazil as a secure, steady career path offering a reliable income – which indeed it is for those with a permanent contract – and these factors weigh more heavily among entrants to the profession in Brazil than in many other countries.

Figure 5.5. Factors behind decision to become a teacher, 2018

Percentage of lower secondary teachers reporting that the following factors were of moderate or high importance in their decision to become teachers



Note: Responses are ordered from highest to lowest as per answers of teachers in Brazil.

Source: (OECD, 2019^[21]), TALIS 2018 database, <https://www.oecd.org/education/talis/talis-2018-data.htm> (accessed on 14 October 2020).

StatLink  <https://stat.link/qo1t5k>

Only just over 10% of Brazilian lower secondary teachers agreed that the teaching profession is socially valued, compared with about twice that proportion in OECD countries (26%) and 40% in Colombia for example (see Figure II 2.1, (OECD, 2020^[6]). This may also deter potential entrants to the teaching profession (Bauer, Cassettari and Oliveira, 2017^[22]).

Although initial teacher education (ITE) programmes are among the most popular higher education degrees in the country (Todos pela Educação, 2019^[23]), according to PISA 2018, only 2% of Brazilian 15-year-olds expected to become teachers (OECD, 2019^[24]). National data reinforce this picture: not only are ITE programmes among the easiest to access (World Bank, 2016^[11]), but teacher candidates tend to have low entry scores in the Brazil's National Upper Secondary Exam (*Exame Nacional do Ensino Médio*, ENEM) (Abrucio, 2016^[25]). While Brazil's Law on National Education Guidelines and Framework (*Lei de Diretrizes e Bases da educação nacional*, LDB) proposes threshold requirements (e.g. a minimum ENEM score) for entry into initial teacher education programmes, this has never been implemented

In contrast, many high-performing countries, such as Finland, Singapore as well as parts of China, have established rigorous selection processes. In Finland, for example, each year there are typically more than nine applicants for every place in teacher education and applicants are assessed on the basis of their high school record and their score on the matriculation exam. Once applicants make it beyond this initial screening, they are observed in teaching-like activity and interviewed. Only candidates with a clear aptitude for teaching in addition to strong academic performance are admitted. These entrance hurdles help make teacher education one of the most prestigious academic programmes (Schleicher, 2018^[26]).

In principle, but not always in practice, teachers should have a higher education degree

The LDB and Target 15 of the National Education Plan (*Plano Nacional de Educação*, PNE) established that all teachers⁵ should have a higher education licentiate's degree (ISCED 6) in their area of specialisation. There are however alternative routes to join the teaching profession in Brazil (see Table 5.1):

- *Magistério*: teacher education programmes at the upper secondary level (ISCED 4) allow teachers to teach in early childhood education and care (ECEC) institutions or in primary education.
- *Licenciatura*: a teacher's license degree, equivalent to a four-year bachelor's degree (ISCED 6). A teacher's license degree in pedagogy prepares ECEC and primary teachers. A subject-specific teacher's license degree prepares teachers to teach in lower- and upper-secondary education. For example, a teacher with a teacher's license degree in mathematics can teach mathematics in secondary schools. Licensed teachers can also obtain a second license degree – as part of a one-year higher education programme – in a different subject, allowing them to teach, for instance, mathematics and physics.
- *Complementação pedagógica*: those who already have a bachelor's or technical higher education degree can follow a “pedagogical complementation” course to become teachers in secondary education. These higher education programmes usually take between one and two years. This alternative route was put in place as an emergency measure to address teacher shortages, and ensure that all teachers had pedagogical training.

Table 5.1. How Brazilian teachers in 2019 were trained

Distribution of teacher qualification from the total number of teachers in 2019

Type of teacher training	Type 1	Type 2	Type 3	Type 4	Type 5
% of teachers in each education level					
ECEC (ISCED 01 and 02)	54.8	1.6	19.1	4.0	20.5
Primary education (ISCED 1)	66.1	3.1	11.3	3.3	16.2
Lower secondary education (ISCED 2)	53.2	2.6	30.8	4.6	8.8
Upper-secondary education (ISCED 3)	63.3	3.3	25.0	5.9	2.5

Notes: Explanation of types of teacher training:

Type 1: Licentiate degree in the same area of discipline they teach or bachelor's degree in the area + pedagogical complementation course)

Type 2: Teachers with a bachelor's degree (without pedagogical complementation course) in the same area of the discipline they teach

Type 3: Teachers with a Licentiate's degree (or bachelor's degree with pedagogical complementation) in an area other than the one they teach

Type 4: Teachers with a higher education degree not considered in the previous categories.

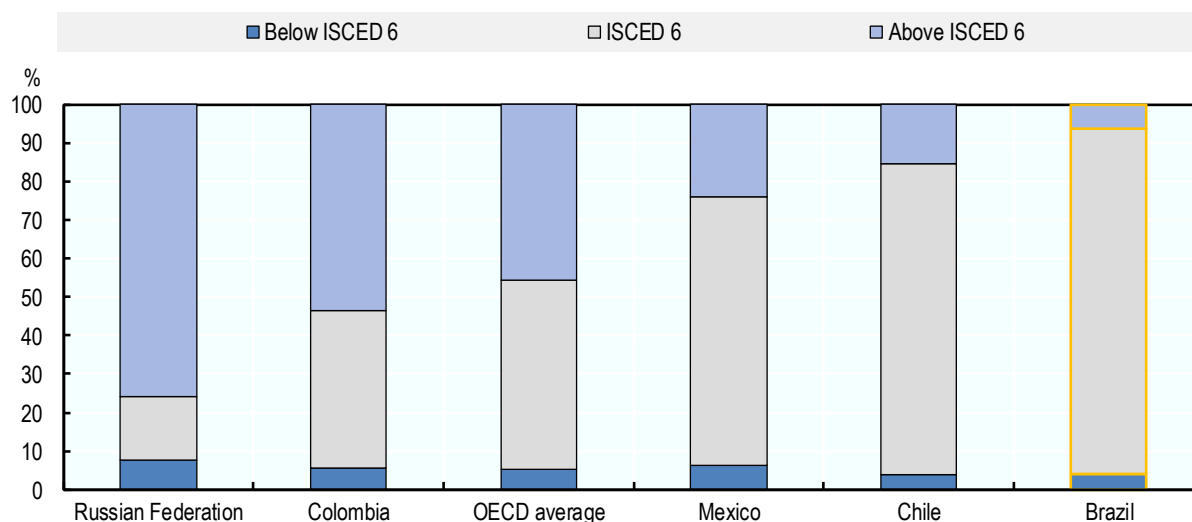
Type 5: Teachers without higher education

Source: (INEP, n.d.^[27]), *Indicadores Educacionais [Educational Indicators]*, <http://portal.inep.gov.br/indicadores-educacionais> (accessed on 15 October 2020).

Brazil took major steps in the 1990s and 2000s to improve teacher qualification levels. First, some measures sought to upgrade the skills of existing teachers, for example through the National Programme for Teacher Training in Basic Education (*Programa Nacional de Formação de Professores da Educação Básica*, Parfor), created in 2009. Second, the “University for All” Programme (*Programa Universidade para Todos*, ProUni) and the Student Financing Fund (*Fundo de Financiamento Estudantil*, FIES) supported the expansion of teacher candidates with tertiary qualifications (see Chapters 2 and 4). As a result, the share of teachers with a tertiary qualification has increased significantly; for example in ECEC growing from 54% to 77% between 2011 and 2019 (INEP, n.d.^[27]). Currently, the majority of new teachers obtain

their degrees from private institutions, often following evening and/or online distance programmes (Abrucio, 2016^[25]; Todos pela Educação, 2019^[23]). However, as shown in Table 5.1, the country is still far from reaching its target of ensuring that all teachers in Brazil's basic education have a tertiary qualification in the subject they teach. Evidence from a World Bank study has also found limited effects of raising teacher qualification levels on students' achievement, signalling concerns around the quality of programmes (Barbosa and Costa, 2019^[28]).

Figure 5.6. Lower secondary teachers: percentage distribution of qualification levels, 2018



Source: (OECD, 2019^[21]), TALIS 2018 database, <https://www.oecd.org/education/talis/talis-2018-data.htm> (accessed 14 October 2020).

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Few teachers have postgraduate qualifications, in comparison to peers in OECD countries

While 90% of Brazilian lower secondary teachers are educated at bachelor's level (ISCED 6), only 6% have higher-level qualifications (at masters level and above, equivalent to ISCED 7 and 8) (OECD, 2019^[21]), much fewer than in OECD countries where almost half (44%) had such qualifications (see Figure 5.6). In many OECD countries, a master's degree is required of teachers, especially at the secondary level. Target 16 of the PNE stipulates at least 50% of teachers in Brazil's basic education should have a postgraduate degree (ISCED 7 and 8) by 2024 (Ministério da Educação, 2014^[29]).

The value of a master's level qualification is not automatic. Some studies report a slight positive correlation between master's qualifications and student outcomes (Darling-Hammond, 2000^[30]), whereas other research from England (United Kingdom) and the United States draws an unclear picture (Brooks et al., 2012^[31]; Ronfeldt and Reininger, 2012^[32]; Lorraine, 2016^[33]). This may be because the quality of teacher preparation is a more important factor. However, the low share of teachers with postgraduate degrees can have a broader and detrimental effect on the status and attractiveness of the profession (OECD, 2005^[34]). Efforts to raise the qualification of teachers can help "raise the bar" for entry to the teaching profession, signalling higher expectations and prestige.

While teachers in public schools should go through public competition, in practice not all do, and requirements vary across the country

Teachers in Brazil's public basic education are civil servants. The Federal Constitution stipulates that public teachers should be hired through public competitions (*concurso*) carried out by states and municipalities and undertake a 3-year probation period. However the form of public competitions varies (Bauer, Cassettari and Oliveira, 2017^[22]) and the process may not always identify the best potential teachers (Abrucio, 2016^[25]; Todos pela Educação, 2020^[20]), given that candidates are not always required to pass a practical examination. Moreover, there is evidence that the probation period is not effective at supporting or assessing novice teachers' development and readiness (Todos pela Educação, 2020^[20]). In most federal entities, the probation appraisal is often no more than a formality, for which teachers receive "automatic" approval.

Public competitions are costly (Todos pela Educação, 2020^[20]), which may explain why around 30% of teachers in the public sector were not selected through these pathways (Gomes, 2019^[35]). This creates two problems. First, those who enter the workforce without a public competition and receive temporary contracts, receive lower salaries and may have lower engagement (Gurgel and Junior, 2013^[19]). Second, the lack of robust entry requirements for this group further hinders the quality of teaching and the social status of the profession.

In Brazil, it can take several years for aspiring teachers to pass the public competition, and during this period, most take up temporary teaching contracts and other roles. This may explain why many teachers in Brazil have previous work experience outside teaching: they report six years on average of such experience, twice the OECD level. Nevertheless, two-thirds (65%) of Brazilian teachers report that teaching was their first choice of career — very similar to the figure for OECD (67%) (OECD, 2019^[21]).

Box 5.1. The OECD Teacher Ready! platform

The OECD [Teacher Ready!](#) Interactive platform contains all the resources collected by the OECD Initial Teacher Preparation (ITP) study and produced in a structured, searchable and easily accessible form for use by various stakeholders (policy makers, teacher educators, teachers, ITP leaders) and in diverse country contexts.

The platform offers SWOT (strengths, weaknesses, opportunities and threats) policy dialognosis and information on OECD countries' initial teacher preparation systems, as well as a number of promising practices for other countries to learn from them. This includes for example, an analysis of the role of teachers' employment examination in Japan, and of measures taken in Australia to improve the quality of the selection process of teacher candidates.

Most OECD countries set a rigorous certification process at the end of teacher education. In addition to the successful completion of teacher education programmes – which provides at least a bachelor's level qualification, and increasingly a qualification at master's level – many OECD countries require that prospective teachers pass an external qualification or licensing examination, which can help ensure fairness in selection and guarantee basic standards (see Figure 5.7) (OECD, 2014^[36]). This is particularly important in countries where, as in Brazil, teaching is a "career-based" public service, lifetime employment is guaranteed, and where quality assurance in the tertiary sector is weak. Since an examination cannot recognise all the attributes that are important for teaching, countries with examinations often complement them with other forms of assessment such as interviews, which can capture motivation and socio-emotional skills. Finally, in most countries full certification is dependent on successfully passing a probation appraisal, where teachers are able to better demonstrate the attitudinal dimensions of good teaching.

Figure 5.7. Requirements to enter and progress in initial teacher education, upper secondary education, 2013

[illegible]

Note: Symbols: "a" = data are not applicable because the category does not apply; "m" = data are not available.

Source: Adapted from table Table D6.2d (Web only) in (OECD, 2014^[36]), *Education at a Glance 2014: OECD Indicators*, <https://doi.org/10.1787/eag-2014-en>.

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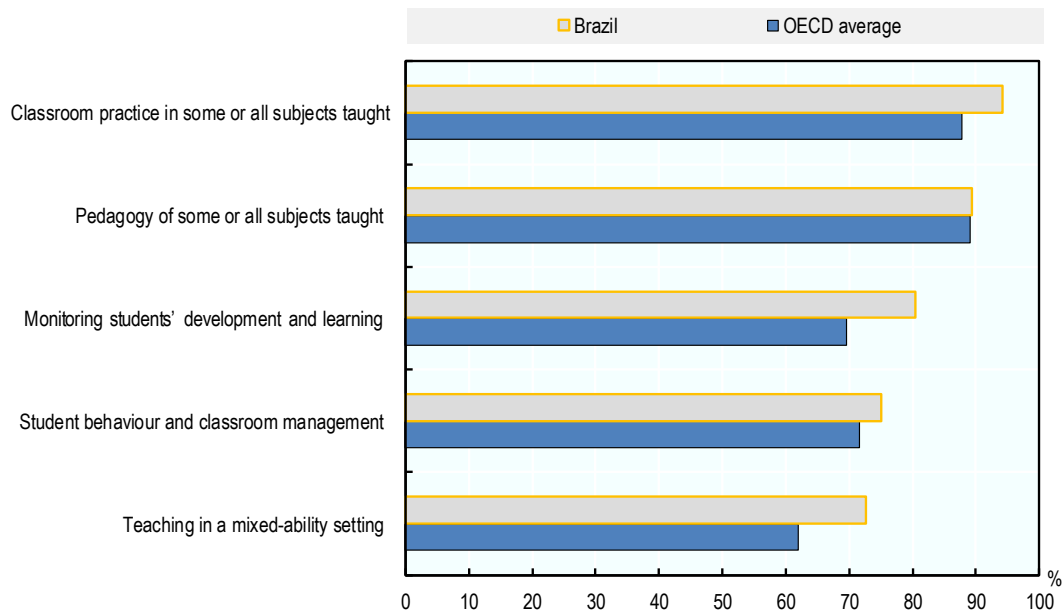
Most Brazilian teachers see themselves as well prepared

Brazilian teachers generally reported that they had received training in key teacher competencies: 89% reported that they had received training in the pedagogy of the subject taught, 94% in classroom practice in the subjects taught, 73% in mixed ability teaching, 75% in managing classrooms and student behaviour, and 81% in monitoring student learning. These figures are higher in nearly every case than the comparable OECD averages: respectively 89%, 88%, 62%, 72% and 70% (see Figure 5.8) (OECD, 2019^[21]).

Most likely as a result, most Brazilian teachers reported themselves to be well prepared for most teaching challenges, with 95% reporting themselves well or very well prepared to teach the content of the subjects, and 89% reporting similarly in respect of pedagogy (OECD averages: 80% and 71% respectively) (OECD, 2019^[21]). Overall, Brazilian teachers saw themselves as somewhat better prepared than some of their international counterparts. These perceptions also seem to be reflected among school leaders: in 2018 only around 11% of school leaders in Brazil report that inadequate or poorly qualified teaching staff hinder learning to some extent or a lot. This is slightly lower than in OECD countries where the comparable figure is 15% on average (OECD, 2019^[21]).

Figure 5.8. Share of teachers who pursued teacher education or training programmes, including the following elements, 2018

Results based on responses of lower secondary teachers



Source: (OECD, 2019^[5]), *TALIS 2018 Results (Volume I): Teachers and School Leaders as Lifelong Learners*, <https://doi.org/10.1787/1d0bc92a-en>.

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But evidence points to concerns with the quality of initial teacher education, especially in the private sector

However, the confidence of Brazilian teachers in their own preparedness, although supported by school leaders, is not matched by international and national research evidence, which suggests that the quality of initial teacher training in Brazil – in particular online teacher training programmes in the private sector (Marcondes, Leite and Ramos, 2017^[17]) – is poor (Abrucio, 2016^[25]; World Bank, 2016^[11]). There are different reasons for this. First, Brazil's higher education regulatory framework remains inadequate. As highlighted in the 2018 OECD report *Rethinking Quality Assurance for Higher Education in Brazil*, rules and procedures governing distance education providers and programmes are ineffective in guaranteeing quality education provision (OECD, 2018^[37]). Increasingly, OECD countries have introduced specific accreditation standards for teacher education programmes, as they have for other high-skilled professions such as medicine and engineering.

Second, findings also show that programmes are too theoretical, with limited emphasis on pedagogical knowledge and skills and classroom management, a challenge especially for online programmes. While teacher candidates are required to have practical classroom experience during their initial training, they receive inadequate support for this experience (Bauer, Cassetari and Oliveira, 2017^[22]), because of weak relationships between the higher education institutes responsible for teacher education and school networks (Abrucio, 2016^[25]). In contrast, high-performing systems recognise the importance of preparing teachers in classroom settings by developing well-integrated teaching practicum, where teachers can link theory to practice, and strengthen their pedagogical skills (Schleicher, 2018^[26]).

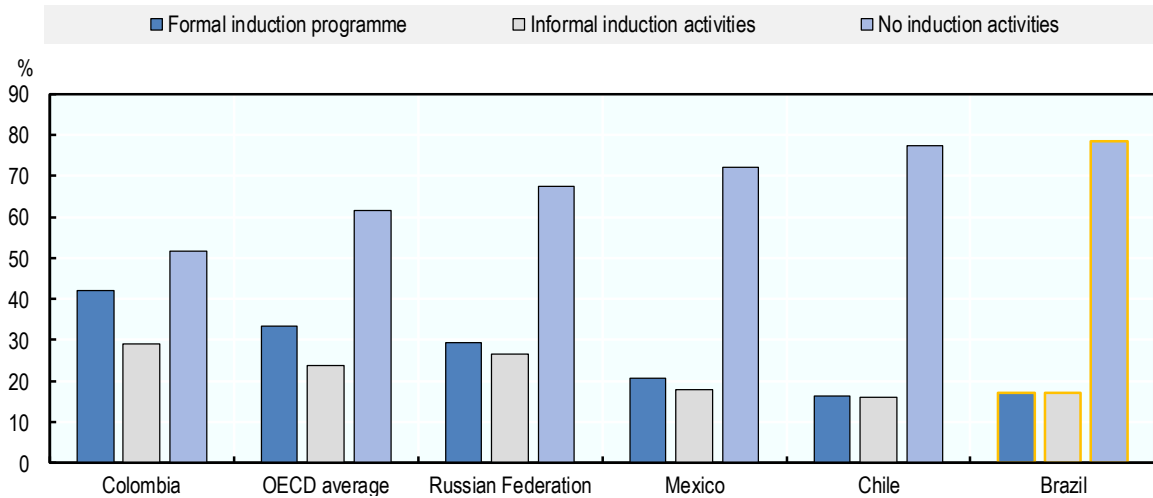
In recent years, the government has announced several measures that are aligned with international best practice (OECD, 2019^[38]). These include a new National Teacher Training Policy, which created new National Common Guidelines for Initial Teacher Training in Basic Education (*Diretrizes Curriculares Nacionais para a Formação Inicial de Professores para a Educação Básica*) intended to make learning more grounded in practice. The Policy also modernised the Institutional Teaching Initiation Scholarship Programme (*Programa Institucional de Bolsas de Iniciação à Docência*, PIBID), which offers scholarships for undergraduate students to intern and carry out pedagogical activities in public schools where they are supervised by experienced teachers (Silva Neto et al., 2016^[39]). Strong partnerships between schools and teacher education institutions can support the alignment of teacher education content and the school context.

Less than one-quarter of novice teachers in Brazil receive induction

Novice teachers need to build and establish their teaching skills in their first years in the job, and there is good evidence that effective induction programmes are a key element in this process (Schleicher, 2016^[40]). Induction programmes can be either formally organised in a school or local region, or involve more informal professional support given to novice teachers by experienced teachers. In Brazil, there is no nationally mandated induction programme, which may partly explain why less than one-quarter of lower secondary teachers reported that they had taken part in induction activities (equally divided between formal and informal induction). In OECD countries, 38% of teachers report some induction, and so do nearly half (48%) of teachers in Colombia, for example (see Figure 5.9). Schools in Brazil seem to offer some alternative support measures: 33% of lower secondary teachers reported that they have an assigned mentor, much more than the OECD average (22%).

Figure 5.9. Percentage of teachers who took part in the following induction activities during their first employment, 2018

Results based on self-reported data from lower secondary teachers



Notes: "Induction activities" are designed to support new teachers' introduction to the teaching profession and to support experienced teachers who are new to a school, and they are either organised in formal, structured programmes or informally arranged as separate activities. The sample is restricted to teachers who gave a valid answer to both questions of whether they participated in a formal induction programme and in informal induction.

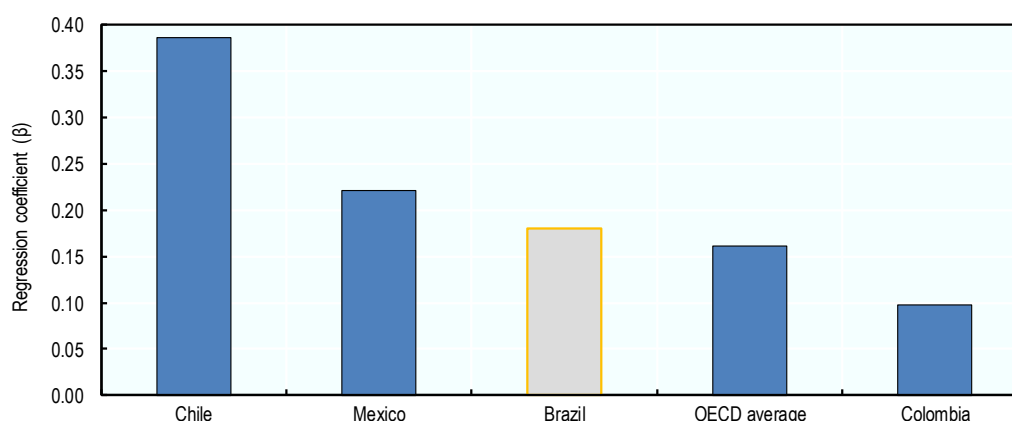
Source: (OECD, 2019^[5]), *TALIS 2018 Results (Volume I): Teachers and School Leaders as Lifelong Learners*, <https://doi.org/10.1787/1d0bc92a-en>.

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In most countries and economies participating in TALIS, teachers who were paired with experienced teachers as part of their induction activities at their current school also tend to report higher self-efficacy. The association found among Brazilian teachers is also positive, as shown in Figure 5.10.

Figure 5.10. Relationship between self-efficacy and participation in induction activities at the current school, 2018

Results of linear regression based on responses of lower secondary teachers



Note: All values are statistically significant apart from Colombia. Countries are ordered from highest to lowest regression coefficient.

Source: (OECD, 2019^[5]), *TALIS 2018 Results (Volume I): Teachers and School Leaders as Lifelong Learners*, <https://doi.org/10.1787/1d0bc92a-en>.

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In Brazil, novice teachers sometimes have to work in challenging schools without adequate induction

TALIS findings show that teachers have less confidence in their own abilities at the outset of their careers, but such confidence grows over time. Although in principle one might expect that more experienced teachers would be assigned to work in more challenging school environments⁶, in fact the opposite is often the case, with novice teachers assigned to challenging schools. When inexperienced teachers lacking self-confidence are placed in challenging school environments the outcome may not only be poor teacher performance and therefore poor student learning, but also failure to develop teaching skills and teachers leaving the profession (OECD, 2015^[41]).

Relative to their peers in Latin American countries, novice teachers in Brazil are less likely to be placed in a challenging school. TALIS findings also reveal that between 2013 and 2015, this share declined from 17% to 11%, which is a positive development, but still leaves one in ten new teachers facing a difficult start to their classroom career. While of value for all novice teachers, teacher induction programmes have a particular value especially for those in challenging environments, who often require additional support and motivation.

Table 5.2. Percentage of novice teachers working in challenging schools, 2013-2018

Results based on self-reports from lower secondary teachers and principals

	2013 (%)	2018 (%)
Brazil	17.4	11.4
Chile	30.1	30.6
Colombia	m	13.4
Mexico	18.4	25.1
OECD average	18.4	22.2

Note: m = missing data.

Source: (OECD, 2019^[5]), *TALIS 2018 Results (Volume I): Teachers and School Leaders as Lifelong Learners*, <https://doi.org/10.1787/1d0bc92a-en>; (OECD, 2014^[42]), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, <https://doi.org/10.1787/9789264196261-en>.

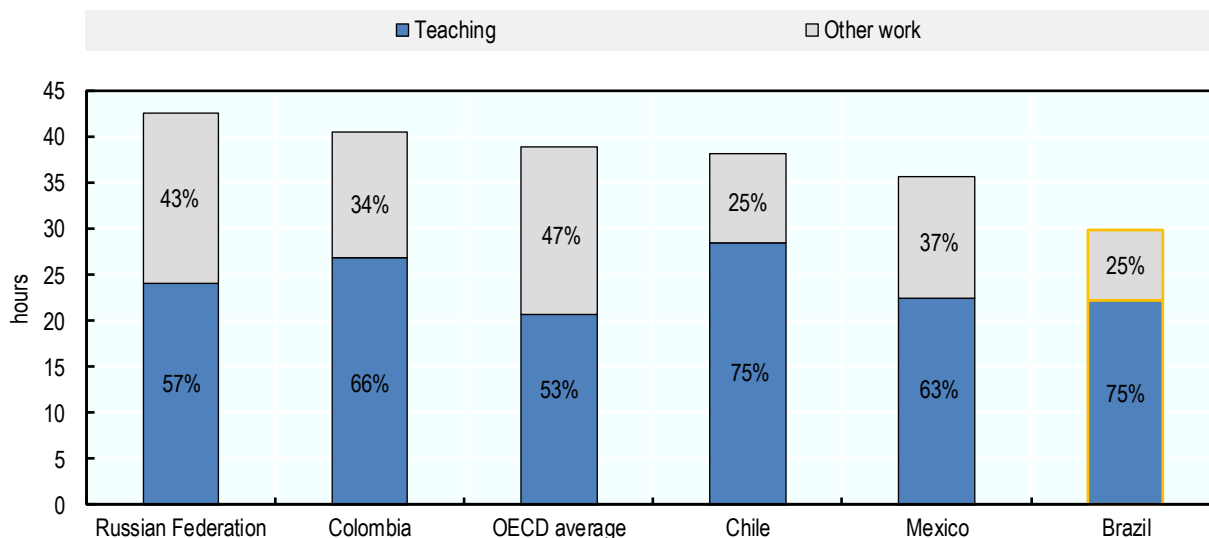
Teacher practices and pedagogical approaches

Brazilian teachers spend relatively more working time in classrooms

The context for classroom pedagogy is the working hours of teachers, and how they divide them between classroom activities and activities outside the classroom. Overall working hours reported by teachers in Brazil are relatively low by international standards, at around 30 hours per week, compared with nearly 40 in OECD countries. But the number of hours spent teaching is actually quite similar to OECD and LATAM countries (see Figure 5.11) even though teaching hours in Brazil declined between 2013 and 2018 by fully three hours per week (OECD, 2019^[5]). Consequently, teachers in Brazil appear to spend less time than in most countries on working tasks outside the classroom, and between 2013 and 2018 this time fell by around one hour per week (OECD, 2019^[5]). Supposedly, a third of teachers' working hours should be devoted to activities outside of the classroom, however this is rarely followed by schools or teachers (Presidência da República, 2008^[43]). In high-performing systems teachers are given time to devote to other tasks besides teaching, such as preparing classes, working with other teachers and pursuing their own professional development. These activities play an important role in supporting the quality of teaching, and teachers' motivation levels (Schleicher, 2016^[40]).

Figure 5.11. Working hours per week spent on teaching and other activities, 2018

Values within the bars represent the percentage of hours spent teaching or doing other work per week relative to each country. Results based on responses of lower secondary teachers



Note: Countries are organised in descending order based on hours spent teaching.

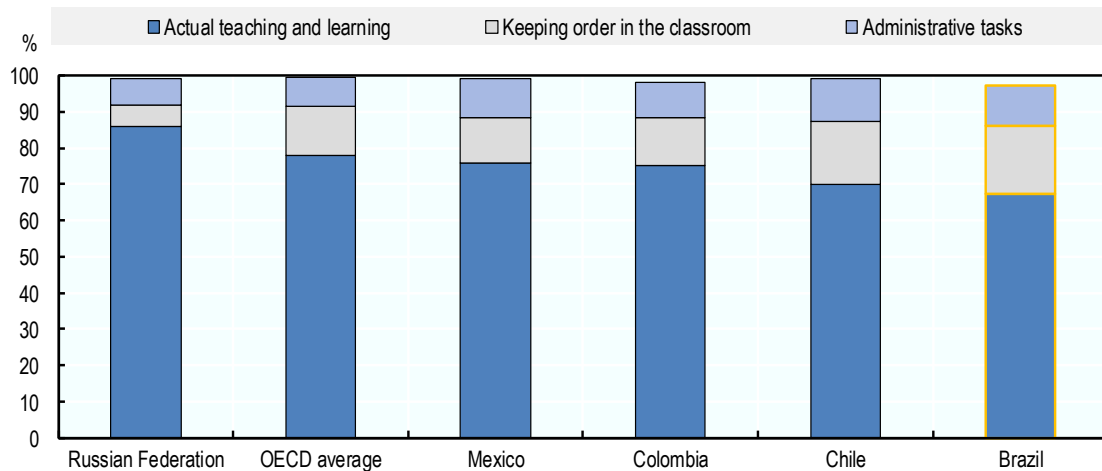
Source: (OECD, 2019^[5]), *TALIS 2018 Results (Volume I): Teachers and School Leaders as Lifelong Learners*, <https://doi.org/10.1787/1d0bc92a-en>.

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While Brazilian teachers spend slightly more working time in the classroom than their peers in OECD countries, nearly a third of this time is spent on administrative tasks (e.g. recording attendance, handing out school information or forms) (11%) or keeping order in the classroom (19%). In comparison, on average across the OECD, 8% of classroom time is spent on administrative tasks and 13% on keeping order (see Figure 5.12). Moreover, in the past ten years, classroom time spent on actual teaching and learning has decreased in Brazil. Chapter 6 will discuss some of the challenges teachers face in their classrooms in more depth.

Figure 5.12. Use of class time during a typical lesson, 2018

Results based on responses of lower secondary teachers



Notes: Countries are organised in descending order based on “actual teaching and learning”. The sum of time spent in an average lesson may not add up to 100% because some answers that did not add up to 100% were accepted.

Source: (OECD, 2019^[5]), *TALIS 2018 Results (Volume I): Teachers and School Leaders as Lifelong Learners*, <https://doi.org/10.1787/1d0bc92a-en>.

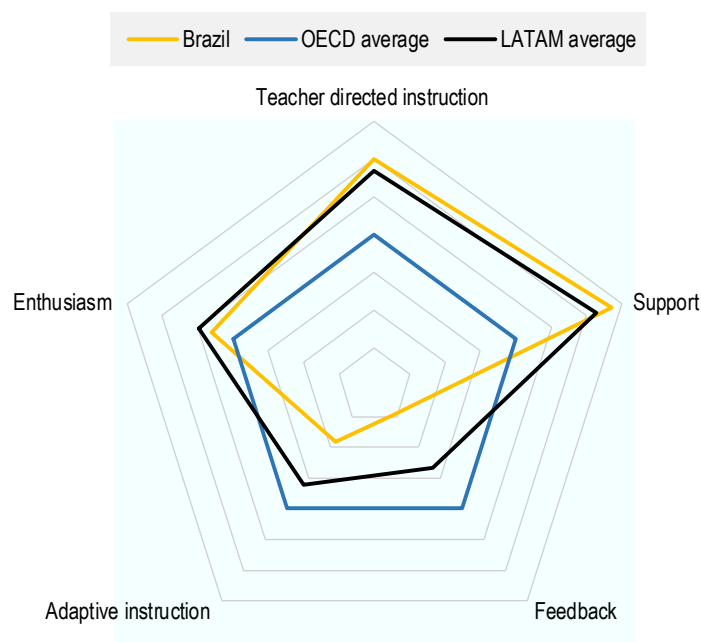
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Different instructional approaches can support learning

Within classroom teaching, different types of instructional approach can be identified, and have been measured through the perceptions of students and teachers in different editions of the PISA and TALIS surveys. In PISA 2018, these approaches were measured using five indices. Figure 5.13 compares Brazil on these indices with the OECD and LATAM averages on the basis of students’ reports of teacher behaviour. Compared to the OECD average, Brazil’s teachers demonstrated a great deal of enthusiasm and support for students, but seem to give much less attention to instruction adapted to the needs of individuals and giving feedback.

Figure 5.13. Index of pedagogical approaches derived from PISA 2018

OECD average = 0.0



Source: (OECD, 2019^[24]), PISA 2018 Database, <https://www.oecd.org/pisa/data/2018database/> (accessed on 13 October 2020).

StatLink  <https://stat.link/zgybjv>

Research suggests that different approaches are all relevant and necessary at different times and in different contexts. Using all these techniques effectively, and balancing them in the classroom, requires a very high level of skill and understanding of students' needs. There is reason to think that both effective feedback and adaptive teaching might require more attention in Brazil.

Box 5.2. Different pedagogical approaches as measured in PISA 2018

PISA 2018 asked students several questions about the teaching practices used in their language-of-instruction lessons. Based on these answers, PISA elaborated a couple of indexes which can be analysed to verify the most used pedagogical approaches by teachers in classrooms. Students' responses were combined to create the indexes. For each index, the average is 0 and standard deviation is 1 across OECD countries. Positive values in the index indicate that the pedagogical approaches are used more frequently.

- **The index of teacher enthusiasm** was based on students' answers to whether they agree ("strongly agree", "agree", "disagree", "strongly disagree") with the following statements about the two language-of-instruction lessons they attended prior to sitting the PISA test: "It was clear to me that the teacher liked teaching us", "The enthusiasm of the teacher inspired me", "It was clear that the teacher likes to deal with the topic of the lesson" and "The teacher showed enjoyment in teaching". These statements were combined to create the index of teacher enthusiasm.
- **The index of teacher support** was developed based on students answers of how often ("never or hardly ever", "some lessons", "most lessons", "every lesson") the following happens in their language-of-instruction lessons: "The teacher shows interest in every student's learning", "The teacher gives extra help when students need it", "The teacher helps students with their learning" and "The teacher continues teaching until students understand".
- **The index of teacher feedback** was created based on students' responses to how often ("never or almost never", "some lessons", "many lessons", "every lesson or almost every lesson") the following happens in their language-of-instruction lessons: "The teacher gives me feedback on my strengths in this subject", "The teacher tells me in which areas I can still improve" and "The teacher tells me how I can improve my performance".
- **The index of teacher-directed instruction** was constructed using students' descriptions of how often ("never or hardly ever", "some lessons", "most lessons", "every lesson") the following happens in their language-of-instruction lessons: "The teacher sets clear goals for our learning", "The teacher asks questions to check whether we have understood what was taught", "At the beginning of a lesson, the teacher presents a short summary of the previous lesson" and "The teacher tells us what we have to learn".
- **The index of adaptive instruction** was constructed using students' descriptions of how often ("never or almost never", "some lessons", "many lessons", "every lesson or almost every lesson") the following happens in their language-of-instruction lessons: "The teacher adapts the lesson to [my] class's needs and knowledge", "The teacher provides individual help when a student has difficulties understanding a topic or task" and "The teacher changes the structure of the lesson on a topic that most students find difficult to understand".

Source: (OECD, 2019^[44]), *PISA 2018 Results (Volume III): What School Life Means for Students' Lives*, <https://doi.org/10.1787/acd78851-en>.

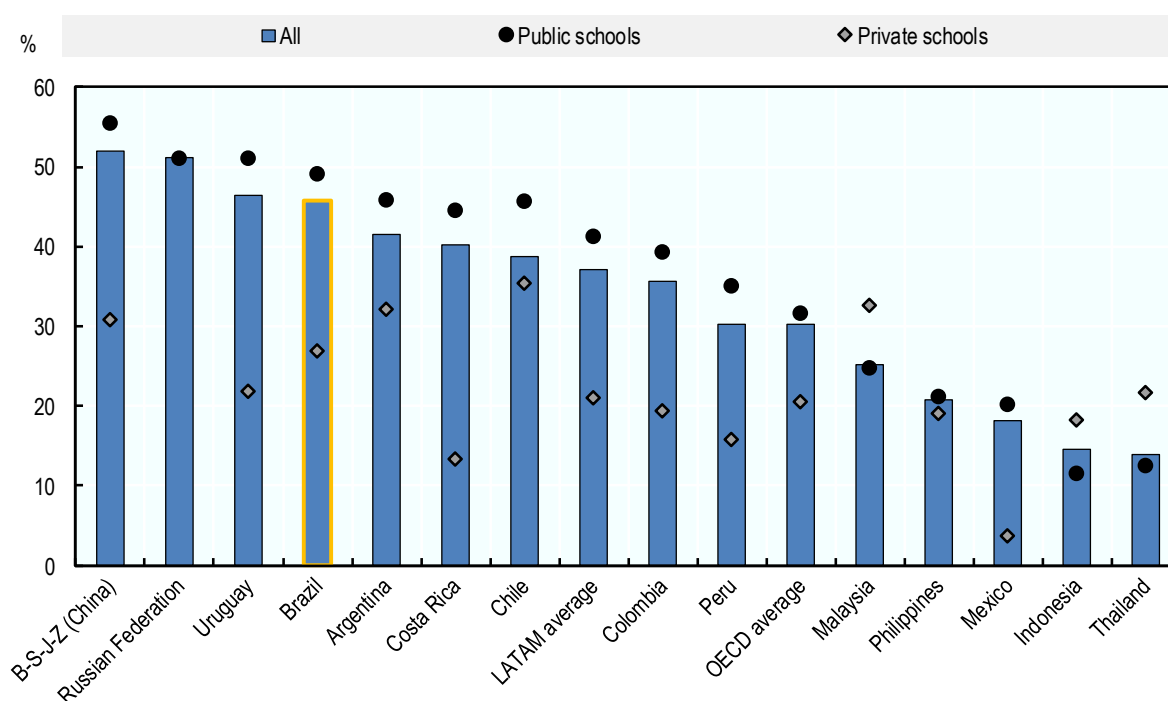
Adaptive instruction is a key tool of teaching and could be particularly helpful in Brazilian classrooms

In recent years, education experts have increasingly emphasised the need for teachers to address variations in students in their classroom through adaptive instruction, meaning teaching adapted to the

needs of individual students, rather than through tracking and streaming (Corno, 2008^[45]; Peterson et al., 2018^[46]). Adaptive instruction, as an umbrella term, links notions such as “personalised learning”, “individualised instruction” and “formative assessment” (Peterson et al., 2018^[46]). Evidence suggests that adaptive instruction has great potential, but its implementation is challenging as it requires going beyond the traditional approach of teaching to some classroom norm, and instead identifies challenges faced by an individual student, and how best to address them in terms of teaching and learning. It therefore requires considerable skill from teachers, and often additional effort and time (Peterson et al., 2018^[46]).

There are reasons to think that adaptive instruction has particular relevance now in Brazil. In earlier chapters, it was argued that Brazil needs to do more to reduce the level of grade repetition. This would mean accepting a greater level of performance variation in each class and classroom, as individual students would be retained with their year group even if their performance is weak. Other developments, including increasing participation so that more disadvantaged students are retained in the system, and measures to include students with special needs in regular schools will also increase the diversity of classrooms. As part of reforms designed to reduce grade repetition, teachers will need to enhance their adaptive instruction skills so as to be able to address more diverse performance and learning needs. School principals in Brazil seem to recognise this point, with almost half of public school principals stating that student learning is hindered by teachers not meeting individual students’ needs (see Figure 5.14).

Figure 5.14. Share of principals that report that student learning is hindered a lot or to some extent by teachers not meeting individual students’ needs, by type of school, 2018



Note: B-S-J-Z (China) refers to Beijing, Shanghai, Jiangsu and Zhejiang (China).

Source: (OECD, 2019^[24]), PISA 2018 Database, <https://www.oecd.org/pisa/data/2018database/> (accessed on 13 October 2020).

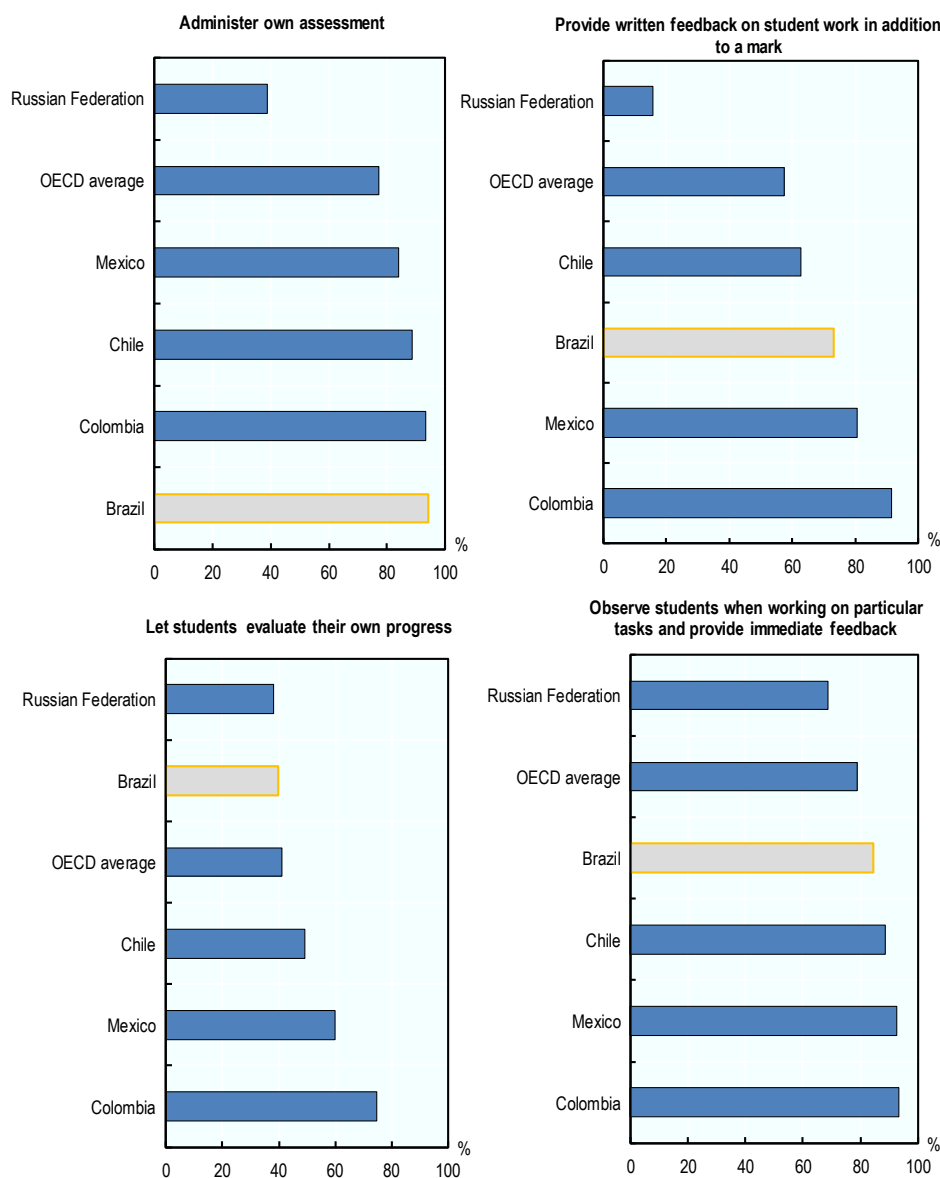
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There is extensive evidence of the value of formative assessment instruction

A key element of adaptive instruction is the capacity of teachers to assess individual performance and offer constructive feedback that promotes learning – formative assessment. The principle of formative assessment is that teachers make frequent, interactive assessments of student understanding, adjusting their teaching to meet individual student needs and to help students themselves understand where they are in their learning and develop their metacognitive awareness and sense of agency. There is evidence that the use of this approach has major benefits for learning outcomes (OECD, 2005^[47]). As indicated in Figure 5.13, Brazil's teachers currently give relatively little attention to feedback to students, although they do assess student performance in various ways, as illustrated in Figure 5.15.

Figure 5.15. Percentage of teachers who reported that they "frequently" or "always" use the following assessment methods in their class, 2018

Results based on responses of lower secondary teachers



Source: (OECD, 2019^[5]), *TALIS 2018 Results (Volume I): Teachers and School Leaders as Lifelong Learners*, <https://dx.doi.org/10.1787/1d0bc92a-en>.

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Supporting teachers in implementing cognitive activation approaches effectively might benefit Brazil

OECD research has underlined the benefits of using the cognitive activation approach in mathematics for student learning. In this approach, the teacher asks questions that make students reflect on the problem, sets challenges that require students to think for an extended time, asks students to decide on their own

procedures for solving complex problems, presents problems for which there is no immediately obvious solution and that can be solved in different ways, presents problems in different contexts, helps students learn from mistakes they have made, and asks students to explain how they have solved a problem.

Teachers' and students' self-reports in TALIS 2018 and PISA 2012 suggest slightly higher use of techniques associated with cognitive activation in Brazil than across the OECD. PISA evidence across countries, including for Brazil, shows that the use of this approach can improve mathematics performance (Echazarra et al., 2016^[48]).

However, implementing cognitive activation teaching strategies effectively can be challenging and time-consuming, which is likely why teachers are less likely to adopt them when they report low levels of self-efficacy or work in disadvantaged schools or disruptive classrooms (OECD, 2016^[49]). Considering the potential of such practices on student achievement, Brazil might therefore do well to give more attention to cognitive activation approaches. This includes providing teachers, and particularly those in disadvantaged schools, with more effective training support to develop their skills in this aspect of teaching.

Professional development and collaboration opportunities

Over the course of a teacher's career, pedagogical methods, curricula and the school environment are likely to change considerably. At the same time, existing skills will need to be refreshed and sustained (Schleicher, 2016^[40]). Continuous professional development (CPD) and collaboration opportunities⁷ can address these needs. They also offer a framework within which teachers can reflect, with peers, on their working experience, and integrate that experience with the acquisition of additional knowledge and skills. According to TALIS data, three-quarters of teachers who participated in professional development reported that it had a moderate or large impact on their teaching (Darling-Hammond, 2014^[50]).

Teachers express strong interest in professional development

When asked about priorities for education spending, 95% of teachers in Brazil (unlike many other countries) identified professional development as a priority (OECD average: 55%) (OECD, 2019^[5]). When asked about specific professional development needs, Brazilian teachers respond similarly to those in other LATAM and OECD countries, but there are a few differences. Brazilian teachers give more weight to: teaching students with special needs⁸; teaching in multicultural settings; communicating with people from different cultures; information and communications technology (ICT) skills; teacher-parent co-operation; and school management and administration (see Figure 5.16). These preferences are linked to some of the current challenges discussed in this report, including:

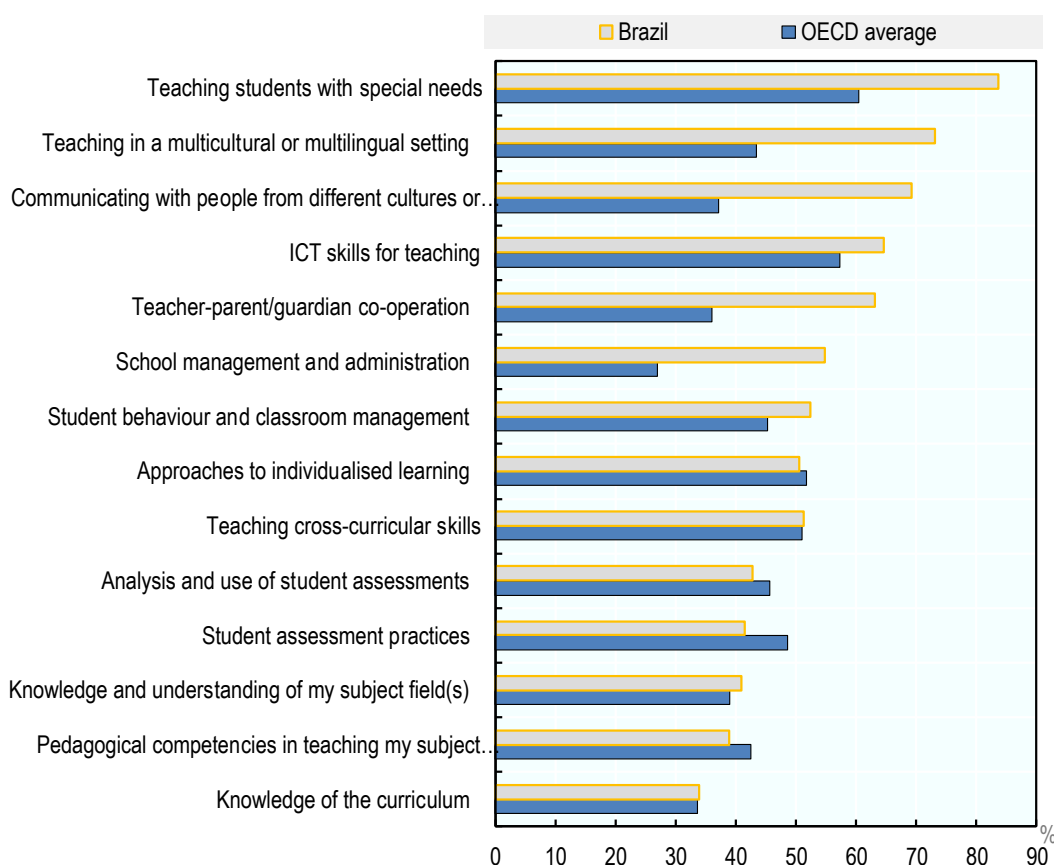
- **Special needs.** Following 2011 legislation designed to integrate more students with special needs into regular schools, the proportion of schools with more than 10% of students identified as having special needs increased markedly between 2013 and 2018 (OECD, 2019^[5]). According to PISA 2018, 10% of lower secondary teachers in Brazil teach in schools where more than 10% of students have special needs, similar to Colombia (9%) and Mexico (7%), but much lower than in Chile (54%) and the OECD average (31%) (OECD, 2019^[5]). Teachers in schools including a higher proportion of students with special needs made more use of professional development opportunities (OECD, 2019^[5]).
- **ICT skills.** This interest may reflect a recognition of the potential value of ICT in teaching and learning in a context where this is currently under-developed given the relative lack of ICT infrastructure in Brazilian schools (as discussed in Chapter 4) or in administrative tasks which take up a lot of teachers' time.
- **School management and administration.** This may reflect an aspiration to school leadership, one of the few pathways for career progression. This may also reflect the challenges faced by some

disadvantaged schools in Brazil, where the lack of human resources and technical capacity means that teachers often have to take on multiple roles, including in school management.

Despite the fact that few Brazilian teachers reported being able to effectively control disruptive behaviour, or to vary instructional strategies in the classroom (OECD, 2019^[5]), CPD in student behaviour and classroom management, in pedagogical competencies or in adaptive instruction were not among teachers' main priorities for professional training according to TALIS. This contrasts with national evidence and school leader reports that suggest that these are significant skills gaps for many teachers.

Figure 5.16. Percentage of teachers reporting a need for professional development in the following areas, 2018

Results based on responses of lower secondary teachers



Source: (OECD, 2019^[21]), TALIS 2018 database, <https://www.oecd.org/education/talis/talis-2018-data.htm> (accessed 14 October 2020).

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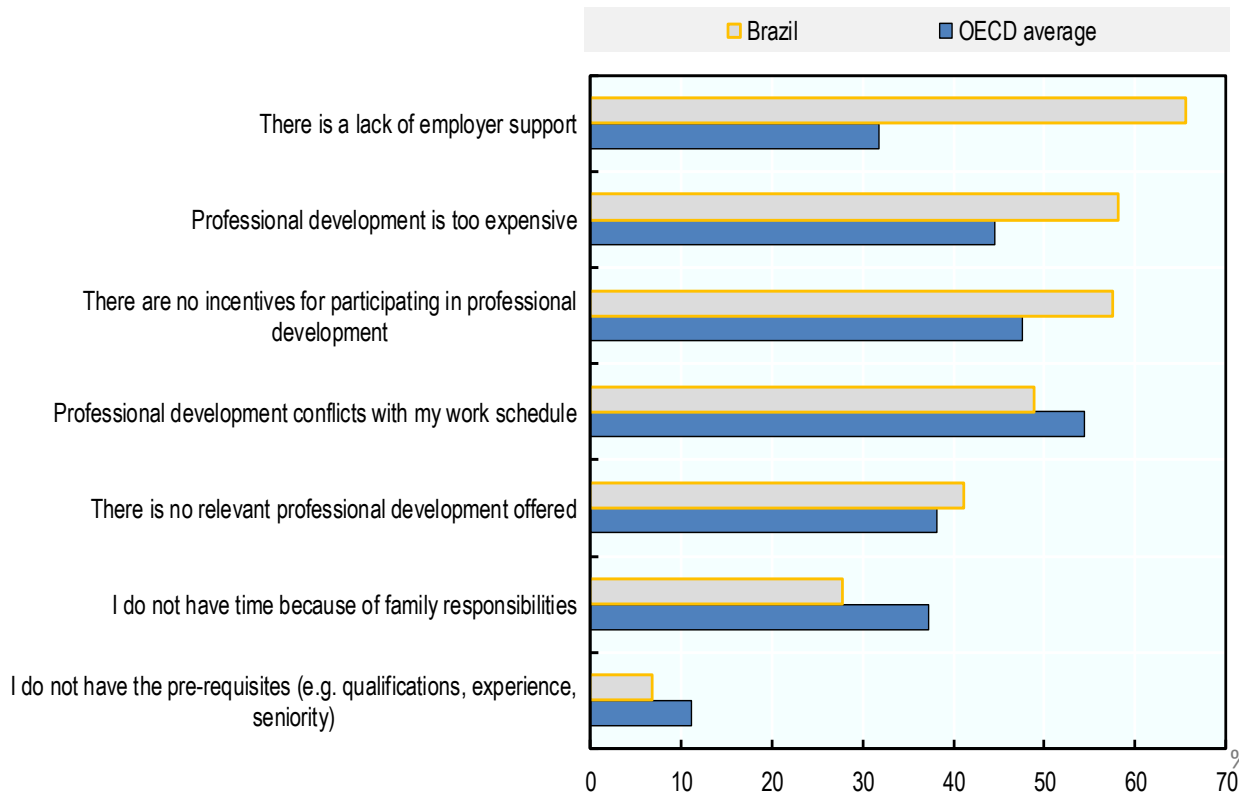
CPD in Brazil faces challenges both in its design and in obstacles to take-up

While recognising their own need for professional development, TALIS data show that Brazilian teachers also identified multiple obstacles to participation, including lack of employer support, the costs involved, lack of incentives to take part in professional development, and incompatibility with their work schedules (see Figure 5.17). These findings are echoed by national survey evidence which reports obstacles to participation, including lack of incentives, unawareness of the CPD offer, limited time availability, and lack

of articulation with career plans in the context of high staff turnover (BCG e IAS, 2014^[51]). As noted above, half of lower secondary teachers in Brazil work part-time, much more than in most other countries. Part-time teachers may have little time to devote to acquiring new skills, and might see limited benefits in doing so. There is a legal requirement that one-third of teachers' working hours be devoted to extra-classroom activities. This time includes class preparation and marking and administrative tasks, which may not leave much time for CPD. National reports also suggest that few schools and teachers respect this legal requirement (Presidência da República, 2008^[43]).

Figure 5.17. Percentage of teachers identifying the following obstacles to professional development, 2018

Results based on responses of lower secondary teachers



Source: (OECD, 2019^[21]), *TALIS 2018 database*, <https://www.oecd.org/education/talis/talis-2018-data.htm> (accessed 14 October 2020).

StatLink  <https://stat.link/7qubso>

According to a recent survey, CPD practices in Brazil are inadequately linked to initial teacher training or teachers' perceived needs or evaluations (World Bank, 2016^[11]). It rarely allows for teaching practice to be observed and feedback offered, and is too often seen as a compensatory response to weaknesses, rather than as a broader vehicle for improvement (BCG e IAS, 2014^[51]). The new National Common Guidelines for Teacher Continuous Professional Development promote school-based and collaborative training opportunities, and emphasise the linkage of CPD to initial teacher education (ITE) requirements and the new BNCC (MEC, CNE, 2020^[52]). While this is promising, it remains unclear how schools, higher education institutions and other entities will be kept accountable for following these guidelines.

Three-quarters of Brazilian teachers never observe classes of others to provide feedback

In most working contexts, practitioners develop and hone their skills by observing colleagues at work and giving and receiving feedback in response. One distinct feature of the teaching profession in most countries is the isolation of the classroom, so that most teaching is only routinely observed by students and not by colleagues. This obstacle can be overcome through active arrangements for teachers to observe each other at work and offer feedback, arrangements that help the professional development of both the observer and the observed (Vangrieken, 2015^[53]). Unfortunately, such arrangements are relatively uncommon. In OECD countries, 41% of the teachers report they never observe the classes of others to offer feedback. In Brazil, three-quarters both of lower (73%) and upper secondary (74%) teachers have never done so (OECD, 2020^[6]). Similarly, a national survey found that observation of other teachers was very rarely part of the CPD offer (BCG e IAS, 2014^[51]). Conversely, in Viet Nam, which reports high levels of teacher self-efficacy and high levels of student achievement, nearly 78% of teachers report that they observe the classes of others at least once a month (tables II.4.1 and II.4.3 (OECD, 2020^[6])). In Brazil, there is much potential for more use of classroom observation, building on evidence and from interventions like the Ceará initiative (see Box 5.3) that systematic observation and feedback can be harnessed to improve outcomes.

Box 5.3. Coaching secondary teachers in the state of Ceará, Brazil

The Ceará programme in Brazil was conceived as a response to two key issues affecting the quality of teaching and learning in Brazil: limited instructional time and low levels of student engagement. The nine-month-long coaching programme for secondary education teachers provided support and practical strategies on lesson planning, classroom management and keeping students engaged. The programme involved school-level pedagogical co-ordinators providing feedback to teachers, based on classroom observations and self-help resources, such as books and online video examples. Moreover, it uses one-on-one coaching for pedagogical co-ordinators using video-conferencing software, which makes the programme highly cost-effective. An impact evaluation of the programme revealed that the intervention resulted in: teachers gaining more instructional time in the classroom by reducing the time spent on classroom management; more frequent use of interactive strategies to improve student engagement; and an overall improvement in the academic outcomes of students in state and national tests

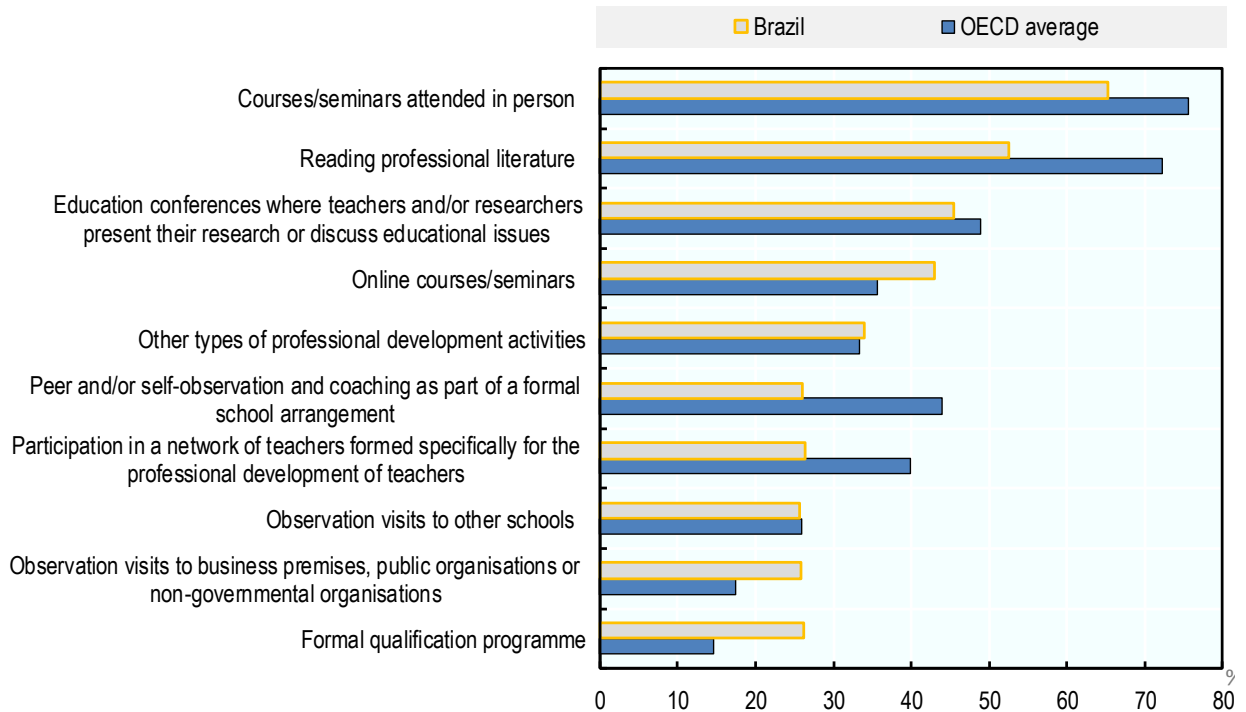
Source: (OECD, 2019^[5]), *TALIS 2018 Results (Volume I): Teachers and School Leaders as Lifelong Learners*, <https://doi.org/10.1787/1d0bc92a-en>.

For other types of collaborative learning, the evidence on Brazil is mixed

Beyond classroom observation, there is broader evidence that teachers can improve their own performance through collaborative learning with other teachers, as this practice is associated across TALIS countries with teacher self-efficacy, and often with job satisfaction (Darling-Hammond, 2014^[50]). As in other parts of Latin America, formal networks of teachers designed to support professional development are unusual (see Figure 5.18). Only 20% of Brazilian teachers reported having taught jointly as a team with a teacher colleague, while the comparable OECD figure is closer to 30%. Only 29% of Brazilian teachers reported that they had exchanged teaching materials with a colleague, much less than the OECD average of 46% (see Figure 5.19).

Figure 5.18. Percentage of teachers who participated in professional development activities in the year prior to the survey, 2018

Results based on responses of lower secondary teachers



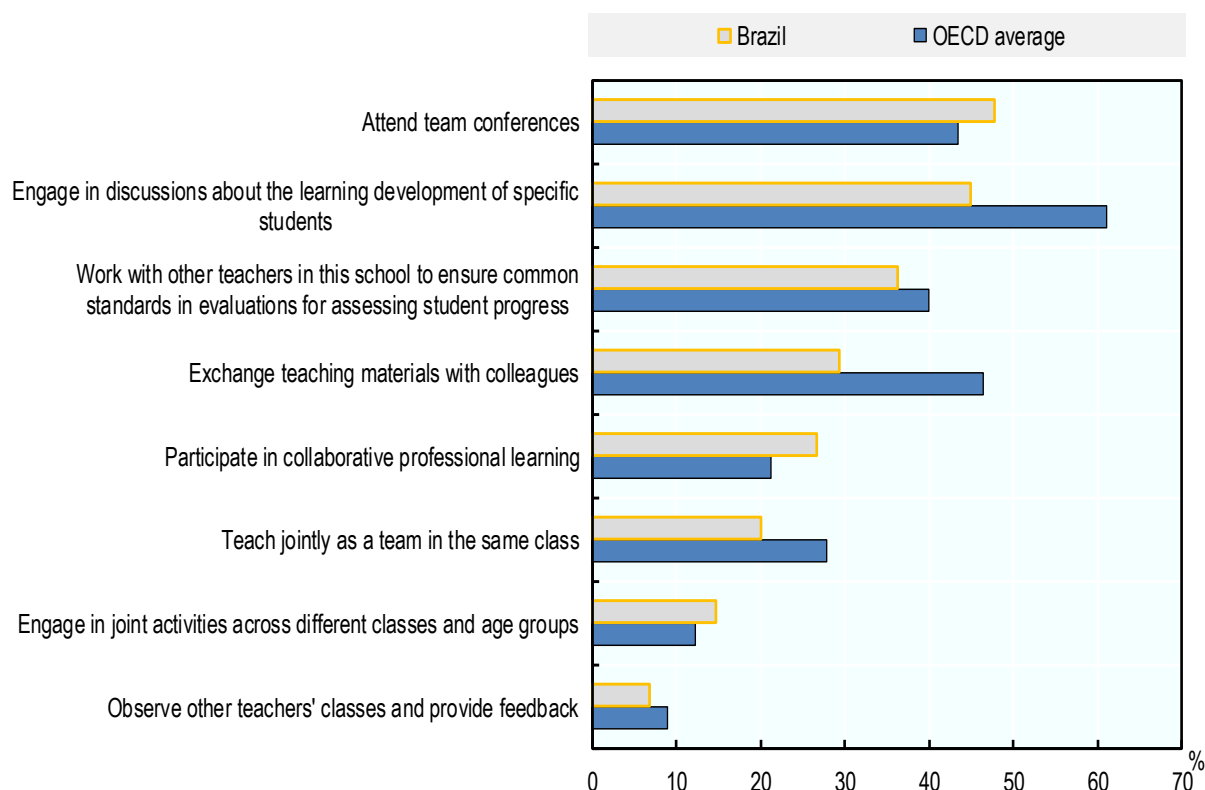
Source: (OECD, 2019^[21]), TALIS 2018 database, <https://www.oecd.org/education/talis/talis-2018-data.htm> (accessed 14 October 2020).

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Conversely, on some other measures, such as participating in collaborative professional learning, Brazil's teachers appeared more active than in other countries. Almost half (49%) of lower secondary teachers in Brazil report that they have scheduled time to collaborate to develop instructional materials, slightly more than in OECD countries where the equivalent figure is 46%.

Figure 5.19. Percentage of teachers who report that they do the following in their school at least once a month, 2018

Results based on responses of lower secondary teachers



Source: (OECD, 2019^[21]), TALIS 2018 database, <https://www.oecd.org/education/talis/talis-2018-data.htm> (accessed 14 October 2020).

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Teacher appraisal

Formal teacher appraisal is given increasing weight in many countries

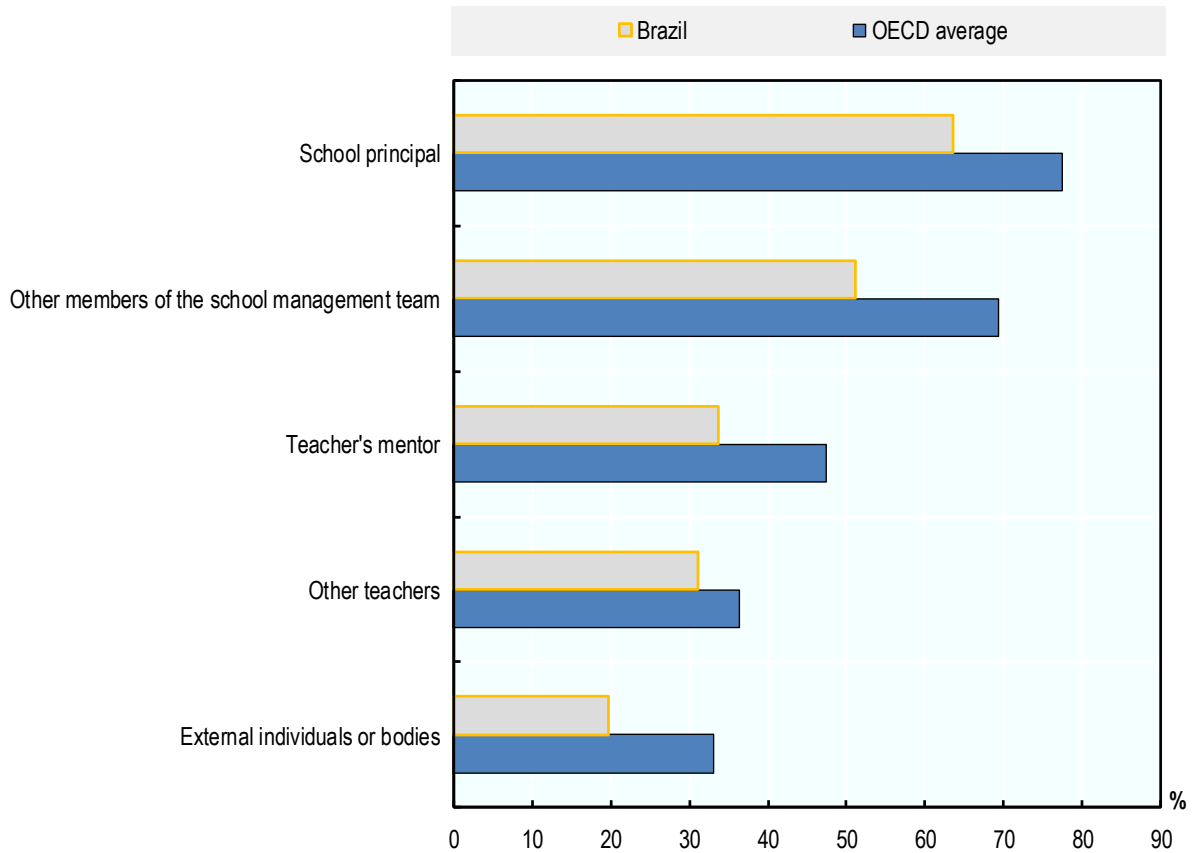
In recent decades, many countries have given increased attention to teacher appraisal systems, as tools to reward and motivate good teaching through recognition, and to identify and address specific professional development needs (see (OECD, 2013^[54]). Formative appraisals, typically within a school, are primarily designed to improve teaching practice, by allowing individual teachers to recognise their strengths and weaknesses and identify relevant professional development opportunities. Summative appraisals have a more explicit accountability function and carry consequences for the teacher in terms of career progression, pay and contractual arrangements (OECD, 2013^[54]). As a result, this type of appraisal will often involve evaluators who are external to the school. Both formative and summative appraisal of teachers may also serve as a link to career development, for example by identifying and fostering leadership potential, or by identifying individuals as suitable for specific posts of responsibility.

As observed in Figure 5.20, in Brazil, as in many other countries in Latin America, regular appraisal is very common – despite not being a mandatory practice nationally – with over 80% of teachers being appraised

at least once a year by their principals or school management teams, according to principals' reports (OECD average: 70%).

Figure 5.20. Percentage of teachers whose school principals report that their teachers are formally appraised at least once a year by the following sources of appraisal, 2018

Results based on responses of lower secondary principals



Source: (OECD, 2019^[21]), TALIS 2018 database, <https://www.oecd.org/education/talis/talis-2018-data.htm> (accessed 14 October 2020).

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To be meaningful, teacher appraisal needs to be linked to clear expectations on teachers

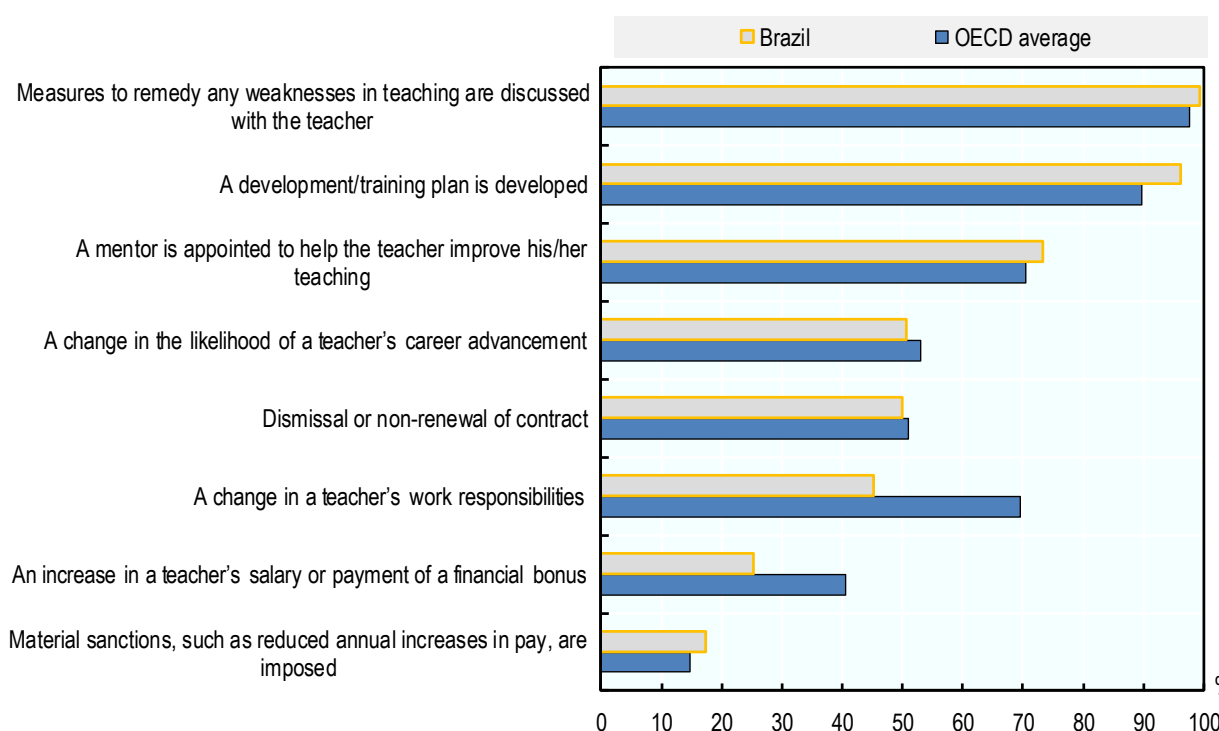
While teacher appraisal seems to be a more common procedure in Brazil than in OECD countries on average, many of the key elements of a structured teacher appraisal system are lacking. There are no national guidelines on teacher appraisal other than on covering probation for those entering the profession, and no common standards to appraise teachers against (World Bank, 2016^[11]). This contrasts with international best practices. Teacher standards, which describe what “good” teaching is and how it is demonstrated, are an essential common reference for both teachers and evaluators that establish clear expectations, encourage consistent judgement and focus appraisal on the key aspects of teaching that matter for learning (OECD, 2013^[55]).

Some states and municipalities use students' performance in standardised assessments as a measure of teaching quality, which can result in unfair judgements, as student achievement reflects many factors. In most OECD countries, teacher appraisal processes draw on multiple sources, including classroom observations, to provide a fuller picture of teaching practice and enable specific feedback to support teachers' continued professional growth (OECD, 2013^[55]).

In Brazil, teacher appraisal mainly serves formative functions, and is less likely to be used to inform hiring or promotion decisions (Figure 5.21), partly because of the limited career development opportunities (Todos pela Educação, 2020^[20]). In OECD countries, appraisal is increasingly being used to inform teacher career advancement, reward effective teaching, raise motivation, and promote capable teachers into roles where they can generate system-wide improvement.

Figure 5.21. Percentage of teachers whose school principals report that the following may sometimes occur after a formal teacher appraisal, 2018

Results based on responses of lower secondary principals



Note: The figure includes principals who report that these outcomes occur "sometimes", "most of the time" or "always" and excludes principals who report that it "never" occurs.

Source: (OECD, 2019^[21]), TALIS 2018 database, <https://www.oecd.org/education/talis/talis-2018-data.htm> (accessed 14 October 2020).

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School leaders

School leaders have been shown to be key in driving school improvement, not only as managers and administrators of schools, but also as instructional leaders, facilitating the skills and professional development of the school staff (OECD, 2008^[56]). They play a vital role as intermediaries, translating large-scale reform efforts into improved quality of teaching and learning within individual schools. In Brazil,

however, school leadership remains a predominantly administrative and bureaucratic role, and school leaders have only limited decision-making authority. In comparison to most OECD and high-performing countries, their selection, preparation, and evaluation remain rudimentary at best (World Bank, 2016^[11]).

School leadership is more often female in Brazil than in OECD countries, and slightly younger

The demographic profile of school principals in Brazil reflects that of the teaching workforce, tending to be somewhat younger and more often female than in OECD and many other countries. At lower secondary level, three-quarters (77%) of Brazil's school leaders are female, compared with an OECD average of around half (OECD, 2019^[5]). At upper secondary level just over two-thirds (68%) of school leaders in Brazil are women (OECD, 2019^[5]). Similarly, the average age of school principals at both lower and upper secondary level is under 50 in Brazil (47 and 49 respectively) but 52 in OECD countries (at lower secondary level) (OECD, 2019^[5]). However, as with teachers, the profile of school principals in Brazil has been ageing: for the lower secondary level, in the decade to 2018, the percentage of school principals under the age of 40 fell from 36% to 23%, while the percentage of over the age of 60 increased from 4% to 10% (OECD, 2019^[5]). More than half (54%) of lower secondary principals were in post for less than five years in 2018 (OECD average: 39%), and despite the overall ageing of principals, this figure has not changed very much (OECD, 2019^[5]). Among the countries participating in TALIS, the average principal has 20 years of teaching experience⁹, compared with 16 in Brazil (OECD, 2019^[5]).

Very few Brazilian school leaders have postgraduate qualifications

Data from TALIS provide a perspective on the preparedness of principals. It shows that the majority report participating in formal training in important elements of the principal role before or after taking up their positions as principal – 56% report training in school administration and 54% in instructional leadership (OECD average: 46% and 44%, respectively). However, this share is below that of systems like Singapore and the United States, where the principal function is well established (see Box 5.4). However, more information would be required to understand the quality and rigour of these programmes.

One notable finding from TALIS is that overall, few school leaders in Brazil have advanced qualifications (ISCED 7 and 8) in comparison with other countries. In OECD countries, two-thirds (66%) of school principals have such qualifications at lower secondary level. In Colombia the comparable figure is 88%, and in Mexico 49%. But in Brazil, only 4% of lower secondary school principals have this type of advanced qualification, and even in upper secondary schools the comparable figure is only 11%. Again, this reflects a wider lack of advanced qualifications in the teacher workforce. As mentioned earlier, Target 16 of the PNE stipulates that half of the teachers in Brazil's basic education should have a qualification at ISCED 7 or above by 2024. If this comes about, it may provide a pool of teachers with more advanced qualifications from which future school leaders can be recruited – but this will necessarily be a long-term process.

Selection of school leaders remains unsystematic

Until very recently, selection procedures for school leaders varied across states and municipalities. In 2018, nearly 70% of municipal school principals were selected locally without any kind of selection process, usually through political appointments (IBGE, 2019^[57]). While Target 19 of the PNE states as a national goal that all public school principals should be selected through a systematic procedure, following specific requirements and combined with an open consultation, in practice little had been done to reform and strengthen the selection process for school leaders.

Given the important place that principals occupy, OECD countries are taking steps to professionalise the role. Several countries have developed professional principal standards that set out what a school leader

is expected to know and be able to do, and guide the recruitment of principals, as well as their training and appraisal.

Box 5.4. Selecting and training school leaders in Singapore

To ensure that Singapore has the best school leaders, young teachers are continuously assessed for their leadership potential and are given the opportunity to develop their leadership capacity. Future school leaders are chosen from successful teachers already in the education system. Moreover, all education leadership positions are part of the teaching-career structure. Potential school leaders can serve on committees, be promoted to middle-level leadership positions (e.g. head of department), and be transferred to the ministry for a period.

Successful potential school leaders are selected to attend the Management and Leadership in Schools program at Singapore's National Institute for Education, based on interviews and leadership-situation exercises. Once accepted, aspiring school leaders can attend the four-month executive leadership training. Potential vice principals attend a six-month Leaders in Education programme. Candidates in both programs are paid during their training. Only 35 people are selected for the executive leadership training each year. More experienced school leaders mentor recently appointed leaders, and principals are periodically transferred among schools as part of Singapore's continuous improvement strategy. Experienced school leaders are offered the opportunity to become Cluster Superintendants, which is the first step toward a system-level leadership role.

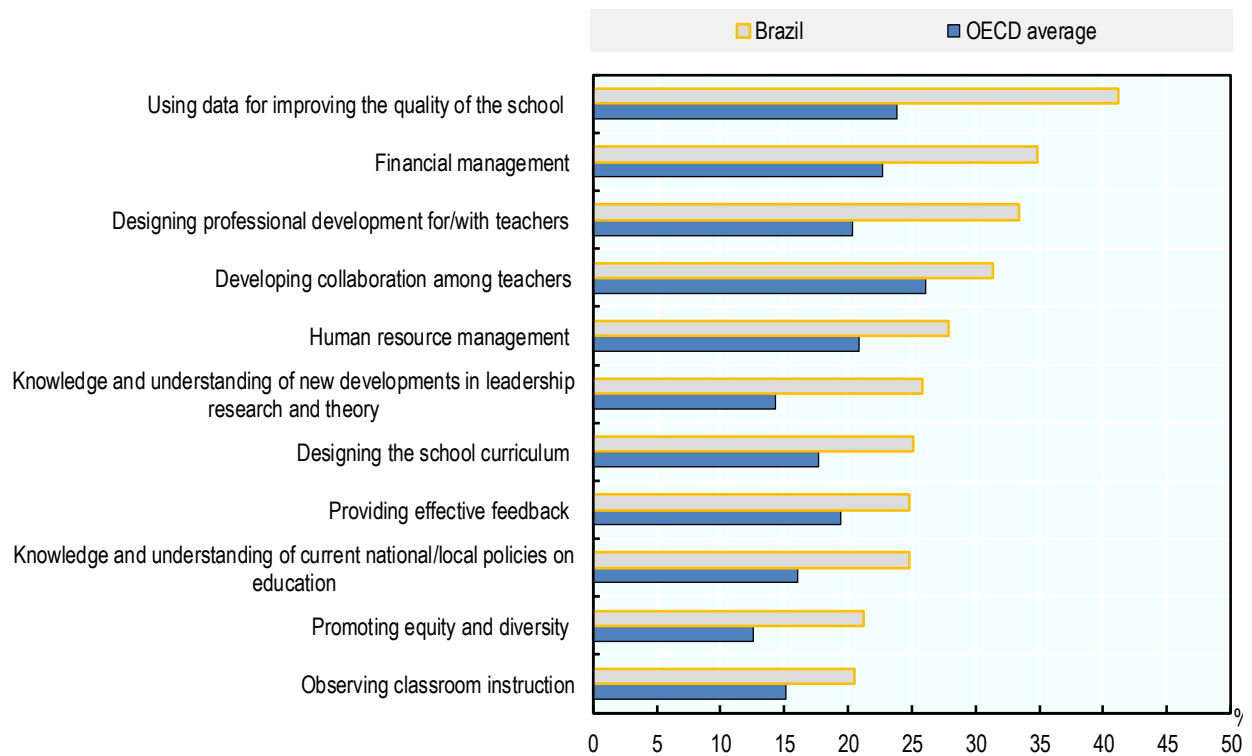
Source: (Schleicher, 2012^[58]), *Preparing Teachers and Developing School Leaders for the 21st Century: Lessons from around the World*, <https://doi.org/10.1787/9789264174559-en>.

Although school leaders see a need to develop their skills, they find it difficult to do so

Given that selection procedures remain for the most part informal in Brazil, the professional development of school principals is particularly important. Even though the majority of Brazilian lower secondary school principals reported that they had received school administration or principal's training, they still report high levels of need for professional development across multiple domains, significantly greater than those reported in OECD countries (see Figure 5.22) (OECD, 2019^[5]). This may indicate inadequacies in the current training on offer.

They also report a different, and often lesser pattern of participation in professional development than their OECD counterparts, with most emphasis falling on formal qualifications and administrative skills rather than on collaborative professional development for themselves and for their teachers (see Figure 5.23) (OECD, 2019^[5]). Some barriers may be preventing needs from being translated into professional development: 45% of principals felt that professional development was too expensive (compared with 35% in OECD countries); 39% pointed to a lack of employer support (compared with only 21% in OECD countries) (OECD, 2019^[5]). Conversely, conflicts with the work schedule were cited by only 36% of Brazilian principals, compared with 48% of OECD principals (OECD, 2019^[5]).

Figure 5.22. Percentage of school principals reporting a high level of need in these areas, 2018

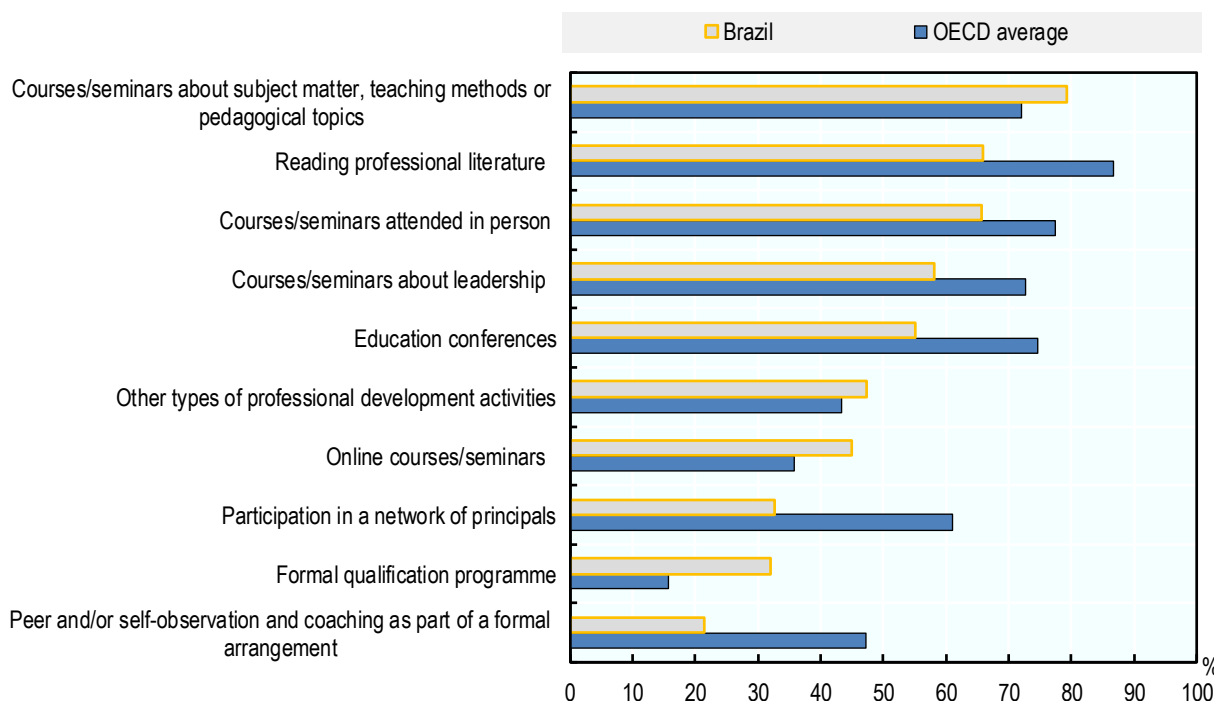


Source: (OECD, 2019^[5]), *TALIS 2018 Results (Volume I): Teachers and School Leaders as Lifelong Learners*, <https://doi.org/10.1787/1d0bc92a-en>.

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Figure 5.23. Percentage of school principals reporting that they took part in these professional development activities in the previous 12 months, 2018

Results based on responses of lower secondary principals



Source: (OECD, 2019^[5]), *TALIS 2018 Results (Volume I): Teachers and School Leaders as Lifelong Learners*, <https://doi.org/10.1787/1d0bc92a-en>.

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Conclusion

This chapter has highlighted several respects in which the experience of Brazilian secondary school teachers is at variance with international benchmarks. While such divergence is not a problem in itself, research evidence suggests that in some of these areas, Brazil faces challenges that might be addressed through reforms designed to align the profession more fully with the strongest examples internationally. Thus:

- **The teaching profession is failing to attract able young entrants:** teacher salaries in Brazil are lower than for other tertiary-educated careers, the profession is not socially valued, and part-time contracts of limited duration are unattractive. Selection measures for initial teacher education and the teaching career itself are not always effective in selecting highly-qualified and motivated candidates. This poses a serious risk to the future of teaching in Brazil.
- **Initial teacher education is weak and provides limited emphasis on practical skills:** Brazil's higher education regulatory framework remains inadequate, in particular at guaranteeing quality education provision from distance education programmes. Moreover, programmes remain too theoretical, with limited emphasis on developing teacher candidate's pedagogical knowledge and skills and classroom management. This is particularly concerning given reports that ITE attracts the lowest-performing students. This inadequate preparation in pedagogy risks leaving many teachers unprepared for the classroom, which impacts the learning of student.

- **Novice teachers in Brazil receive inadequate support:** Brazilian teachers are less likely than in many countries to benefit from the systematic induction programmes that are valuable in easing the transition into classroom teaching. This is particularly important in Brazil, not just because of the quality concerns with ITE, but also because novice teachers are often recruited to the most challenging schools. Reports also suggest that the probation period is not effective at supporting or assessing novice teachers' development and readiness.
- **Promising teaching strategies are not receiving sufficient attention, and teachers require additional support to implement them.** Adaptive teaching, designed to respond to the diverse needs of individual students, is not widely used in Brazil. This effective strategy could however be very valuable for Brazil, given that classrooms are becoming more diverse, with less grade repetition, greater inclusion and retention of disadvantaged students that might previously have dropped out, and more inclusion of students with special needs in mainstream schools. Other potentially valuable teaching strategies, such as providing feedback, are also not as present in Brazilian classrooms as they are in OECD countries, and high-performing education systems in particular.
- **Continuous professional development and teacher appraisal in Brazil do not effectively support learning and career growth.** National and international reports suggest that Brazilian teachers often face obstacles to participation in CPD opportunities, and that the training available is rarely of a practical nature or linked to teachers' daily reality. Certain types of collaborative learning arrangements, such as classroom observation, remain extremely uncommon, despite promising models in the country. A lack of balance in how teachers' time is used, with the majority of working hours spent on classroom teaching, might be one obstacle to peer learning and collaboration. Teacher appraisal is not structured or based on common standards of teacher quality, meaning that teachers often lack meaningful feedback with which to improve their practice. Moreover, in most states and municipalities, teacher appraisal is not linked to teachers' career advancement and development.
- **The quality of school leadership is critical in driving improvement in education and learning outcomes, but in Brazil the school leadership role is insufficiently developed as a high level professional function.** Relative to other countries where most school leaders have postgraduate qualifications, Brazil's school leaders rarely do so. Selection processes for school leaders are at present unsystematic and often simply political. School leaders have limited decision-making power and rarely act as instructional leaders. While school leaders themselves have identified multiple professional development needs, they report many barriers to pursuing them, and rarely participate in professional networking and collaboration as a means of development. Unlike some high-performing countries, Brazil lacks a set of clear standards and expectations for the school leadership role.

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Notes

¹ Brazil took part in the lower and upper secondary components of TALIS 2018. Given that country participation in the latter was limited, this evidence has been used selectively.

² Following TALIS 2018 methodology, the classification of educational personnel as “full-time” or “part-time” is based on hours spent working. The stipulation of full-time employment is usually based on “statutory hours” or “normal or statutory working hours” (as opposed to actual or total working time or actual teaching time). Part-time employment refers to individuals employed to perform fewer than the statutory number of working hours required for a full-time employee. A teacher who is employed for at least 90% of the normal or statutory number of hours of work for a full-time teacher over the period of a complete school year is classified as a full-time teacher. A teacher who is employed for less the 90% of the statutory number of hours of work for a full-time teacher over the period of a complete school year is classified as a part-time teacher (Ainley and Carstens, 2018^[59]).

³ Teachers’ statutory salaries can vary according to a number of factors, including the level of education taught, their qualification level and their level of experience or the stage of their career. Statutory salaries are just one component of teachers’ total compensation. Other benefits, such as regional allowances for teaching in remote areas, family allowances, reduced rates on public transport and tax allowances on the purchase of instructional materials, may also form part of teachers’ total remuneration (OECD, 2020^[15]).

⁴ The minimum statutory salary is based on a 40 hours/week workload, although, as will be discussed in coming sections, overall working hours reported by teachers in Brazil are lower, at around 30 hours/week (Presidência da República, 2008^[43]).

⁵ While the LDB recommends that all teachers in Brazil’s basic education have a tertiary degree, the minimum requirements for teachers in ISCED 0 and ISCED 1 is to have completed teaching training in upper secondary education (*magistério*).

⁶ Challenging schools are defined as those where over 30% of students come from socially disadvantaged homes.

⁷ Internationally, CPD covers diverse activities, including formal training, formal and informal mentoring and coaching, and collaborative learning with other teachers.

⁸ In TALIS, special needs students are defined as “those for whom a special learning need has been formally identified because they are mentally, physically, or emotionally disadvantaged”.

⁹ Results based on responses of lower secondary principals.

6. Students' behaviour, expectations and well-being

On several measures, the well-being and life chances of Brazilian children have clearly improved. However, significant issues remain, and new challenges have emerged, many of which are linked to the COVID-19 crisis. This chapter draws on results from PISA, the TALIS questionnaire and national surveys to discuss student behaviours, expectations and well-being in Brazil, how they compare to benchmark countries, and the implications they have for learning. The aim is to help identify policies and practices that increase resilience, lower stress levels, enhance well-being and improve learning in the short-, medium- and long-term. This chapter will focus on three interrelated themes: first, the school environment and culture, which have a profound influence on students' attitudes, behaviour and life chances. Second, students' aspirations and perceptions. Third, their material, psychological, cognitive, social and physical well-being.

Introduction

On several measures, the well-being and life chances of Brazilian children have clearly improved: infant mortality and child labour are now much less common, while participation in education and care has been rising (de Barros and Medonça, 2010^[1]) (see Chapters 1 and 2). At the same time, as in many OECD countries (Burns and Gottschalk, 2019^[2]) children are reporting more stress and anxiety, and less sleep (Pacífico, Facchin and Corrêa Santos, 2017^[3]; de Assis et al., 2007^[4]). Child obesity is increasing, bringing with it a host of potential physical, social and psychological challenges. Alongside all the challenges to educational progress documented in earlier chapters, the COVID-19 crisis has had some very direct impacts on the well-being of children. School closures and distance education modules may cause disengagement and psychological distress at a time when the economic downturn is pushing millions of families and children back into poverty, increasing the risks of malnutrition, abuse and drop out, as children are forced to look for jobs or take on unpaid care responsibilities at home.

This chapter will draw primarily on data from the OECD Programme for International Student Assessment (PISA), but also from the OECD Teaching and Learning International Survey (TALIS) questionnaire and national surveys to explore student behaviour, expectations and well-being in Brazil, how they compare to benchmark countries, and the implications for learning. The aim is to help identify policies and practices that increase resilience, lower stress levels, enhance well-being and improve learning in the short-, medium- and long-term.

Given that PISA is undertaken by 15-year-olds, our analysis will focus on issues students face as they transition from lower to upper secondary education, some of which are peculiar to adolescence (e.g. rising opportunity costs of staying in school) and some, such as disengagement from learning, that reflect earlier school experience.

This chapter will examine three interrelated themes:

- **The school environment and culture:** children spend much time in school: following lessons, socialising with classmates, and interacting with teachers and other staff members. These are not just places where students acquire academic skills; they can also help students become more resilient, feel more connected with those around them, and develop life and career aspirations. These experiences have a profound influence on students' attitudes, behaviour and life chances.
- **Students' aspirations and perceptions:** student perceptions of their own learning, abilities, and their future reveal much about motivation and ambitions, shaped by school, socio-economic context and family influences.
- **Students' well-being:** this refers to the material, psychological, cognitive, social and physical conditions that help students live a happy and fulfilling life. What happens in and outside school is key to understanding whether students enjoy good physical and mental health, and how satisfied they are.

The school environment and culture

This section uses data from PISA and TALIS to assess the extent to which the Brazilian school environment supports learning outcomes and student well-being. The school environment and culture encompasses, among other things, the disciplinary climate and instructional practices in classrooms and the social dynamics inside the school and in the surrounding community (Fraser, 2015^[5]; Gislason, 2010^[6]; Picus, L.O. et al, 2005^[7]; Twemlow, S.W. et al, 2001^[8]; OECD, 2013^[9]). These elements can either support or hinder student engagement, well-being and academic outcomes. They also bear on teacher job satisfaction, and hence teacher recruitment and retention (Engeström, Y, 2009^[10]; Thapa, A. et al, 2013^[11]) (see Chapter 5).

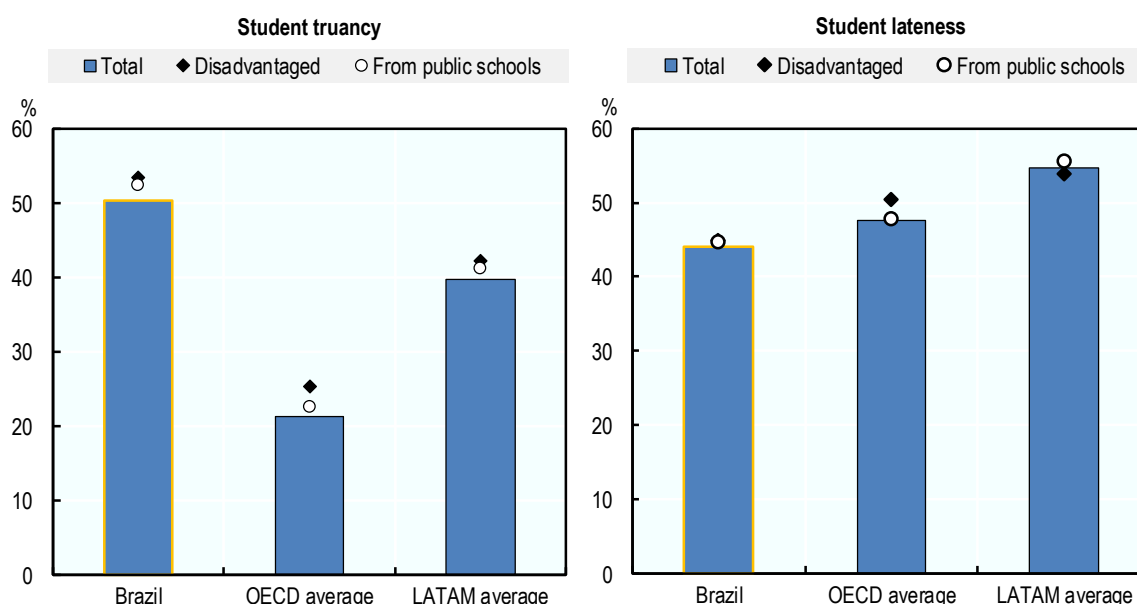
Student truancy

High levels of student truancy in Brazil

PISA 2018 asked students whether they had skipped classes or a whole school day and how often they had arrived late for school in the preceding two weeks (OECD, 2019^[12]). The responses show that student truancy is twice as high among Brazilian students as it is across OECD countries (Figure 6.1). During the fortnight prior to the PISA test, half of the Brazilian students had skipped a whole day of school or some classes at least once (OECD average: 21% and 27%) and 44% of students had arrived late for school at least once during that time period (OECD average: 48%) (OECD, 2019^[12]). The data also suggest that students from disadvantaged backgrounds and public schools tend to be more likely to skip school, when compared to their more advantaged peers. Truancy rates are also higher among those who have repeated a grade.

Figure 6.1. Levels of students' truancy and lateness, PISA 2018

Percentage of students who skipped a whole day of school at least once (on the left) and percentage of students who arrived late for school at least once (on the right), in the two weeks prior to the PISA test.



Note: On the graph regarding student lateness: the difference between disadvantaged and advantaged students is not statistically significant for Brazil or LATAM (Latin American) average; the difference between public and private schools is not statistically significant for Brazil.

Source: (OECD, 2019^[12]), *PISA 2018 Results (Volume III): What School Life Means for Students' Lives*, <https://doi.org/10.1787/acd78851-en>.

StatLink  <https://stat.link/os31mx>

Several factors contribute to truancy. National evidence suggests that lack of motivation is one of the main reasons why students report skipping school. This is followed by the need to work and/or take care of family members (Exame, 2010^[13]; Salata, 2019^[14]; Schwartzman, Simon, 2005^[15]). Moreover, research shows that victims of bullying often avoid school because they are too afraid or embarrassed (Townsend et al., 2008^[16]; Hutzell and Payne, 2012^[17]; ABGLT, 2016^[18]).

Student truancy is associated with poor school performance

High rates of student truancy are one indicator that Brazilian students, and in particular disadvantaged students, are disengaged from school and their studies. Inevitably this affects learning. After accounting for the socio-economic profile of students and schools, students who had skipped a whole day of school in the two weeks prior to the PISA test scored 15 points less than students who had not done so. Skipping some classes was associated with a decline of 32 score points in reading performance; arriving late for school was associated with a drop of 23 score points, even after accounting for the socio-economic profile of students and schools (OECD averages: 40, 37 and 26 score-point decline respectively). In the medium to long-term, truants are more likely to fall behind in class, drop out of school, wind up in poorly paid jobs, have unwanted pregnancies, and even abuse drugs and alcohol (Aucejo and Romano, 2016^[19]; Hallfors et al., 2002^[20]; Smerillo et al., 2018^[21]; Kimberly and Huizinga, 2007^[22]). One challenge here is that it is hard to tell, in the context of a cluster of problems including truancy, weak school performance, and other challenges, which problems are the underlying cause.

If students who arrive late for school or skip classes fall far behind in their classwork and require extra assistance, the flow of instruction is disrupted, which may also hurt other students in the class, and damage the whole school system. PISA 2018 results show that on average, students scored 7 points lower in reading for every 10 percentage point increase in the number of schoolmates who had skipped school (OECD average: -8 score points), and 6 points lower for every similar increase in the number of schoolmates who had arrived late for school in the two weeks prior to the PISA test (OECD average: -6 score points), after accounting for students' and schools' socio-economic profile and students' own truancy or lateness.

School climate

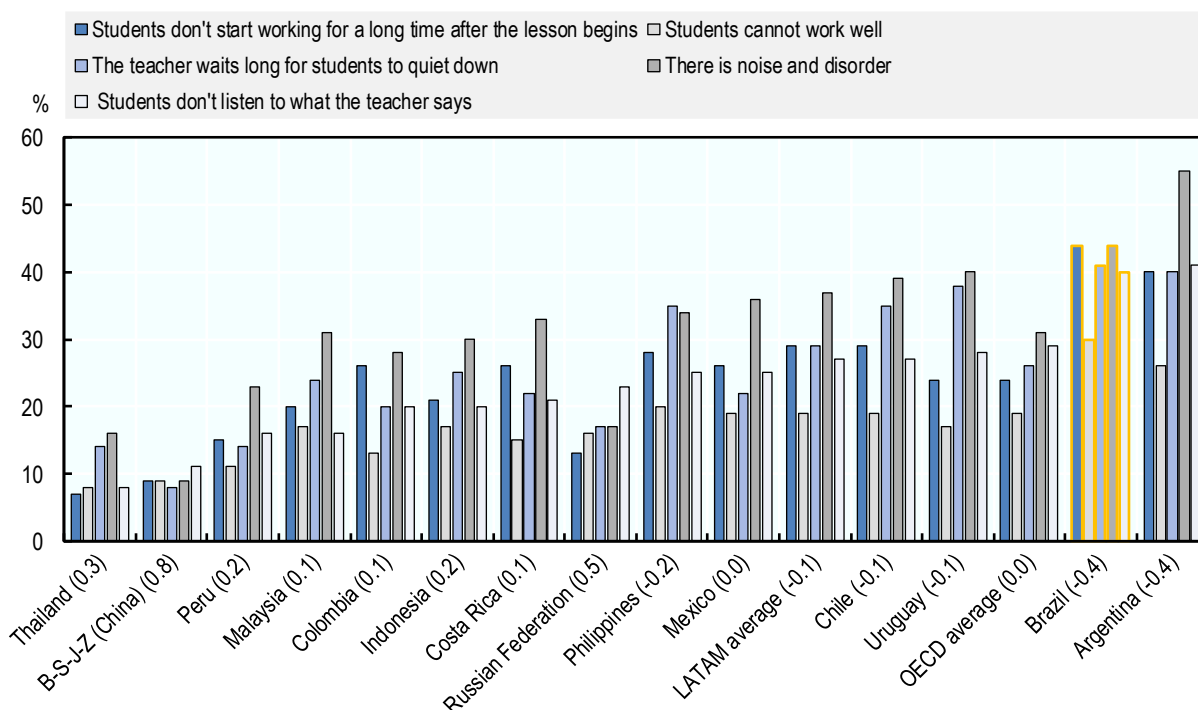
Many Brazilian classrooms are not conducive to teaching and learning

For students to learn, teachers need to create a classroom environment that is conducive to learning, which means keeping noise and disorder at bay and making sure that students can listen to what the teacher (and other students) say and can concentrate on their work. PISA results suggest that this is often not the case in Brazilian schools.

PISA asked students how frequently the following things happen in their language-of-instruction lessons: "Students don't listen to what the teacher says"; "There is noise and disorder"; "The teacher has to wait a long time for students to quiet down"; "Students cannot work well"; and "Students don't start working for a long time after the lesson begins" (see Figure 6.2). These statements were combined to create an "index of disciplinary climate". According to this index, the disciplinary climate is significantly worse in Brazil (index: -0.37) than across OECD countries on average (index: 0.0) and LATAM countries (index: -0.1)¹. For example, 44% of students report that students do not start working for a long time after the lesson begins in every or most lessons. This compares to 24% of students in OECD countries, and much lower rates in some East Asian countries and economies such as B-S-J-Z (China) (9%) and Thailand (7%).

Figure 6.2. Disciplinary climate, PISA 2018

Percentage of students who report lack of disciplinary climate in every or most language-of-instruction lessons. In parenthesis the index of disciplinary climate.



Notes: Countries are ordered in descending order by “students don’t listen to what the teacher says”. The index figures are rounded up or down. B-S-J-Z (China) is an acronym for the four Chinese provinces that participated in PISA 2018: Beijing, Shanghai, Jiangsu and Zhejiang. Source: (OECD, 2019^[12]), *PISA 2018 Results (Volume III): What School Life Means for Students’ Lives*, <https://doi.org/10.1787/acd78851-en>.

StatLink <https://stat.link/zh64wb>

A disaggregated analysis shows that students from disadvantaged backgrounds and in public schools in Brazil face slightly worse disciplinary climates (index: -0.39, -0.4 respectively), as measured by PISA’s disciplinary index, which is likely to contribute to their underperformance (see Chapter 3).

As discussed in Chapter 5, disorderly classrooms may explain why Brazilian teachers report spending less of their classroom time on actual teaching and learning (67%) than in OECD countries (78%). This has important implications for students’ learning, as PISA results show that students’ outcomes are significantly higher when there is more conducive classroom dynamics. On average in Brazil, a unit increase in the index of disciplinary climate (equivalent to one standard deviation across OECD countries) was associated with an increase of 12 score points in reading performance (OECD average: 11 score points).

Student-teacher relationships are difficult

Data from PISA and TALIS suggest that student-teacher relationships in Brazil are often strained and sometimes hostile, suggesting that certain Brazilian schools provide an inadequate learning environment for students or teachers. Research shows that this can have enduring consequences for student outcomes, well-being, behaviour, and engagement (OECD, 2015^[23]) as well as teacher job satisfaction and retention (see Chapter 5) (Guo and Higgins-D’Alessandro, 2011^[24]).

PISA 2018 asked school principals to report the extent to which their school's capacity to provide instruction was hindered ("not at all", "very little", "to some extent" or "a lot") by students lacking respect for teachers or by teachers being too strict with students. Table 6.1 shows that, on average, school leaders in Brazil are more likely to report that these issues hinder learning than across most benchmark countries. Student's lack of respect for teachers, in particular, is seen to be an issue.

Table 6.1. Student-teacher relationships, PISA 2018

Percentage of students in schools whose principals report that student learning is hindered "a lot" or "to some extent"

	Teachers being too strict with students	Students lacking respect for teachers
Argentina	23	16
Brazil	18	43
B-S-J-Z (China)	23	37
Chile	27	24
Colombia	26	26
Costa Rica	25	17
Indonesia	21	16
LATAM average	24	21
Malaysia	16	26
Mexico	27	15
OECD average	12	22
Peru	26	9
Philippines	16	17
Russian Federation	38	51
Thailand	19	14
Uruguay	24	21

Source: (OECD, 2019^[12]), *PISA 2018 Results (Volume III): What School Life Means for Students' Lives*, <https://doi.org/10.1787/acd78851-en>.

Bullying

Bullying is prevalent in Brazilian schools

PISA 2018 asked students several questions about their experiences with bullying. On average, nearly a third of students (29%) reported being bullied at least a few times a month (OECD average: 23%) and 12% of students were classified as being frequently bullied (OECD average: 8%). Internationally and in Brazil, PISA 2018 data show that physical bullying was less prevalent than verbal and relational bullying.

Table 6.2. Bullying, PISA 2018

Percentage of students that report that the following happen to them at least a few times a month during the past 12 months

	Other students left me out of things on purpose	Other students made fun of me	I was threatened by other students	Other students took away or destroyed things that belonged to me	I got hit or pushed around by other students	Other students spread nasty rumours about me
Argentina	13	17	9	15	8	15
Brazil	14	16	10	12	9	14
B-S-J-Z (China)	5	10	3	10	3	5

	Other students left me out of things on purpose	Other students made fun of me	I was threatened by other students	Other students took away or destroyed things that belonged to me	I got hit or pushed around by other students	Other students spread nasty rumours about me
Chile	10	13	6	8	7	13
Colombia	16	18	11	12	11	18
Costa Rica	10	13	8	5	5	15
Indonesia	19	22	14	22	18	20
LATAM average	12	15	8	10	8	14
Malaysia	15	24	9	12	10	17
Mexico	11	14	7	7	8	13
OECD average	9	14	6	7	7	10
Peru	9	11	6	9	7	12
Philippines	33	50	35	31	32	32
Russian Federation	23	16	11	12	11	14
Uruguay	12	13	8	9	9	13

Source: (OECD, 2019^[12]), *PISA 2018 Results (Volume III): What School Life Means for Students' Lives*, <https://doi.org/10.1787/acd78851-en>.

National data allow for a more fine-grained picture of school bullying. Results from the National Student Health Survey (*Pesquisa Nacional de Saúde do Escolar*, PeNSE) show that among Grade 9 children who report being bullied, most are boys, from ethnic minorities and from modest backgrounds (Oliveira et al., 2015^[25]). The 2015 survey also reveals that, according to victims of bullying, the main stated causes for bullying incidents were physical appearance, followed by race/ethnicity, religion, sexual orientation and place of origin (IBGE, n.d.^[26]). While bullying is often linked to personal issues, the profile of bullying victims seems to reflect Brazil's socio-economic inequalities, structural racism and other forms of prejudice (see Chapter 1). This warrants careful monitoring and prevention measures from school staff and policymakers.

Bullying has severe physical and emotional long-term consequences for students and is damaging learning outcomes

A wide range of evidence from different countries shows that students who experience bullying as a victim, bully or observer – even if only sporadically – demonstrate lower academic performance. On average, every one-unit increase in the index of exposure to bullying (equivalent to one standard deviation across OECD countries) was associated with a drop of 9 score points in reading, after accounting for students' and schools' socio-economic profile (OECD average: -9 score points). In Brazil, 15-year-old students who reported being bullied at least a few times a month scored 24 points less in reading than students who were less-frequently bullied, after accounting for students' and schools' socio-economic profile (OECD average: -21 score points). The associated drop in scores is even larger when looking at specific types of bullying acts, such as being threatened by other students (Table 6.3).

Moreover, school violence, including bullying, has been shown to damage the mental and physical health of students and leads to many problems including dropout, depression and substance abuse. Teachers also suffer, and it can lead to higher teacher stress levels and absenteeism (Stelko-Pereira and Williams, 2016^[27]).

Table 6.3. Association between bullying acts and learning outcomes, PISA 2018

Change in reading performance (measured in score points) when students reported being exposed to different acts of bullying, after accounting for students' and schools' socio-economic profile.

	Being threatened by other students	Other students left me out of things on purpose	Other students made fun of me	Other students took away or destroyed things that belong to me	I got hit or pushed around by other students	Other students spread nasty rumours about me	Any type of bullying act
Argentina	-35	-15	-11	-21	-41	-23	-17
Brazil	-48	-20	-15	-35	-55	-33	-24
B-S-J-Z (China)	-42	-19	5	-7	-28	-16	2
Chile	-62	-29	-22	-50	-57	-32	-24
Colombia	-52	-33	-20	-44	-52	-31	-28
Costa Rica	-34	-12	-10	-57	-54	-13	-11
Indonesia	-42	-18	-11	-25	-37	-30	-18
LATAM average	-49	-23	-18	-44	-52	-29	-23
Malaysia	-64	-23	-13	-57	-57	-37	-26
Mexico	-53	-27	-16	-46	-42	-28	-25
OECD average	-56	-25	-13	-51	-50	-37	-21
Peru	-49	-19	-23	-36	-50	-24	-25
Philippines	-33	-13	-10	-38	-35	-37	-28
Uruguay	-61	-28	-26	-62	-68	-45	-35
Russian Federation	-53	-6	-18	-50	-56	-40	-18

Notes: Values that are statistically significant are in bold. For more information please check Table III.B1.2.6 from the source below.

Source: (OECD, 2019^[12]), *PISA 2018 Results (Volume III): What School Life Means for Students' Lives*, <https://doi.org/10.1787/acd78851-en>.

Steps are being taken to fight bullying in Brazil

At the national and sub-national level, steps are being taken to assess and address this issue: self-reported data on bullying is collected by PeNSE and in 2016, the Programme Against Systematic Intimidation was implemented to fight bullying through teacher capacity-building programmes, awareness campaigns and the publication of monitoring reports (Presidência da República, 2015^[28]). Education networks are now legally required to have anti-bullying arrangements in place to support students and the overall school community. In the state of Rio Grande do Sul, the Internal Commissions for the Prevention of Accidents and School Violence (*Comissões Internas de Prevenção de Acidentes e Violência Escolar*, CIPAVes), formed by students, teachers, members of the school leadership, school staff and families, twice a year assess the level of school violence and identify the challenges faced by the school. The evidence collected is used to develop follow-up measures, some of which are carried out with external partners (Jotz, 2017^[29]). Box 6.1 provides some insights from around the world into how anti-bullying programmes work and evidence of their effectiveness.

Box 6.1. Anti-bullying programmes

Many anti-bullying programmes involve a whole-of-school approach, with co-ordinated engagement among teachers, students and parents. Several of these holistic programmes include training for teachers on bullying behaviour and how to handle it, anonymous surveys of students to monitor the prevalence of bullying, and a strategy to provide information to and engage with parents.

The Olweus Bullying Prevention Programme, first developed and implemented in Norway, has greatly influenced the design of anti-bullying strategies around the world. This programme includes meetings among teachers, improved supervision, surveys of students, parent-teacher meetings, role-playing among students to learn how to handle bullies, gathering and disseminating information about bullying for students and parents, developing class rules against bullying, and talking with bullies and their parents without imposing punitive measures. Other prevention programmes include KiVa, which was developed in Finland and is now implemented in Belgium, Estonia, Hungary, Italy, the Netherlands and Sweden, the Kia Kaha programme, developed in New Zealand, and the Respect programme in Norway. Castile and Leon (Spain) recently launched an anti-bullying strategy that co-ordinates plans and actions of all public and private institutions involved in the fight against bullying.

Most evaluations of bullying-prevention programmes find a positive but modest impact. Randomised control trials found that the KiVa programme reduced the incidence of bullying, and also made a positive difference in students' attitudes toward bullies and victims. Research shows that, of the various possible preventive measures, training and information for parents, better supervision in the playground, improved disciplinary measures, working with peers and classroom management are the most effective. Programmes need to be long-term, and frequently monitored and evaluated to be effective. Those combine systematic monitoring and targeting of high-risk youth are particularly constructive. Although these programmes may not eliminate bullying entirely, interventions make bullying less acceptable to students, teachers, and parents, mitigating the potentially harmful effects.

Source: (OECD, 2019^[12]), *PISA 2018 Results (Volume III): What School Life Means for Students' Lives*, <https://doi.org/10.1787/acd78851-en>; (Smith, Pepler and Rigby, 2004^[30]), *Bullying in schools: How successful can interventions be?*, <https://psycnet.apa.org/doi/10.1017/CBO9780511584466> (accessed on 29 June 2020); (Salmivalli, Kärnä and Poskiparta, 2011^[31]), *Counteracting bullying in Finland: The KiVa program and its effects on different forms of being bullied*, <https://doi.org/10.1177/0165025411407457>; (Salmivalli, Kaukiainen and Voeten, 2005^[32]), *Anti-bullying intervention: Implementation and outcome*, <http://doi.org/10.1348/000709905x26011>; (Raskauskas, 2007^[33]), *Involvement in traditional and electronic bullying among adolescents*, <https://psycnet.apa.org/doi/10.1037/0012-1649.43.3.564> (accessed on 29 June 2020); (Ertesvåg and Vaaland, 2007^[34]), *Prevention and Reduction of Behavioural Problems in School: An evaluation of the Respect program*, <https://doi.org/10.1080/01443410701309258>; (Evans, Fraser and Cotter, 2014^[35]), *The effectiveness of school-based bullying prevention programs: A systematic review*, <https://doi.org/10.1016/j.avb.2014.07.004>; (Ttofi and Farrington, 2009^[36]), *What works in preventing bullying: effective elements of anti-bullying programmes*, <https://doi.org/10.1108/17596599200900003>; (Ferguson, 2007^[37]), *The Effectiveness of School-Based Anti-Bullying Programs: A Meta-Analytic Review*, <https://doi.org/10.1177/0734016807311712>; (Nocentini and Menesini, 2016^[38]), *KiVa Anti-Bullying Program in Italy: Evidence of Effectiveness in a Randomized Control Trial*, <http://doi.org/10.1007/s1121-016-0690-z>; (Ttofi and Farrington, 2010^[39]), *Effectiveness of school-based programs to reduce bullying: a systematic and meta-analytic review*, <http://doi.org/10.1007/s11292-010-9109-1>.

Sense of belonging

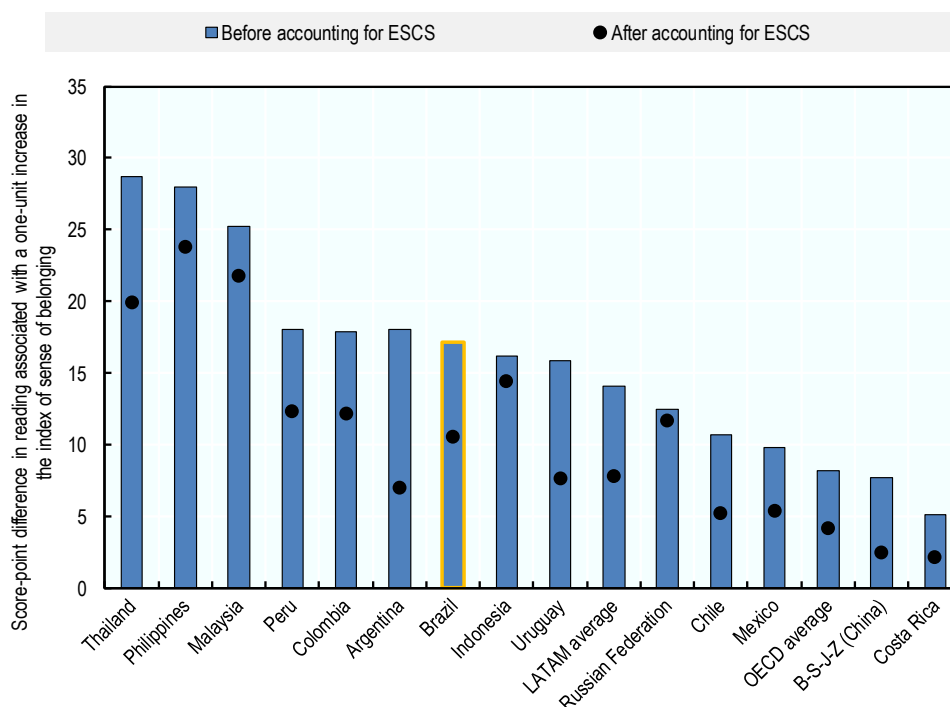
Students report low sense of belonging at school

According to PISA evidence, the sense of belonging at school is lower in Brazil (-0.19) than in OECD or LATAM countries (0.0 and -0.09, respectively), on average. This suggests that Brazilian students are less likely to report feeling accepted, respected and/or supported at school. This may reflect some of the factors described above, including undisciplined classroom climate, strained student-teacher relationships and high rates of bullying (Garcia-Reid, 2007^[40]; Ma, 2003^[41]; OECD, 2017^[42]). In Brazil, students in rural (-0.42) and public schools (-0.24) have less sense of belonging than their peers in urban and private schools (-0.14 and 0.05, respectively).

Supporting students' engagement with school could support better outcomes

Internationally, and in Brazil, 15-year-old students who reported a stronger sense of belonging at school scored higher in reading, even after accounting for the socio-economic profile of students and schools. On average, a one-unit increase in the index of belonging at school (equivalent to one standard deviation across OECD countries) was associated with an increase of 11 score points in reading, after accounting for the socio-economic profile of students and schools (OECD average: 4 score points) (Figure 6.3). Research shows that students who feel they belong at school are also less likely to engage in risky and anti-social behaviours (Catalano et al., 2004^[43]), to play truant and drop out of school (Lee and Burkam, 2003^[44]; McWhirter, Garcia and Bines, 2018^[45]; Slaten et al., 2015^[46]). This suggests that measures targeted at improving school connectedness could help support higher levels of achievement and participation in Brazil (see Box 6.2).

Figure 6.3. Sense of belonging and reading performance, PISA 2018



Notes: Countries are ordered from highest to lowest score-point difference associated with a one-unit increase in the index of sense of belonging before accounting for ESCS.

Source: (OECD, 2019^[12]), *PISA 2018 Results (Volume III): What School Life Means for Students' Lives*, <https://doi.org/10.1787/acd78851-en>.

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Box 6.2. Increasing students' sense of belonging at school in Brazil

To Be and Belong (*Ser e Pertencer*) initiative in Rio de Janeiro

The public municipal school E.M. Bernardo de Vasconcellos, offering the last years of elementary education and upper secondary education in the neighbourhood of Penha in Rio de Janeiro, used to be considered one of the worst schools in the area because of poor infrastructure conditions and weak motivation of staff and students. In 2017, new school leadership launched the *Ser e Pertencer* initiative, which aimed to create an educational environment which would be seen as welcoming, safe, and inclusive by both students and staff. A sports' court was built through collaboration between school staff, parents and students; and the school was repainted by a local artist, who represented the history of the region and its culture through images on the school walls, alongside motivational statements outlawing discrimination and promoting peace.

The initiative also involved measures designed to encourage more dynamic and inclusive learning: the history teacher used slang and local vocabulary, so students would feel represented and their culture valued. A Walk in Penha (*Rolê na Penha*) project aimed to stimulate local tourism and students' knowledge of their region by having students from the neighbourhood present the region, its history and tourist spots to young people from other areas. The project was developed in partnership with a local tourism agency which promotes memory rescue and valorisation of disadvantaged urban

neighbourhoods. Other activities included conversation circles and lectures on topics such as mental health, homophobia and religious intolerance.

Source: (Prefeitura da Cidade do Rio de Janeiro, 2017^[47]), *Futuro em construção na Vila Cruzeiro* [Future under construction in Vila Cruzeiro], <http://www.pcrj.rj.gov.br/web/sme/exibeconteudo?id=7317107> (accessed on 20 October 2020); (MultiRio, 2017^[48]), *Projeto fortalece sentimento de pertencimento dos alunos à E.M. Bernardo de Vasconcellos* [Project strengthens students' sense of belonging to E.M. Bernardo de Vasconcellos], <http://www.multirio.rj.gov.br/index.php/leia/reportagens-artigos/reportagens/13383-projeto-fortalece-sentimento-de-pertencimento-dos-alunos-%C3%A0-e-m-bernardo-de-vasconcellos> (accessed on 20 October 2020).

Students' aspirations and perceptions

How students perceive their own learning and potential can influence their attitudes towards learning and school. Students with high expectations for their future careers and strong beliefs in their own capacity for development are more likely to work hard at school and to see value in remaining in education. Conversely disengaged and low-performing students may develop less ambitious aspirations. Students' expectations and perceptions are also shaped, at the system level, by the structure of the labour market, and the potential returns from education, and at a personal level, by family economic circumstances and wider social expectations and pressures.

Students' outlook and self-perception

PISA collects data on three important dimensions of students' self-perception (OECD, 2019^[12]):

- **Self-efficacy:** the extent to which students believe in their current ability to engage in certain activities and perform specific tasks, especially when facing adverse circumstances (Bandura A., 1977^[49]).
- **Fear of failure:** the extent to which students fear making a mistake because of the perceived negative consequences associated with failing (Lazarus, 1991^[50]; Warr, 2000^[51]).
- **Growth mindset:** the belief that their ability and intelligence can develop over time (Caniëls M. et al., 2018^[52]) (Dweck, 2006^[53]).

This section explores how different students perceive themselves and their abilities and the extent to which their perceptions are associated with their performance.

Students' self-efficacy is associated with stronger outcomes

PISA asked students to report the extent to which they agree ("strongly disagree", "disagree", "agree", "strongly agree") with the following statements about themselves: "I usually manage one way or another"; "I feel proud that I have accomplished things"; "I feel that I can handle many things at a time"; "My belief in myself gets me through hard times"; and "When I'm in a difficult situation, I can usually find my way out of it". Brazil's results are, on average, similar to those across OECD and benchmark countries.

Table 6.4. Students' self-efficacy, PISA 2018

Percentage of students who “agree” or “strongly agree” with the following statements:

	I usually manage one way or another	I feel proud that I have accomplished things	I feel that I can handle many things at a time	My belief in myself gets me through hard times	When I'm in a difficult situation, I can usually find my way out of it
Argentina	87	84	61	78	82
Brazil	76	88	57	75	77
B-S-J-Z (China)	82	90	61	81	74
Chile	92	91	78	75	84
Colombia	89	93	75	91	90
Costa Rica	91	96	79	84	89
Indonesia	72	90	71	91	89
LATAM average	88	91	72	82	86
Malaysia	63	85	55	80	80
Mexico	91	95	78	86	89
OECD average	89	86	70	71	84
Peru	89	93	74	88	90
Philippines	84	89	76	83	83
Russian Federation	67	76	61	75	82
Thailand	89	94	67	90	86
Uruguay	90	90	73	76	85

Source: (OECD, 2019^[12]), *PISA 2018 Results (Volume III): What School Life Means for Students' Lives*, <https://doi.org/10.1787/acd78851-en>.

In Brazil, advantaged students are much more likely than their less advantaged peers to report high levels of self-efficacy (index: -0.07 and -0.25, respectively). This matters because greater self-efficacy is associated, in Brazil as well as OECD countries, with stronger reading performance even after accounting for the socio-economic profile of students and schools, and for gender. In Brazil, a one-unit increase in the index of self-efficacy was associated with an increase of five score points in the reading assessment, on average, similar to the association observed in OECD countries (six score points). This is in line with research that suggests that students' with more positive self-perceptions are more likely to set challenging goals for themselves, persist for longer and expend greater effort (Bandura A., 1977^[49]; Ozer and Bandura, 1990^[54]).

Fear of failure among students is high, especially among girls, but this may encourage stronger performance

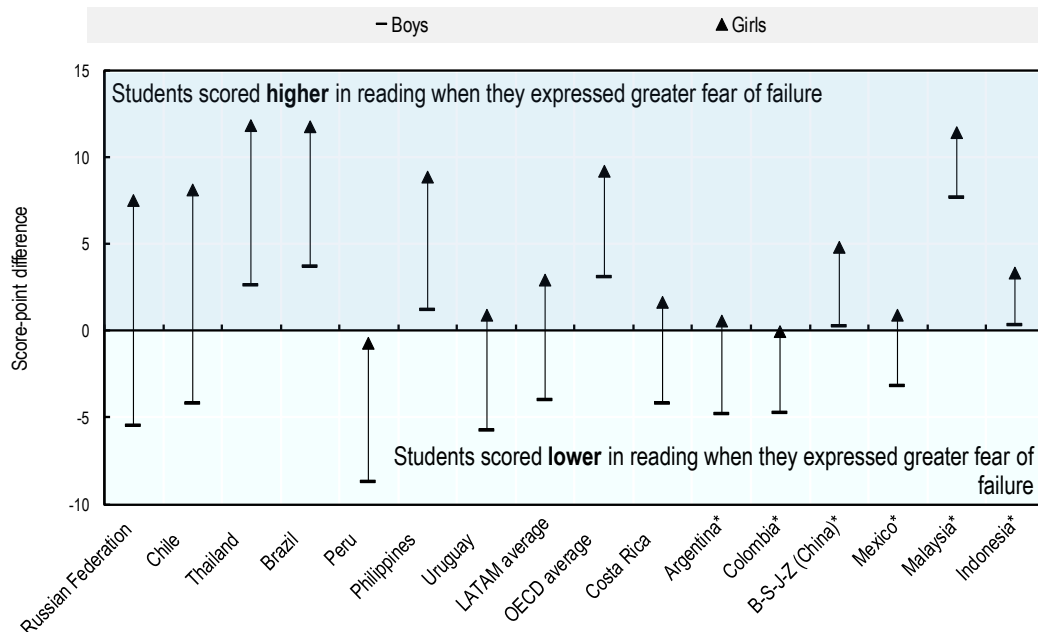
Students were asked to report the extent to which they agree (“strongly disagree”; “disagree”; “agree”; “strongly agree”) with the following statements about themselves: “When I am failing, I worry about what others think of me”; “When I am failing, I am afraid that I might not have enough talent”; and “When I am failing, this makes me doubt my plans for the future”. These statements were combined to create the index of fear of failure whose average is zero and standard deviation is one across OECD countries. In Brazil, the fear of failure is 0.04, slightly higher than the average in OECD countries (index: -0.01). Perhaps surprisingly, students who expressed a greater fear of failure scored five points higher in reading than students expressing less concern about failing, after accounting for the socio-economic profile of students, and for gender (OECD average: four score points) (see Figure 6.4).

Disaggregated data show that not only do girls have much higher levels of fear of failure (index: 0.16 for girls and -0.10 for boys), but also that it is a much better predictor of academic performance among girls than among boys (OECD, 2019^[12]). In reading, for instance, girls scored 12 points higher for every one-

unit increase in the index of fear of failure, after accounting for students' socio-economic status and the index of self-efficacy, whereas boys scored only 4 points higher.

Figure 6.4. Association between fear of failure and reading performance, by gender, after accounting for students' socio-economic profile, PISA 2018

Change in reading performance associated with a one-unit increase in the index of fear of failure. Based on students' reports.



Notes: Countries and economies where the difference between boys and girls is not statistically significant are marked with an asterisk (see Annex A3 of PISA 2018 vol. III, source below).

Countries and economies are ordered according to the size of the score difference from the largest to the smallest.

Source: Adapted from (OECD, 2019^[12]), *PISA 2018 Results (Volume III): What School Life Means for Students' Lives*, <https://doi.org/10.1787/acd78851-en>.

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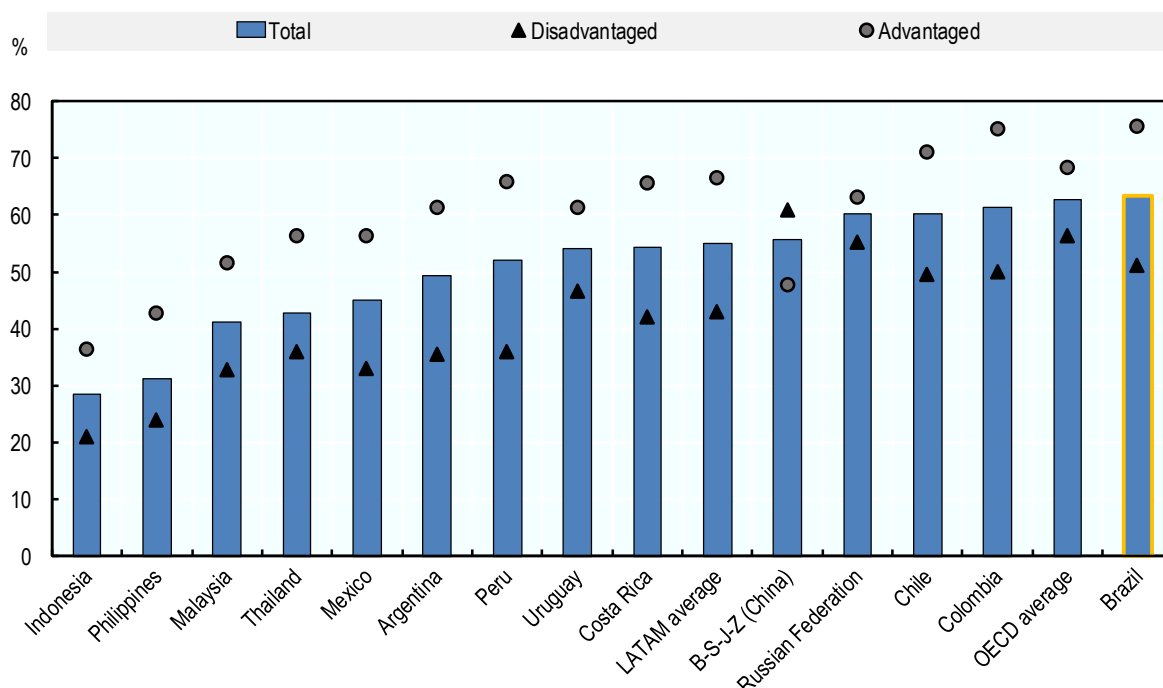
Overall, Brazil's results are consistent with international results and evidence that some degree of fear can urge students to expend greater effort on academic tasks. But it needs to be kept within limits: an unreasonable fear of failure has been associated with stress, anxiety, burnout and depression (H, SS and A, 2017^[55]; Sagar, Lavalley and Spray, 2007^[56]; Conroy, 2001^[57]).

“Growth mindset” — a belief that one can improve — is associated with better outcomes

To measure the “growth mindset”, PISA 2018 asked students whether they agreed (“strongly disagree”; “disagree”; “agree”; “strongly agree”) with the following statement: “Your intelligence is something about you that you can’t change very much”. Students who disagreed with the statement are considered to have a stronger growth mindset than students who agreed with the statement. Results for Brazil show that nearly two-thirds of 15-year-olds have a strong growth mindset (63%), which is equivalent to the OECD average and higher than in many LATAM countries (see Figure 6.5).

Figure 6.5. Growth mindset, PISA 2018

Percentage of students who “disagree” or “strongly disagree” with the statement “your intelligence is something about you that you can’t change very much”, by students’ socio-economic background



Note: Countries are ordered from lowest to highest percentage (total) of students who “disagree” or “strongly disagree” with the statement “your intelligence is something about you that you can’t change very much”.

Source: (OECD, 2019^[12]), PISA 2018 Results (Volume III): What School Life Means for Students’ Lives, <https://doi.org/10.1787/acd78851-en>.

StatLink  <https://stat.link/ztsvo4>

Internationally, and in Brazil, socio-economically disadvantaged students were more likely than advantaged students to believe that their intelligence cannot change very much over time. However, the gap is much higher in Brazil than in OECD countries: 75% of advantaged students have strong growth mindsets, compared to only 51% of disadvantaged students (OECD average: 68% and 56%, respectively). A similar gap is observed between students in public and private schools.

Internationally, PISA results show a statistically significant positive association between a strong growth mindset and students’ scores. That is to say, students that disagree that “your intelligence is something about you that you can’t change very much” score higher than their peers who agree with the statement. Brazil has one of the strongest associations among PISA-participating countries: students who disagreed or strongly disagreed with the statement scored 57 points higher than the latter group after accounting for the socio-economic profile of students and schools (OECD average: 32 score points).

These findings are consistent with the theory that encouraging a growth mindset in students can improve academic performance. However, PISA cannot prove cause and effect: holding a growth mindset could be the result of strong academic performance, rather than the other way around. In the case of Brazil, this discussion is closely linked with socio-economic disparities among students, which may further reinforce performance gaps.

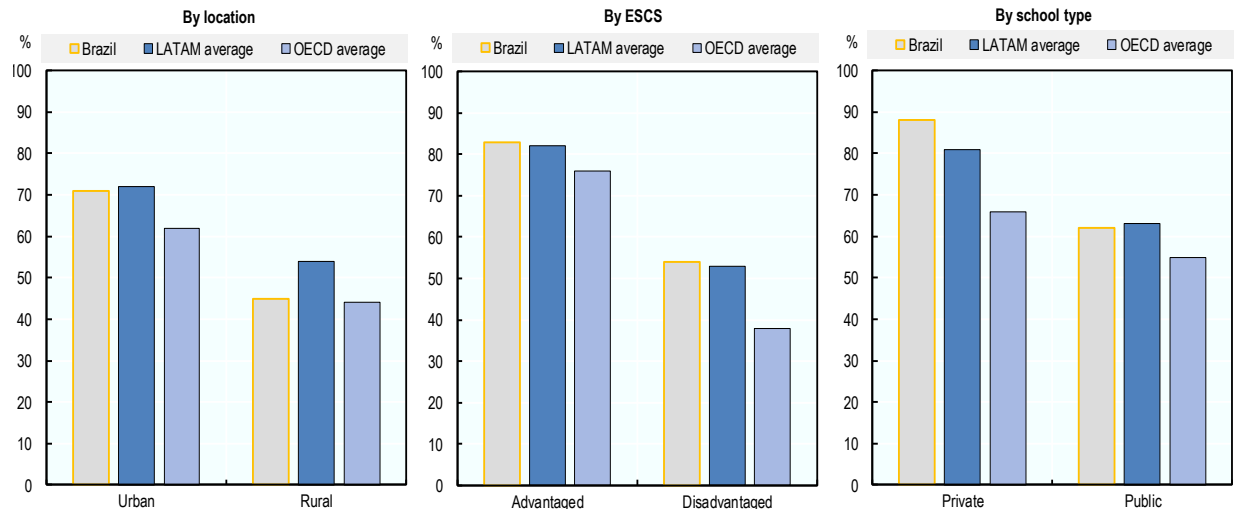
Academic expectations

Great expectations: most students aspire to enter university

In Brazil, 66% of 15-year-olds report that they expect to obtain a tertiary qualification (ISCED 5 or more). While similar to Latin American countries (67%), this share is higher than the one found in OECD countries (56%) on average (Figure 6.6). As is the case elsewhere, in Brazil, students from more advantaged backgrounds, private schools or urban areas are more likely to expect to progress into higher levels of education.

Figure 6.6. Students' academic expectations, PISA 2018

Share of students that report that they expect to obtain a tertiary qualification, by geographic location, socio-economic status (ESCS) and school type



Note: Tertiary education is equivalent to obtaining a bachelor's, master's, or doctoral degree (ISCED 5A and 6).

Source: (OECD, 2019^[58]), PISA 2018 Database, <https://www.oecd.org/pisa/data/2018database/> (accessed on 13 October 2020).

StatLink  <https://stat.link/e1kqsd>

Such expectations might reflect socio-economic circumstances and the broader education structure

Expectations of entry to higher education are likely a reflection of wider societal and family pressures. PISA 2018 results show that 73% of Brazilian parents expect their children to complete a tertiary degree, which compares to 63% in OECD countries. These high aspirations are striking, as participation in tertiary education is in fact much lower in Brazil than in OECD countries (see Chapter 2). As discussed in Chapter 3, there are very good labour market returns to tertiary qualifications in Brazil, providing strong economic incentives for young Brazilians to aim for university.

These strong aspirations for tertiary level education among 15-year-olds suggest that secondary education in Brazil may be seen by students primarily as an academic path to university, with few opportunities for children to acquire more practical knowledge and skills. This has implications for adolescents and young adults, as well as for the Brazilian labour market (OECD, 2018^[59]; OECD, 2020^[60]). The recent restructuring of upper secondary education in Brazil is a chance to address this issue, as students will be able to take more vocational and technical courses as part of their studies. It might also offer the possibility of strengthening one- or two-year postsecondary vocational programmes (at ISCED 4 and 5) that might meet

the need for higher technical skills in the Brazilian economy. This level of education is currently relatively undeveloped in Brazil compared to many OECD and other countries. It would also help address the current wide gap, identified above, between high academic aspirations among 15-year-olds, and relatively low levels of participation in higher education programmes (at ISCED 6 level).

Student well-being

Student well-being, defined as the quality of students' lives, has increasingly been identified as important by policy makers and educators around the world. Evidence shows that students who feel that they are part of a community and supported by others, tend to have stronger motivation and better academic performance. Higher well-being also has wider benefits, including a link to better health and less anti-social behaviour (Lyubomirsky et al., 2005^[61]; Park N., 2004^[62]).

In Brazil, as in other countries, increasing attention is being given to how the education system can support student well-being. Since the early 2000s, federal and local initiatives have promoted healthy lifestyles in schools and sought to prevent violence. In recent years, PeNSE has collected data on student well-being and the school environment (see Box 6.6). But gaps remain in the policy measures. First, some key dimensions of well-being, especially psychological health, tend to be overlooked, and little data collected. This makes it difficult to assess the existing (and emerging) issues, monitor the effectiveness of on-going programmes and develop targeted responses. Second, without a common framework for student well-being, there has been limited continuity or alignment in policies at the national and sub-national levels.

In 2020, COVID-19 has had a new, damaging and unanticipated impact on student well-being. School closures and lockdowns inhibited social life, and sometimes damaged nutrition because of the loss of access to school meals. International evidence suggests that in times of crisis and lockdowns, children may be more at risk of maltreatment, neglect, sexual abuse and teenage pregnancies (Folha de S. Paulo, 2020^[63]; OECD, 2020^[64]). While most schools are now (in late 2020) re-opening, even if only part-time, the COVID-19 health and economic crisis will have long-lasting effects on students' well-being and life chances. This crisis has also exposed the lack of any systematic and co-ordinated approach to student well-being in Brazil.

This section will draw on PISA (see Box 6.4 for PISA's definition of well-being), and national results looking at four different dimensions: their material, psychological, physical and social well-being. The data were collected before the COVID-19 pandemic and therefore do not reflect students' well-being during and after school closures and the crisis.

Box 6.3. Student well-being in PISA

The five domains of student well-being identified in the Framework for the Analysis of Student Well-Being in the PISA 2015 Study are:

- **Cognitive well-being**, which refers to the knowledge and skills students have to participate effectively in today's society, as lifelong learners, effective workers and engaged citizens. This is discussed in Chapter 3.
- **Material well-being**, which refers to the material resources that make it possible for families to provide for their children's needs, and for schools to support students' learning and healthy development.
- **Psychological well-being**, which includes students' evaluations and views about their lives and their feelings and issues.
- **Physical well-being**, which refers to students' health status, engagement in physical exercise and the adoption of healthy eating habits. Limited data for Brazil meant that sources other than PISA had to be explored.
- **Social well-being**, which refers to the quality of social lives. For the purposes of this report, the analysis will distinguish between students' social life at school (with peers and friends) and their connections within the home environment (with parents and families).

Source: (Borgonovi and Pál, 2016^[65]), "A Framework for the Analysis of Student Well-Being in the PISA 2015 Study: Being 15 In 2015", <https://doi.org/10.1787/5jlpzsqghvnb-en>.

Material well-being

PISA student questionnaires are used to compute the PISA Index of Economic, Social and Cultural Status (ESCS), which is a composite score based on parental education, highest parental occupation and home possessions, which acts as a proxy for wealth. Analysis of the students' home possessions indicator offers insights into the material well-being of Brazilian students and their access to educational resources. This is particularly important in the context of an economic and health crisis which may exacerbate inequalities in Brazil.

Brazilian students are not as wealthy as their OECD peers, and there are large disparities

According to PISA 2018 results, on average, Brazilian students' index of home possessions (-1.43) is significantly lower than that found across OECD countries (-0.04) although similar to Latin American comparison countries (-1.27) with the exception of Chile (-0.71) and Uruguay (-0.96) (Table 6.5). Moreover, the disparities between students in rural and urban schools, public and private schools, and from disadvantaged and advantaged backgrounds are much wider than those found in OECD countries, although similar to those in LATAM countries on average. The same is observed across all indices.

Table 6.5. Student's home possessions index, PISA 2018

Disaggregated breakdown of PISA's ESCS

	Home possessions index		Family wealth index		Educational resources at home index		Cultural possessions at home index	
	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.
Brazil	-1.43	0.02	-1.37	0.02	-0.98	0.02	-0.60	0.01
LATAM average	-1.27	0.01	-1.34	0.01	-0.76	0.01	-0.50	0.01
OECD average	-0.04	0.00	-0.05	0.00	-0.03	0.00	-0.01	0.00

Note: In PISA, students reported the availability of household items at home including three country-specific household items that were seen as appropriate measures of family wealth within the country's context (e.g. cable TV, microwave oven and a washing machine). In addition, students reported the amount of possessions and books at home. Five indices were derived from these items: family wealth possessions (WEALTH), cultural possessions (CULTPOSS), home educational resources (HEDRES), ICT resources (ICHOME) and home possessions (HOMEPOS), which comprises the indices of family wealth, cultural resources, access to home educational and cultural resources and books in the home.

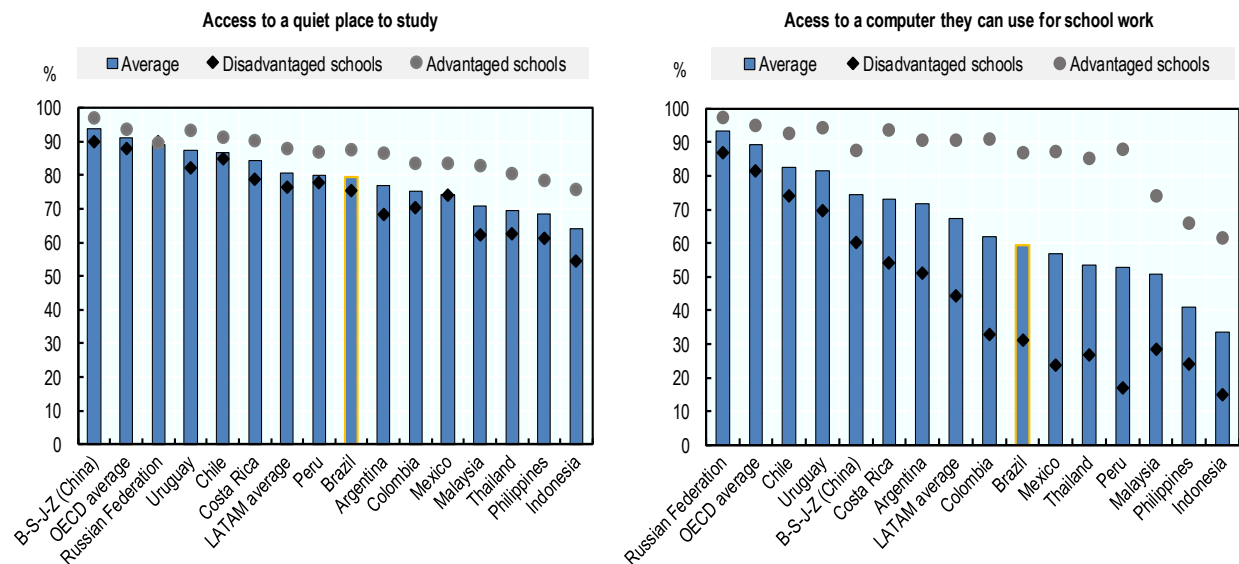
Source: (OECD, 2019^[12]), *PISA 2018 Results (Volume III): What School Life Means for Students' Lives*, <https://doi.org/10.1787/acd78851-en>.

Lack of access to basic educational resources at home can be a barrier for learning, in particular for disadvantaged students

PISA research shows that home education resources, including quiet study space and Internet access, are associated with stronger learning outcomes (OECD, 2017^[42]). Although less than 10% of Brazilian 15-year-olds have no home Internet access, (OECD average: 4%) (OECD, 2020^[66]), 20% of students have no quiet place to study (OECD average: 9%) and 40% have no computer that they can use for school work (OECD average: 11%) (see Figure 6.7). Access to home educational resources is closely tied to socio-economic background everywhere, but the disparities are much wider in Brazil than in most OECD countries. For example, 31% of students from disadvantaged schools have a computer to work with at home, compared to 89% of advantaged students. This compares to a 14 percentage point difference in OECD countries.

Figure 6.7. Access to basic educational resources, PISA 2018

Share of students who have access to a quiet place (left) and to a computer for school work (right)



Notes: For the figure on the left, values for the Russian Federation (advantaged and disadvantaged) are not statistically significant. Countries are ordered from highest to lowest percentage of students who have access to a quiet place to study (graph on the left), have access to a computer they can use for school work (graph on the right).

A socio-economically disadvantaged (advantaged) school is a school whose socio-economic profile (i.e. the average socio-economic status of the students in the school) is in the bottom (top) quarter of the PISA index of economic, social and cultural status among all schools in the relevant country/economy.

Countries and economies are ranked in descending order of the average percentage of students that have access to a quiet place (figure on the left); and access to a computer they can use for school work (figure on the right).

Source: (OECD, 2019^[58]), PISA 2018 Database, <https://www.oecd.org/pisa/data/2018database/> (accessed on 13 October 2020).

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The COVID-19 pandemic has greatly increased the importance of home Internet access and computing facilities, as distance learning and socially-distanced school models (e.g. hybrid classrooms) become the norm. Students lacking these facilities at home (most disadvantaged students), risk falling further behind in their studies (see Chapter 3). While certain initiatives have been taken at the local or school level to support these students (e.g. laptop donations or using social media tools), many students remain unable to follow their online courses.

Psychological well-being

Psychological well-being is a vital element in health (Choi, 2018^[67])(Box 6.4), a key component of overall well-being (Pollard and Lee, 2003^[68]) and a precondition of "good quality" life (Morgan et al., 2007^[69]). Childhood and adolescence are crucial periods in the development of psychological well-being. Children who are in a good state of emotional well-being have a much better chance of growing into adults who are happy, confident and able to enjoy healthy lifestyles, and to contribute to society (Morgan et al., 2007^[69]; OECD, 2015^[70]). Conversely, adult mental health disorders mostly originate during childhood or adolescence (Kessler et al., 2007^[71]; Paus, Keshavan and Giedd, 2008^[72]; Kieling et al., 2011^[73]; Jones, 2013^[74]), but treatment usually does not begin until later in life due to the stigma and lack of awareness, as well as other cultural or social norms. Nearly one-in-two adult mental health problems begin by age 14 and 75% by the mid-20s (WHO, 2020^[75]) and many of these problems recur and persist.

Prior to the COVID-19 crisis, PISA results revealed worrying evidence related to declining levels of students' life satisfaction in Brazil. More recently, national surveys have revealed the damaging impact of school closures and lockdown measures, with between 40% and 50% of interviewees reporting sadness, irritation and lack of motivation as a result of the disruption (Fundação Lemann, 2020^[76]). At the same time, the pandemic has disrupted child and adolescent mental health services and identification, partly because of social distancing measures and partly because of the redeployment of staff to COVID-19 activities (Chevance et al., 2020^[77]). School closures also interrupt the use of schools as a common site for mental health interventions, especially for low-threshold interventions (McDaid, Hewlett and Park, 2017^[78]).

Box 6.4. Understanding the definitions of psychological well-being, emotional well-being and mental health

Although the terms “psychological well-being”, “emotional well-being” and “mental health” are often used as synonyms, there are some important differences:

- **Mental health** is defined by the World Health Organization (WHO) as “a state of well-being in which an individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community.” It is commonly used as a clinical indicator for the existence or absence of mental disorders and diseases.
- **Emotional well-being** – often referred to as “hedonic well-being” – has been defined as “the quality of an individual's emotions and experiences, i.e. sadness, anxiety, worry, happiness, stress depression, anger, joy, and affection that leads to unpleasant or pleasant feelings”. Emotional well-being encompasses mental health.
- **Psychological well-being**, as defined by PISA's Framework for the Analysis of Student Well-being, depends on students' evaluations and views about their lives, their engagement with school, and the goals and ambitions they have for their future. Psychological well-being encompasses aspects both of emotional well-being and mental health. However, in PISA, no direct objective indicators for well-being as a whole are available. This means that the PISA data cannot be used to make conclusions about students' mental health.

Source: (OECD, 2019^[79]), *PISA 2018 Assessment and Analytical Framework*, <https://doi.org/10.1787/b25efab8-en>; (Choi, 2018^[67]), *Emotional well-being of children and adolescents: Recent trends and relevant factors*, <https://doi.org/10.1787/41576fb2-en>.

Life satisfaction among Brazilian students is similar to the OECD average but lower than in neighbouring countries

PISA 2018 defines life satisfaction in terms of an individual's evaluation of their quality of life (Shin and Johnson, 1978^[80]). Box 6.5 explains how the assessment measured students' satisfaction. Brazilian students reported 7.1 on the life satisfaction scale, similar to the OECD average (7.0), but slightly lower than the LATAM average (7.5). On average across OECD countries, and in Brazil, PISA data show that boys are more likely than girls to be “satisfied” with their lives (the gender gap is equivalent to 11 percentage points in Brazil and in OECD countries). While in most countries, students from more advantaged backgrounds are more likely to be satisfied with their lives, this was not the case for Brazil.

Box 6.5. How PISA 2018 measured students' life satisfaction

PISA 2018 asked students to rate their life satisfaction on a scale from 0 (not at all satisfied) to 10 (completely satisfied). Based on students' responses, 15-year-olds were classified into four different groups and are referred to as the following:

- A student is “not satisfied” if he or she reported between 0 and 4 on the life-satisfaction scale
- A student is “somewhat satisfied” if he or she reported 5 or 6 on the life-satisfaction scale
- A student is “moderately satisfied” if he or she reported 7 or 8 on the life-satisfaction scale
- A student is “very satisfied” if he or she reported 9 or 10 on the life-satisfaction scale

A fifth group “satisfied” combines the two groups of students that reported the highest levels of life satisfaction (between 7 and 10 on the life-satisfaction scale).

Source: (OECD, 2019^[12]), *PISA 2018 Results (Volume III): What School Life Means for Students' Lives*, <https://doi.org/10.1787/acd78851-en>.

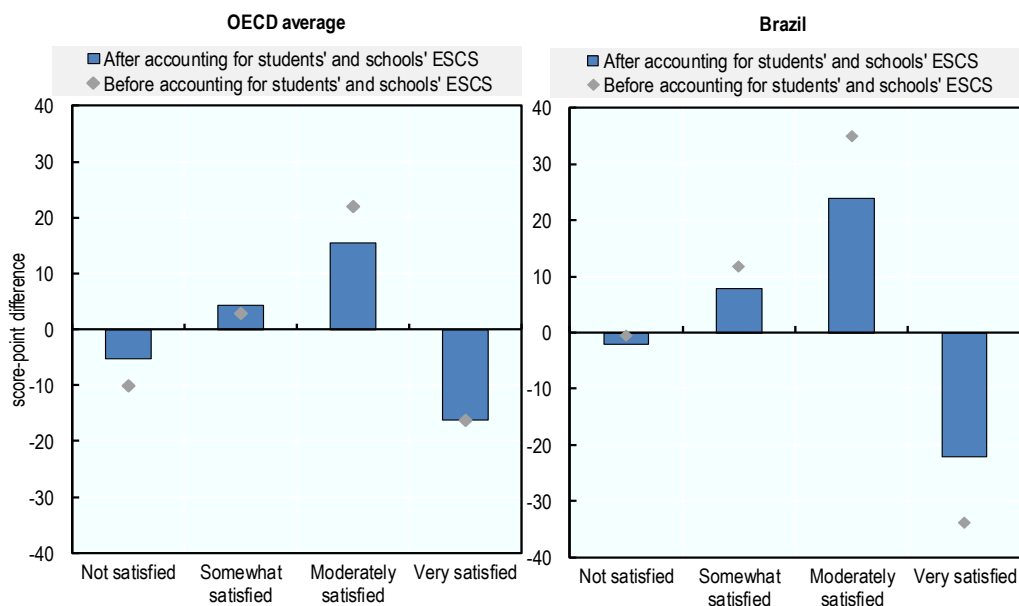
PISA 2015 asked the same question about life satisfaction as PISA 2018. In Brazil, as in most participating countries, students reported less satisfaction with their lives in 2018 than they did in 2015², with a larger decline in Brazil (-0.53) than in OECD countries (-0.30). While it is important not to infer much from only two data points, this decline should be monitored.

Higher life satisfaction does not always mean better outcomes

In Brazil and in OECD countries, PISA 2018 results show an inverted U-shaped relationship between reading performance and life satisfaction. Reading scores were lower amongst students who reported between 0 and 4, and 9 or 10 on the life-satisfaction scale, while reading scores were higher among students who reported 5 through 8 on the scale (see Figure 6.8).

Figure 6.8. Students' satisfaction with life and reading performance, PISA 2018

Score-point difference in reading associated with students' life satisfaction



Notes: The socio-economic profile is measured by the PISA index of economic, social, and cultural status (ESCS).

All values are statistically significant apart from Brazil "Not satisfied" (both before and after accounting for ESCS).

Legend: Not satisfied (Students who reported 0 to 4 on the life-satisfaction scale of 0 to 10); Somewhat satisfied (5 to 6 on the life-satisfaction scale); Moderately satisfied (7 to 8 on the life-satisfaction scale); Very satisfied (9 to 10 on the life-satisfaction scale).

Source: (OECD, 2019^[12]), *PISA 2018 Results (Volume III): What School Life Means for Students' Lives*, <https://doi.org/10.1787/acd78851-en>.

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Students' feelings can support better outcomes only to a certain point

PISA asked students to report how frequently ("never"; "rarely"; "sometimes"; "always") they feel happy, lively, proud, joyful, cheerful, scared, miserable, afraid and sad. Overall, Brazilian students reported feeling good about their lives. Between 80% and 90% of students reported sometimes or always feeling happy, cheerful, joyful and lively; 65% reported feeling proud with the same frequency. By contrast, around 40% of students sometimes or always feel scared, sad and miserable, and about half of students reported feeling afraid with the same frequency. These results are relatively similar to those found in OECD and LATAM countries (OECD, 2019^[12]). Negative feelings, as long as they do not dominate lives, are not necessarily harmful, as they can play a constructive role in life. The relationships between students' feelings and reading performance are curvilinear (increasingly positive until a certain point and decreasing thereafter), similar to the pattern for life satisfaction.

Physical well-being

In OECD and partner countries, as in Brazil, many children and young people are risking their health through lack of exercise, poor diet and insufficient sleep (Aston R., 2018^[81]). This reflects wider trends, including but not limited to, the use of technology, changing family structures and sedentary lives. At the same time, there is growing awareness of the impact of physical health on cognitive, mental and social well-being (and vice versa), and how negative impacts can reduce academic performance and increase social costs. As a result, educators and policymakers are increasingly interested in the role education and schools might play in addressing physical health issues.

This section looks at self-reported data from PISA 2015 student questionnaires³, and from PeNSE (see Box 6.6). This offers an indication – albeit imperfect and incomplete – of 15-year-old students' health conditions, and the extent to which they engage in healthy habits.

Box 6.6. The National Student Health Survey (PeNSE)

PeNSE is a survey carried out by the national Brazilian government in a collaboration between the Brazilian Institute of Geography and Statistics (*Instituto Brasileiro de Geografia e Estatística*, IBGE), the Ministry of Health and the Ministry of Education (*Ministério da Educação*, MEC) since 2009. As a sample survey, PeNSE collects self-reported information from students from both public and private sectors with the goal of identifying and monitoring behavioural risk factors and health protection of young students in Brazilian schools.

Since its first cycle, PeNSE's questionnaire has evolved and together with the improvement of data collection instruments (see below), these developments have allowed the survey to cover a wide array of topics and collect more disaggregated data, including:

- the four common risk factors for chronic non-communicable diseases (smoking, physical inactivity, inadequate nutrition and alcohol consumption)
- the following themes: socio-economic aspects of students, including family context; drug use and consumption; sexual and reproductive health; eating habits; hygiene habits; mental health; violence, safety and accidents; perception of body image; student well-being
- information about characteristics of the school environment.

Initially, PeNSE's target population were students from Grade 9. Since 2015, the survey has collected data from two different sampling groups: students attending Grade 9, as before, allowing for trend comparability, and 13-17 year-olds, i.e. students attending Grades 6-9 of elementary education and Grades 1-3 of upper secondary education. This second sample allows for a stronger developmental focus, and better comparability with the international Global School-Based Student Health Survey (GSHS), developed by the WHO.

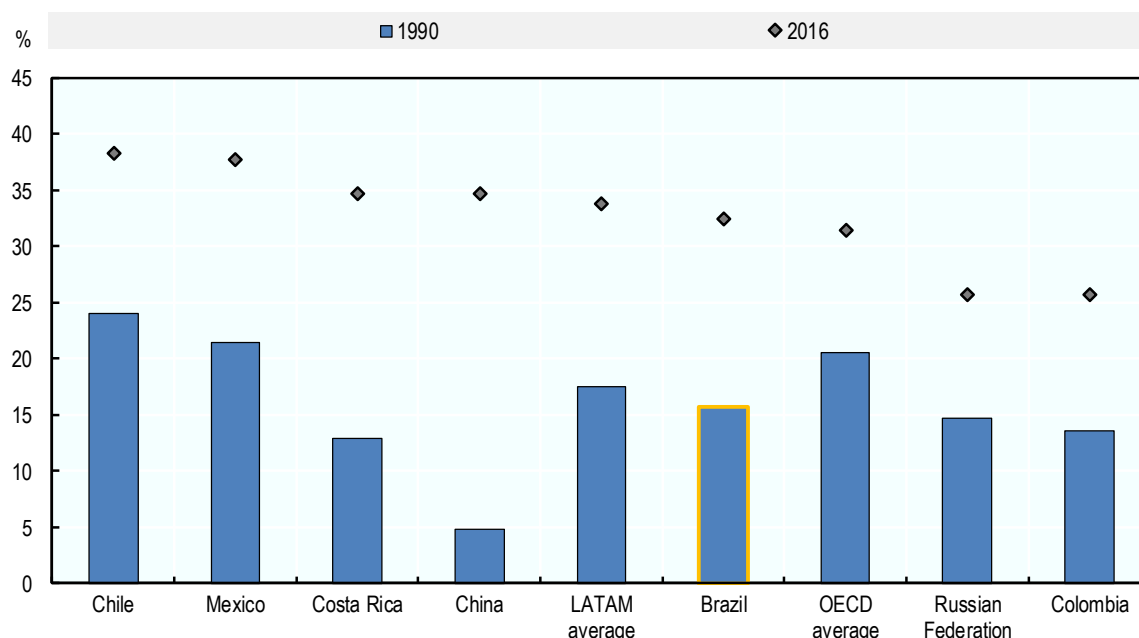
For PeNSE's most recent, 2019 edition, a single national sample of 13-17 year-old students from public and private schools will be used to guarantee international comparability with GSHS. PeNSE has no fixed periodicity. Since 2012, the survey results have been available at the national and region level. In 2015, results were available by states and state capitals (for sample 1).

Source: (Ministério da Saúde, 2020^[82]), *Pesquisa Nacional de Saúde do Escolar (PeNSE): o que é, para que serve, temas* [National Student Health Survey (PeNSE): what is it, what is it for, themes], <http://antigo.saude.gov.br/saude-de-a-z/pense> (accessed on 13 October 2020); (IBGE, n.d.^[83]), *Pesquisa Nacional de Saúde do Escolar - PeNSE* [National Student Health Survey - PeNSE], <https://www.ibge.gov.br/estatisticas/sociais/populacao/9134-pesquisa-nacional-de-saude-do-escolar.html?=&t=o-que-e> (accessed on 13 October 2020).

Obesity rates are high

In 2017, a third of Brazilian children (5-9 year-olds) were overweight, similar to the OECD average (31%) but better than Costa Rica (35%), Mexico (38%) and Chile (38%). However, this share has doubled since 1990 (16%) (see Figure 6.9) (OECD, 2019^[84]). Childhood obesity is a strong predictor of obesity in adulthood, which is in turn linked to diabetes, heart disease and certain types of cancer (Bösch, 2018^[85]; OECD, 2019^[84]). Obesity can also lead to poor self-esteem, eating disorders and depression. It may also inhibit participation in educational and recreational activities

Figure 6.9. Change in the proportion of overweight (including obese) 5-9 year-olds, 1990-2016



Notes: Countries are ordered from highest percentage to lowest, as per 2016.

Overweight includes children who are obese. Childhood overweight and obesity rates were calculated using body mass index (BMI). BMI is calculated by dividing weight in kilograms by height in metres squared. A child is considered overweight if their BMI is one standard deviation above the median, according to the World Health Organization child growth standards. A child whose BMI is two standard deviations above the median is classified as obese.

Source: WHO Global Health Observatory. Adapted from (OECD, 2019^[84]), *Health at a Glance 2019: OECD Indicators*, <https://doi.org/10.1787/4dd50c09-en>.

StatLink  <https://stat.link/b584f7>

Childhood obesity is a complex issue with many causes. In Brazil, the response has been to implement a suite of complementary policies involving government, community leaders, schools, health professionals and industry. The Health in Schools Programme (*Programa Saúde nas Escolas*, PSE), undertaken by the Ministry of Education, in collaboration with the Ministry of Health and municipalities aims to assess and monitor students' health, and encourage healthy habits, including a balanced diet and physical activity (Presidência da República, Casa Civil, 2007^[86]).

Brazilian students are not very physically active at school or during their free time

Self-reported data suggest that in 2015, only 20% of lower secondary Brazilian children reach the recommended 300 minutes a week of moderate or vigorous activity (Saúde Brasil, Governo Federal, 2017^[87]). PISA 2015 also reveals that one in five Brazilian students failed to engage in *any* moderate or vigorous physical activity during the week, nearly twice the OECD average (see Table 6.6).

Table 6.6. Frequency of physical activities, PISA 2015

Students' reports on the frequency with which they engage in physical activities outside of school during the past seven days.

	Share of students that engaged in moderate activities outside of school the following number of days in the past seven days				Share of students that engaged in vigorous activities outside the school the following number of days in the past seven days			
	No day		More than 3 days		No day		More than 3 days	
	%	SE	%	SE	%	SE	%	SE
Brazil	22	0	44	1	35	1	35	1
Chile	12	1	57	1	21	1	41	1
Colombia	24	1	41	1	19	1	40	1
Costa Rica	14	0	48	1	27	1	37	1
LATAM average	15	0	51	0	22	0	41	0
OECD average	11	0	65	0	17	0	52	0
Mexico	10	0	56	1	15	1	48	1
Peru	9	0	53	1	15	1	42	1
Russian Federation	6	0	72	1	12	1	60	1
Uruguay	16	1	56	1	24	1	46	1

Source: (OECD, 2017^[42]), *PISA 2015 Results (Volume III): Students' Well-Being*, <https://dx.doi.org/10.1787/9789264273856-en>.

Schools play an important role in encouraging and offering physical exercise, through physical education (PE) lessons or extra-curricular activities. While physical education is compulsory in Brazil's basic education, more than one in ten students (14%) reported not having had any PE classes in the week prior to the PeNSE 2015 survey. Several factors may explain low participation. First, many schools, and in particular municipal schools at the primary and lower secondary levels, lack the necessary infrastructure (e.g. football field) (INEP, 2020^[88]). Second, schools are still seen, for the most part, as places where students acquire academic skills and, as a result, students' physical health and development are much less valued than other classes (e.g. mathematics). Third, many students are unable to take part in physical activities outside of school, either because of lack of safe spaces and activity offerings outside of school, or because of lack of time due to care and work responsibilities. Currently, the need to impose social distancing measures and potential school closures may further discourage physical activity in and outside schools.

Social well-being

An extensive research literature has documented the importance of families for children's cognitive, developmental, educational, labour and health outcomes (OECD, 2011^[89]). Outside families, other peers can also affect these outcomes, both positively and negatively (Haynie and Osgood, 2005^[90]; Reitz et al., 2014^[91]; Hay, 2005^[92]; Burns and Gottschalk, 2019^[2]). Problems with home and family relationships can have profoundly negative effects on well-being (Stavropoulos et al., 2015^[93]). Peer rejection and feeling disliked by your peers have been shown to be a strong predictor of having difficulties in school, such as truancy, dropout and disciplinary problems (Hartup, 1992^[94]). For example, poor parental contact and poor peer relationships (i.e. not being happy with classmates, spending time alone) are significant predictors of adult mental and functional health (Landstedt, Hammarström and Winefield, 2015^[95]). These are important factors in Brazil, as student truancy, dropout and disciplinary problems are common.

Students report that their social connections in school are not always positive

Self-reported data collected through PISA 2018 questionnaires suggests that, for the most part, Brazilian youth benefit from healthy social lives: 70% of 15-year-olds agree or strongly agree that they make friends

easily at school, and 78% agree or strongly agree that other students seem to like them. These are similar to results from OECD and LATAM countries (OECD, 2019^[12]).

But some indicators for Brazil are more concerning. Bullying is common, and less than half of Brazilian students report that students value co-operation or cooperate with each other (48% for both), a lower figure than in OECD countries on average (57% and 62%, respectively) (OECD, 2019^[12]). Around one-quarter of PISA-participating students report feeling lonely at school (23%). Such loneliness is particularly worrying in the context of school closures due to COVID-19. International organisations have warned that millions of children are currently missing social contact that is essential to learning and development (UNESCO, n.d.^[96]).

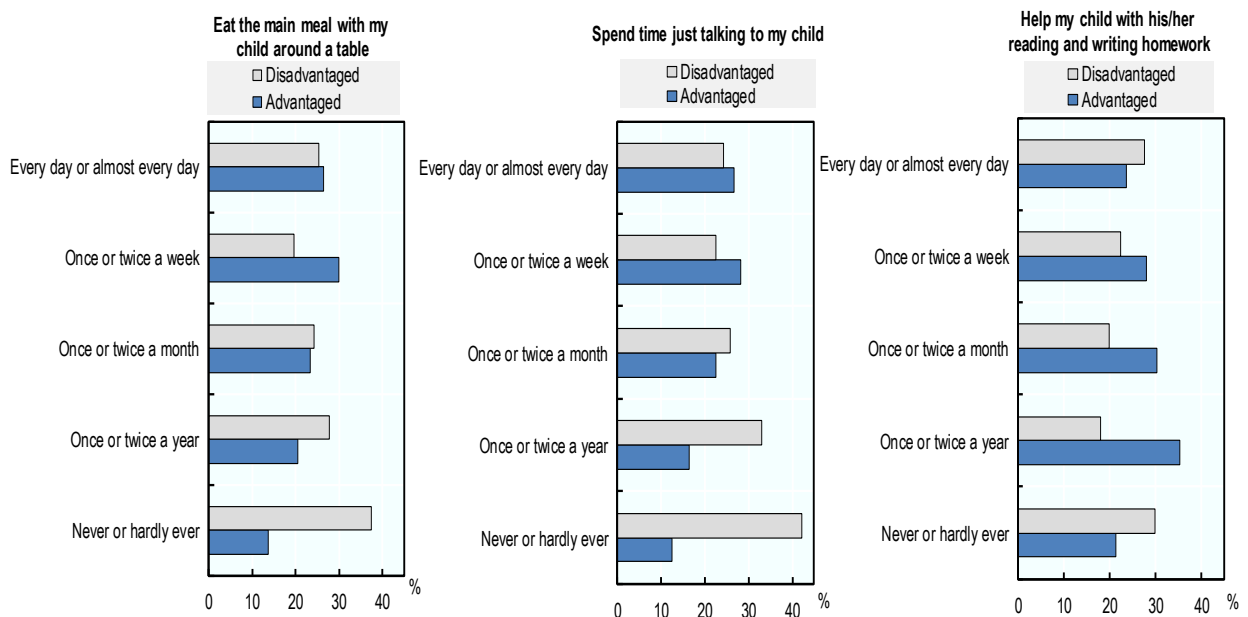
The home environment: differences in parental support may further increase disparities

Even as children mature, family support remains critical. PISA 2018 collected self-reported data from students on the type and frequency of parental emotional and learning support. In every education system, emotional support from parents, as perceived by students, was positively associated with students' positive feelings. Compared with OECD countries for which there is available data, Brazilian students receive less emotional and learning support from their parents. Brazilian parents are more likely to spend time with their children talking (85%) or having a meal (84%), but are rather less likely to spend time helping them with school work (41%) (OECD, 2019^[12])⁴.

Students from disadvantaged backgrounds are much less likely to report feeling supported (see Figure 6.10). Parents with low levels of educational attainment often struggle to communicate with school staff, and to support their children with academic tasks and questions. Many also lack the time to be involved in their children's schoolwork. Others are simply unaware of the importance of doing so. Differences in emotional support may therefore be contributing to the observed performance disparities between advantaged and disadvantaged students (Chapter 3).

Figure 6.10. Percentage of parents who do the following activities with their children, by socio-economic background, Brazil, PISA 2018

By frequency



Source: (OECD, 2019^[58]), PISA 2018 Database, <https://www.oecd.org/pisa/data/2018database/> (accessed on 13 October 2020).

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Conclusion

This chapter highlights four main issues that children and adolescents in Brazil face, which not only contribute to their underperformance in education, but also negatively impact their well-being. These are:

- **First, the Brazilian school climate is not very conducive to learning or students' well-being.** Student misbehaviour and disruption in the classroom is common and takes time away from actual learning. Furthermore, relationships among students and between students and teachers in schools are strained and, at times, hostile. This creates an unsafe environment where students feel little connection, which in combination with a disengaging curricula, encourages student truancy, dropout and underperformance. Evidence suggests this issue is particularly prominent in public and disadvantaged schools.
- **Second, students perceive few attractive options for their future academic and professional careers, other than a university degree.** The fact that Brazilian students aspire to obtain a university degree is understandable considering the large economic benefits associated with tertiary attainment (see Chapter 3). However, the fact that this is the expectation of the majority of 15-year-olds despite the fact that few actually attain a tertiary qualification is concerning. First, this suggests that secondary education is narrowly understood as a pathway to university and, in turn, to the labour market. As a result, few young Brazilians perceive – much less aspire to – any other alternative for their future. The effect is that the very large proportion of Brazilians who aspire to university entrance but fail to achieve it may, as a result, become disillusioned and unmotivated. This is particularly concerning because, at present in Brazil, young adults have few opportunities to pursue alternative vocational and professional pathways.

- **Third, not enough is being done to promote children's well-being.** There is growing recognition in Brazil that education is not only a narrow academic enterprise, but also a means for individuals to develop key social and emotional skills that allow them to become independent citizens, build social connections and help attain a sense of control over – and satisfaction with – their life and future. Despite this recognition, many aspects of psychological, social and physical health remain overlooked. Too many students are overweight or obese, and too few take sufficient exercise. The COVID-19 crisis has magnified many of these challenges and therefore the importance of supporting children's well-being.
- **Fourth, parental and home environments are not always able to support their children's education.** Disadvantaged families are particularly likely to lack the cultural and economic resources to offer their children sufficient support at school. This may contribute to inequity in learning outcomes, particularly if the home resource gap is not effectively compensated in the school environment. Once again, the COVID-19 crisis and the move to distance learning has amplified this issue, as home support becomes doubly vital during school closures. As schools reopen, it will be vital for schools to reach out to those who have fallen furthest behind and help them succeed despite the multiple challenges they have faced.

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Notes

¹ Higher values in the index indicate a more positive disciplinary climate.

² The decline is statistically significant.

³ Brazilian students did not answer the health-related questions from the student questionnaire in PISA 2018.

⁴ The OECD average is not available for comparison.

7. 10 Steps to a Stronger Education System

This chapter sets out ten steps that, taken together, would lead towards a stronger education system in Brazil, first exploring the issue of priorities and resources, then the quality of teaching and learning, and finally equity. This chapter then discusses how to implement these steps through better governance, prioritisation and data.

The context: advances, challenges, and opportunities

Brazil has achieved major advances in education

As shown in this report, Brazil has achieved much in the field of education in the last few decades, dramatically enhancing the participation of children and young people, and closing the gap, at least in some respects, with high-performing countries. Early childhood education and care (ECEC) has been expanded, enrolment in primary education is close to universal, and around 80% of the cohort participate in lower secondary education (see Chapter 2), with well over half now progressing to upper secondary school. Evidence from the OECD Programme for International Student Assessment (PISA) shows that growth in secondary participation has been realised alongside some improvements in learning outcomes (see Chapter 3). This is an achievement given that many of the students now progressing through the different phases of secondary education are children from disadvantaged backgrounds who are often the first in their family to advance beyond primary school. Tertiary participation has also grown sharply, and access enhanced for the most disadvantaged.

These gains have been driven by a range of policy initiatives, which have not only promoted positive changes in Brazil, but also served as an inspiration for reforms in other emerging economies. First, over the last two decades a set of measures have supported the most disadvantaged individuals and regions. These measures, including *Bolsa Família*, the Basic Education Maintenance and Development Fund (*Fundo de Desenvolvimento da Educação Básica*, FUNDEB) and quotas in tertiary education have expanded access to all levels of education and helped reduce disparities. Second, a long history of investing in indicators and monitoring systems, including the Basic Education Assessment System (*Sistema de Avaliação da Educação Básica*, SAEB) and the national education quality index (*Índice de Desenvolvimento da Educação Básica*, IDEB), have provided valuable measures of learning outcomes, supporting evaluation of the effectiveness of schooling and informing better policies and practices (see Chapter 3). These data and monitoring systems compare well with those of many developed OECD countries. Such national measures have been augmented by many related initiatives at state and municipality level.

Despite these advances, many challenges remain, especially in raising the quality of education to match its quantitative growth, in developing the teacher profession, strengthening the school learning environment, and reducing inequalities of opportunities. Moreover, in the last decade, Brazil's economy has faltered, weakening the tax base that provides for education, limiting household resources available to support the education of children, and posing challenges to a long-held constitutional commitment to protect government spending on education.

Now, the COVID-19 crisis places achievements at risk

The COVID-19 crisis has administered a further shock, both badly disrupting education directly because of institution closures, and through its economic impact on individual families and on the resources available to government at all levels. Brazil's Gross Domestic Product (GDP) fell by 4.1% in 2020 (IBGE, n.d.^[1]) and poverty rates are expected to increase (see Chapter 1) (OECD, 2020^[2]; OECD, 2020^[3]). School and university closures, and the move to hybrid models of teaching relying in part on online provision, have increased inequity, as students from disadvantaged homes have fewer of the family, technical and cultural resources that support distance learning. The crisis is therefore both reducing the capacity of families to support the education of children and young people, and challenging the ability of government to resource education. The collective risk is not only that further progress might not take place but also that recent achievements could be reversed.

Despite the challenges, the crisis also presents opportunities. In a context fraught with risk, bold reforms become less risky relative to inaction. All the reforms suggested in this report have the potential to yield

significant gains for Brazil's children and the nation's economy. Some present political difficulties. Yet a time of crisis, when it is generally recognised that hard choices are inevitable, may make it easier to take necessary decisions, and for them to be accepted. This chapter advances ten policy steps which Brazil should consider to address the key challenges identified in this report, steps which will collectively put Brazil on the path to excellence for all in education.

In education, the key challenges are quality and equity

Looking ahead, Brazil's future is defined by two strategic goals for its development, reflected in the related challenges of *quality* and *equity* facing its education system:

- First, historically, much economic growth in Brazil has been driven by natural resources, but in the future, Brazil aims to join other advanced economies in relying, increasingly, on human capital, especially in the form of higher-level skills. Continued improvement in attainment and learning outcomes will be critical in supporting this shift, and strengthening civic cohesion, Brazil's living standards and well-being (OECD, 2020^[4]). At present, by international standards, Brazil's attainment rates at upper secondary and tertiary level are not sufficient (see Chapter 2). International evidence also shows that half of the 15-year-olds in Brazilian schools lack a baseline level of proficiency in reading, compared with only about one in five in OECD countries on average (see Chapter 3). This is the *quality* challenge for Brazil.
- Second, for Brazil to fully benefit from economic growth, it needs to ensure that the fruits of growth are widely shared and poverty drastically reduced, overcoming the large inequalities that currently exist. Some long-term declines in inequality had already started to reverse even before the COVID-19 crisis, and Brazil remains a highly unequal country economically and socially (see Chapter 1). Education, managed well and in combination with wider governmental strategies, can support equity by unlocking the potential of individuals born in humble circumstances, overcoming barriers of wealth, social background, gender, and ethnic origin. But in Brazil, social and economic background, including race, has a bigger impact on participation and learning outcomes than in OECD countries (see Chapter 3). Fee-paying (often better quality) private schools, alongside the cultural advantages of many better-off homes, often allow wealthier families to use the education system to secure better life chances for their children, including through access to public universities which are free of tuition. While increased enrolment rates have served to reduce gaps in access to compulsory education, large inequities in outcomes persist. This reflects the fact that children start school with already markedly different levels of development and readiness to learn. It also reflects the way in which poor quality schooling and disadvantaged home backgrounds combine to mean that basic skills are not acquired early on, setting disadvantaged students on a trajectory that leads to weak school performance, high rates of dropout and limited life chances. This is the *equity* challenge for Brazil.

As a precondition for delivering both education *quality* and *equity*, Brazil will need to set clear *priorities* and secure the *resources* needed for education. The remaining part of this chapter will therefore set out 10 Steps to improve the quality of Brazilian education, first exploring the issue of priorities and resources, then the quality of teaching and learning, and finally equity.

Setting priorities and securing resources

Now more than ever, as Brazil faces a deep recession and the socio-economic consequences of the COVID-19 pandemic, the country's limited resources need to be carefully used on the issues that matter most. While in the short term, the crisis will and should force a reappraisal of spending priorities, it will be crucial for Brazil to sustain its efforts to improve quality and equity. This will require setting priorities, securing resources, and putting in place a more robust monitoring and accountability system.

Step 1: Protecting education spending and linking it to outcomes

A sustained commitment to adequate resourcing for education is necessary to avoid risks to the quality and equity of the system

Education is a critical long-term investment in youth and in the future of Brazil, and therefore needs to be sustained through the ups and downs of the Brazilian economy. In the immediate future, the COVID-19 crisis, superimposed on an economic slowdown, may lead to expenditure cuts at the national and sub-national levels. Unmanaged, the risk is that fragmented expenditure cuts will damage education quality and hinder the implementation of reforms underway. There are also big risks for equity: while FUNDEB should help cushion some of the pressures through transfers to poorer states and municipalities, this will still leave the large challenge of students with interrupted education, relying too heavily on variable home resources, thus exacerbating inequalities. The flight of students to the public sector also risks sudden pressures, in the form of many additional students in schools and localities ill-equipped and unprepared for the new demands.

Linking spending to more robust monitoring and accountability can encourage improvement

The recent OECD economic survey of Brazil has argued that Brazil needs to move away from mandatory and earmarked public expenditure to one which, within overall expenditure limits, links expenditure to outcomes (OECD, 2020^[2]). This principle could usefully be applied to education expenditure. As described in Chapter 4, there is a long history in Brazil of determining education expenditure – and sometimes its sub-components – by law. This has covered, for example, the proportion of municipality, state and federal revenues that should be spent on education, and the proportion of the taxes that should be spent on particular programmes. But whether such rules set expenditure minima or maxima, their common feature is to make education authorities accountable for *what they spend*, rather than for *what they achieve*, in terms of learning outcomes, or equity. This reduces the capacity and incentive to reallocate resources to achieve better outcomes. States, municipalities and schools should be able to use budgets in unconventional ways if they can justify it in terms of outcomes – for example by employing fewer but better qualified and better paid teachers, or by giving school leaders more discretion over parts of their budget, while holding them accountable for the results they achieve with this expenditure. Unsuccessful programmes might then be scaled back or dropped, and successful ones expanded. Such flexibility is needed particularly during the COVID-19 crisis since it allows for a reappraisal of spending priorities. It would also provide a framework in which demographic changes (e.g. declining school-age populations) could be addressed.

The principle here is to give education authorities and school stakeholders more freedom for how they use their financial resources, while monitoring and holding them accountable for their achievements in terms of education outcomes. Depending on the education authority, such accountability might be exercised in different ways, but very often in terms of democratic accountability to electors in their state or municipality and of user-friendly tools that increase transparency.

The flexibilities proposed here (in Step 1) underpin the reallocation of resources proposed in Step 2.

Step 1. Protect education spending and link it to education outcomes

Education is a critical long-term investment in the economic and social development of Brazil and should therefore be protected when faced with the financial challenges associated with the COVID-19 crisis and an economic downturn. In common with other parts of public policy, funding for education in Brazil should move away from an emphasis on earmarked spending requirements for education as a whole and for elements within the education budget. Instead there should be more flexibility in how money is spent, with the emphasis instead falling on the education outcomes which are realised through that expenditure, and with education authorities at different levels of government justifying expenditure in relation to the outcomes achieved. As discussed in Chapter 3, a number of sub-national entities, including the state of Ceará, have taken steps in this direction. Their experience and insights may be of value to other stakeholders in the country.

Step 2: Reassessing education spending priorities

The COVID-19 crisis is an opportunity for a radical reappraisal of budgetary priorities within education

The COVID-19 crisis and its economic fallout are placing increased pressure on budgets at every level. Building on the increased budgetary flexibility proposed in Step 1, this creates the need and opportunity for a reassessment of priorities for education spending, so that key objectives are protected, savings realised where possible, and spending reconfigured to sustain and deliver priority goals. While an effective response to the COVID-19 crisis is an urgent requirement, the strategic priorities of quality and equity will require sustained efforts and commitment of resources over the coming years, so that despite short-term pressures on budgets, Brazil's education system continues to make progress towards its goals. The substance of such efforts, and where resources might be most fruitfully directed, is discussed in sections 0 and 0 which follow.

In two areas resources might be saved and reallocated

In two parts of the education system there is scope to reallocate resources for the priority objectives identified above:

- As argued in Chapter 2, the practice of repeating grades has few benefits for student learning, and is very costly to the education system, even though the schools concerned rarely bear the costs directly. Estimates suggest that around 5% of the costs of primary and secondary education could be saved by progressively reducing grade repetition. Usually the cost to the system of educating that student for an additional year falls on the public purse. In addition, the individual and the Brazilian economy lose out because of delayed entry to the labour force. Brazil would therefore benefit from adopting the practice in many high-performing OECD countries, where repetition is a rare event. This would need to be backed by much more systematic use of early intervention and diagnosis tools to support students' progression, and training to help teachers adapt to a more diverse classroom, including techniques of adaptive instruction and formative assessment. In some cases, it will also require additional resources for schools so that they can give extra time, or offer study rooms to students falling behind. Efforts to improve the learning environment in schools and classrooms (see Step 6) can also support students' engagement and progression.

- Tertiary education is important, and attainment rates need to increase in Brazil to meet the needs of the economy and aspirations of individuals. But, as shown in Chapter 4, despite efforts to widen participation through the quota system and financial support for students attending private universities, over half of public expenditure on tertiary education goes to benefit students from the wealthiest quintile in the population. These students have families that could readily afford to contribute to the costs of their education. Taking advantage of this option, through cost-sharing models, would free up resources that could be devoted to education objectives that have a much stronger equity return, such as expanding ECEC.

Step 2. Reassess education spending priorities and redirect public spending to the education interventions that yield the greatest returns

In the medium term, key education stakeholders need to reassess Brazil's education priorities, ensuring that limited financial resources are used where they make the biggest contribution to the quality and equity of the education system (OECD, 2020^[5]). The recommendation from the OECD *Auditing Decentralised Policies in Brazil* to expand and strengthen evidence and risk-based audit methodologies can also support such efforts.

Savings could be made by bearing down on the wasteful and expensive practice of grade repetition, and by introducing more extensive cost-sharing arrangements in tertiary education, including tuition fees for those from wealthier backgrounds or compulsory social service programmes. In turn, public spending should be reallocated to the areas and interventions that yield the greatest returns, including in expanding ECEC for the most disadvantaged as well as other key interventions discussed in this report and Steps 3 to 10 below.

Step 3: Providing immediate support to alleviate the impact of the COVID-19 crisis

Additional resources will be needed immediately to respond to the impact of the COVID-19 crisis on education

The closure of many schools and tertiary institutions for extended periods has held back the learning of students, particularly the most disadvantaged who often have less family support, fewer practical resources for continued learning at home, and face increasing risks of hunger and malnutrition. In some parts of Brazil, during periods of school closure, schools and local education authorities have developed innovative ways of maintaining teaching online (Dellagnelo and Reimers, 2020^[6]). However, many students cannot benefit from such arrangements: half of the poorest students have no Internet access (see Chapter 6). Moreover, those completing their education face the additional challenge of a difficult labour market. The whole youth cohort is therefore vulnerable, but particularly the most disadvantaged.

In addition, as Chapter 1 has indicated, one impact of the crisis could be a sudden migration of students from private schools into the public school system, given evidence that many parents are withdrawing their children from the private sector for financial reasons. This will place an additional strain on the public system and may mean some schools become overcrowded.

In light of this, an immediate priority will be to provide the support needed by education institutions and students so that they can recover from disruption, with particular attention given to the most vulnerable and disadvantaged. Some adjustments to the school calendar and examination timetables will also be necessary. International guidance is available, drawing on the shared experience of countries around the

world facing very similar challenges. Moreover, civil society organisations have played an important role in documenting best practices from around the world, as well as within Brazil. Moreover, the National Council of Education (*Conselho Nacional de Educação*, CNE) has also established specific requirements and provided guidelines for schools' closures and re-opening (MEC, CNE, 2020^[7]). However, uncertainties remain over whether the current measures in place will be sufficient to allow students to catch up and successfully complete their programmes, and how to find the financial resources to support such efforts at a time when budgets are already strained.

Step 3. In the short term, give immediate support to institutions and students affected by the COVID-19 crisis

An urgent priority for Brazil's education system is to provide technical and financial support to schools, other learning institutions and students to facilitate an effective return to face-to-face learning, and to allow learning recovery. Such measures will need to give particular attention to the most disadvantaged students, as they will often not have had the combination of online facilities and family support necessary to sustain learning during school closures or blended learning models. On-going monitoring and evaluation will be critical to ensure that the support and resources provided are effective in addressing the issues that emerged from the COVID-19 crisis and to limit misappropriation.

Improving the quality of teaching and learning

Education quality depends on teachers, schools, curricula, and programmes

Brazil's strong progress in increasing education participation has not yet been matched by commensurate improvements in completions and learning outcomes. So, while increased participation has been realised without lowering standards, according to PISA evidence, learning outcomes remain behind comparator countries (see Chapter 3). Quality challenges therefore mean that the education system is not delivering the learning outcomes that will support both individual life chances and Brazil's economic development. Brazil is addressing these challenges, for example through its work to develop the National Common Curricular Base, to reform upper secondary education and offer more choice to students, to strengthen initial teacher education and the way in which school leaders are selected. But many gaps remain. Currently, the teaching profession is insufficiently attractive to young Brazilians, and in particular to the top-performing and advantaged students. The initial teacher education, induction processes and continuous professional development of teachers are inadequate, and more attention is needed to teachers' pedagogical skills, including the capacity to teach in more diverse classrooms. School leaders are too rarely well-qualified and trained, and are seen as administrators rather than as instructional leaders who can support teachers and teaching. The school climate is often challenging for both students and teachers. These issues are addressed in this section.

Step 4. Developing the teaching profession

Strengthening the teacher career is key to improve teaching and learning

As discussed in Chapter 5, teachers are a central element in education. Effective teaching can engage and motivate students, and convey knowledge, skills and critical thinking. It should also help build the resilience of students and their learning, even in the face of crises such as the impact of COVID-19. In recent decades, Brazil has put in place some of the core elements of a teaching career, such as minimum requirements for entry and a probation period for entrants. However, some dimensions of a true profession

remain lacking in Brazil. Less than one-quarter of lower secondary teachers reported having received induction support, teachers are paid less than tertiary-educated peers, and there are few opportunities for career advancement (see Chapter 5).

Central to any long-term improvement in the quality of school education in Brazil will be measures to attract and retain high calibre teachers in the profession, and provide them with the support and professional development that will enable excellent teaching. Incentives to enter teaching will also need to be sensitive to supply and demand factors in different parts of the country, and in different subject areas of teaching.

The development of higher education accreditation processes will be critical to improve the quality of Brazil's initial teacher education programmes. Given the large share of teacher candidates coming from private institutions offering distance education programmes, the government should consider the OECD recommendations from the *Rethinking Quality Assurance for Higher Education in Brazil* report to strengthen the rules governing distance education providers, while taking the specificities of initial teacher education into account.

Across the OECD and partner countries, high-performing education systems give much attention to the teaching profession. Salary levels tend to be purposefully competitive. In many cases, entry into initial teacher education is highly selective and programmes are demanding, often requiring postgraduate degrees, and with extensive practical experience in schools. Novice teachers receive systematic induction support from experienced peers, which provides key guidance and support through their first years in the profession. A developed teacher career structure allows experienced teachers avenues for development as instructional leaders, or as administrators. An ethos of continuous improvement, based on evidence and continuous feedback, is pervasive. The overall impact is to raise the status and attractiveness of the profession, and therefore the calibre of entrants.

Step 4. Develop a highly-skilled and well-rewarded teaching profession

As a means of enhancing the quality of education, the teaching profession needs to be upgraded. This means ensuring that teaching is sufficiently rewarding to attract able candidates, in terms of initial salary, career progression, and working conditions. The selection of teacher candidates needs to be more discriminatory to ensure that only those with the knowledge, skills and attitudes come into the profession and help raise the status of the career. Novice teachers should pass a licensing test and receive systematic induction support in their first years in teaching (see Step 10). Teachers should have adequate opportunities for professional development throughout their career. A structured teacher appraisal process, based on common standards, can help inform teachers' development and career advancement. Brazil can also learn from effective local initiatives to strengthen the quality of teaching. Examples include programmes introduced in the states of Ceará, Goiás and Pernambuco.

Step 5. Improve teaching practices

Innovative and proven teaching approaches, facilitated by high-quality initial teacher education and professional development, need more attention

Data from PISA and the OECD Teaching and Learning International Survey (TALIS) suggest that Brazilian teachers rarely use the teaching approaches that, according to research evidence, most enable student learning. Relative to OECD countries, Brazilian teachers show much enthusiasm and support for their students, but less emphasis on adaptive instruction and formative feedback (see Chapter 5).

Moreover, in Brazil, few teachers participate in job-embedded, collaborative forms of learning; in fact, three-quarters of secondary teachers never observe the classes of other teachers to provide feedback (see Chapter 5). However, there is much evidence that these forms of collaborative forms of professional development can be very valuable, not least because they tend to improve the self-efficacy of the teachers involved and can help support the adoption of new, more effective methods of instruction.

If successfully rolled out, the new National Common Guidelines for Teacher Training and the modernisation of the Institutional Teaching Initiation Scholarship (*Programa Institucional de Bolsas de Iniciação à Docência*, PIBID), discussed in Chapter 5, have the potential to strengthen teacher candidates' and novice teachers' knowledge and skills and ground learning in practice. While essential, reforms to initial teacher education will be a slow vehicle for introducing new teaching techniques. High-performing education systems also rely on high-quality continuous feedback and training to develop and introduce innovative teaching strategies, as well as to hone and strengthen existing strategies. In countries with strong teaching professions, teachers benefit from feedback from their peers, including through classroom observation, and through professional networking opportunities, as well as through specific professional development programmes throughout their careers. This framework of continuous development supports the introduction and dissemination of new and effective strategies such as adaptive instruction.

Step 5. Improve teaching practices

For the purposes of professional development, collaborative learning should be facilitated, including systematic arrangements to allow teachers to observe and be observed in the classroom, and to give and receive feedback. Both initial teacher training and professional development should give increased attention to pedagogical skills, and in particular teaching adapted to individual needs and classroom management, so that teachers are prepared for the more diverse classrooms which will emerge when grade repetition is reduced, and with increased access.

Step 6. Tackling challenges in the school climate

The learning environment in many schools is weak and hinders learning and well-being

As described in Chapter 6, the climate in many of Brazil's schools provides inadequate support for learning. School bullying is common, frequent student misbehaviour interrupts teaching, and there are poor relationships between teachers and students, and among students. There is good evidence that these problems of school climate not only damage student well-being, but also affect learning, promoting disengagement and dropout as well as poor learning. A challenging school climate also discourages entry to the teaching profession, and encourages departures. A poor school climate is particularly damaging in the context of extended school closures due to the COVID-19 crisis. This is partly because weak school connectedness may discourage some students from returning to school, and partly because difficult relationships among stakeholders will make it harder to manage the range of adjustments necessary for schools to facilitate school re-opening and learning recovery (described above under Step 3).

Many countries are sharply increasing the attention they give to well-being in schools, in recognition of its pervasive role in underpinning both developmental and education goals. This means adopting measures to target specific problems (e.g. school bullying, violence, mental health and drugs) that may be affecting individual students or groups of students, and other school stakeholders. It also means introducing a whole-of-school approach to well-being, focusing on creating a positive and safe school environment and strengthening the collaboration with parents and the wider community.

Step 6. Improve the school climate

Building on existing efforts, Brazil's schools should develop explicit policies to improve the school climate, with particular attention to the social and emotional well-being of students. In the first instance, these should address challenges associated with the COVID-19 crisis. Longer term, there is a need for measures to not only address school bullying and violence, but also focus on building positive relationships among school actors and encouraging greater school connectedness, especially in public schools. Such an approach can help improve well-being, support higher learning outcomes, and reduce the risk of dropout among both students and teachers.

Step 7. Developing professional school leadership

The school leadership role is particularly under-developed in Brazil, relative to OECD and high-performing countries. The quality of school leadership is not only linked to improvements in learning outcomes, but will be key to the development of improved teaching and learning practices (Step 5) and bettering the school climate (Step 6). Relative to other countries, where most school leaders have postgraduate qualifications, Brazil's school leaders rarely do so. While Brazil's National Education Plan (*Plano Nacional de Educação*, PNE) now sets the goal of more transparent and objective selection processes for school leaders, at present they remain unstructured and often political. School leaders themselves have identified many professional development needs, but report barriers to pursuing them. Training is often limited to online courses and formal qualifications, with less emphasis on professional networking and collaboration as a means of development.

In recent years, many high-performing countries have given increased attention to the role of the school leader in delivering quality education, sometimes associated with increased school autonomy and, consequently, increased powers for school leaders. This may involve the establishment of clear professional standards for school leaders, linked to instructional leadership as well as administrative and financial skills. Specialised training programmes for school leaders have been developed to cover these aspects, and these are sometimes mandatory. Continuous professional development, including measures to help school leaders to learn from one another, is also widely encouraged. In recognition of the demanding role of school leaders, salaries are commensurate.

Step 7. Develop professional school leadership

Brazil's existing school leaders have, relative to other countries, low levels of education and limited preparation to for the role. In support of the systematic selection procedures now planned for school leaders, training programmes should be expanded. These programmes should cover not only school administration, but also should be practically focused on instructional leadership, giving emphasis to working in collaboration with teachers to deliver instructional excellence.

Step 8. Enhancing the relevance of education to students

As described in Chapter 1, Brazil has embarked on a restructuring of upper secondary education, which has increased the number of pathways available to students and the offer of practical training and vocational options at this level. This is an important change, given that unlike the majority of OECD countries, Brazil's vocational education and training (VET) has traditionally been mainly academically-oriented and reserved for a limited number of high-performing students, offering limited options for those interested in practical training.

Behind reforms to upper secondary education is an attempt to enhance the relevance of education to students, by ensuring that they can choose topics of interest to them. It is also intended to increase relevance to the labour market, by strengthening the linkage between curricular options and real-world subsequent academic and professional career options. Where students have distinct career goals, these two objectives coalesce. So this reform has the potential both to increase student engagement and reduce dropout, and improve labour market outcomes.

However, depending on their design, the proposed reforms do not only have advantages, but also potential downsides, observed in OECD reviews of vocational education and training across the globe (OECD, 2020^[8]). Vocational pathways at upper secondary level need to be well-resourced, avoiding the risk that they become stigmatised as programmes into which students who do not perform well are directed. Such stigmatisation is a particular risk if they undermine university entrance or future studies. Vocational programmes also need to be designed so as to reflect the skills requirements of local employers, recognising that sometimes this will call for extra resources, since programmes that are easy and cheap to teach may not be those needed by the labour market.

Step 8. Enhance the relevance of education to students and to the labour market

Current education reforms, including the reform of upper secondary education, have as one of their objectives that of enhancing student motivation, engagement and success beyond school. Recognising that reforms of this type have many types of impact, not all of which can be easily predicted, it will be important to closely monitor their impact. One option would be to develop programmes locally in collaboration with employers, and in response to their engagement and expressed demand for the skills involved. The development of vocational pathways might also be informed by extensive international experience.

Education for equity

Brazil has made extensive progress in reducing education inequalities

Much progress in reducing education inequality has been realised through expanded participation in primary and secondary education (see Chapter 3). These developments have been underpinned by measures designed to alleviate poverty – notably *Bolsa Família* – and by redistribution measures such as FUNDEB. Aspects of inequity in tertiary education have been addressed through the quota scheme for federal universities.

But major challenges remain

Despite these advances, far too many young people still fail to complete their education, and too often they come from disadvantaged backgrounds. Not only are there large performance gaps between advantaged and disadvantaged students, but PISA results suggest that they have widened between 2012 and 2018. There are equity concerns on three main fronts. First, there is too much emphasis on measures such as grade repetition, rather than on early, preventive interventions that might address challenges in school performance before they become serious. Early interventions take the form of early childhood education directed to the most disadvantaged, and targeted and individualised support for students struggling at school. Second, too many gaps in performance remain between well-resourced and badly-resourced schools. Brazil is addressing some of the financial aspects of this challenge through the new and more

redistributive FUNDEB and other current reforms. However, there are also issues in relation to the allocation of teachers, the way in which states and municipalities allocate resources to schools, and whether they grant sufficient support to the neediest schools and those in the most remote locations. The large resource differences between private and public schools are also a challenge, particularly when private sector school education is leveraged by the more affluent parents to gain access for their children to the best universities, which are often public and free of charge. Third, as the world becomes more digitalised, the divide between those who are able to benefit from technological developments and those who are not is growing. Overcoming digital exclusion – in terms of access, skills, use and motivation – is a major and complex challenge Brazil will need to tackle in the years to come. On top of this, the COVID-19 crisis has now amplified equity challenges, as the most disadvantaged schools and students face the greatest challenges of re-opening and ensuring learning recovery.

Inequalities of race remain large in Brazil and require further analysis

As discussed in Chapter 1, race distinctions remain a huge challenge to equity and social inclusion in Brazil. In the poorest decile of the Brazilian population, three-quarters are black and mixed-race. In the field of education, tertiary participation rates among black and mixed population are half those of whites (see Chapter 2). This issue has only featured in a limited way in this report because race categories are not easy to compare internationally. In Brazil, as in many countries, self-reported race is included in national PISA datasets according to national classifications. This potentially allows comparing the performance of racial subgroups not only with national averages, but also with the average performance of other countries. However, disaggregated results from Brazil's PISA national dataset have not been made publicly available. Chapter 3 reports results from national assessments that demonstrate significant disparities across racial groups. This issue is of profound importance to Brazil and deserves further investigation.

Step 9. Intervening early to support students at risk

Early, targeted interventions

The most effective way to ensure equity is to invest in early intervention, targeted at those who need most support. This means investment in early childhood education (see Step 2), and high-quality primary education in which minimum standards are sustained and improved, and in which experienced teachers are encouraged to work in the most challenging schools (see Step 10). Teachers themselves will need to be equipped with the skills to address individual student weaknesses through adaptive instruction (Step 5). In all these respects, other steps outlined in this report provide essential supports to equity in education.

Tackling dropout

While Brazil has made progress in reducing dropout, large challenges remain. Tackling dropout requires a package of measures at different levels, recognising that dropout has many causes, and many actors within the education system have a role to play. Internationally, countries have pursued measures of the following types:

- *Supporting learning.* Practical guidance, in the form of initial training and professional development, is needed to provide teachers with the pedagogical tools necessary to identify and support the students most at risk of grade repetition and dropout, including through differentiated teaching skills and formative assessment. Measures to help students catch up after school closures, or to support the return of dropouts to school, will be extremely important in Brazil's immediate future.
- *Strengthening financial and practical incentives and support systems for students at risk.* Against the backdrop of the COVID-19 crisis, there is a major risk of dropout in the short-term, in part because

some students will have taken on work and care responsibilities because of the socio-economic consequences of the crisis. In response, targeted outreach measures will be needed to ensure that vulnerable students remain in school, and if they do drop out, contacting them at home and encouraging their return. Measures to support vulnerable students need to take into account the diverse causes of dropout. Girls are more often at risk of dropping out because of care responsibilities that may arise either because of their own early pregnancy, or because of the need to care for a parent or other children in the family. For boys, dropout is more often caused by economic pressures and challenges at home. Financial measures to support families in poverty, such as more generous conditional cash transfers, and expanding the offer of early childhood education and care, should help children stay in school to completion.

- *Tackling school failure by introducing incentives and support for schools and teachers to encourage retention of students.* This implies engaging with the multiple in-school and out-of-school factors associated with dropout, from violence and bullying and the poor quality of infrastructure, to weak community engagement. One option is for states and municipalities to offer holistic support programmes to schools in tackling dropout. At tertiary level too, dropout is a major challenge, with only one-third of students completing their bachelor's programmes in the expected time (see Chapter 2). While issues at tertiary level are different, the same principles apply. Tertiary institutions need to have incentives to reduce dropout rates and encourage timely completion, as well as practical guidance on how to achieve this. At all levels practical guidance may often include the sharing of good practice between institutions, as well as centralised expertise.
- *Engaging key stakeholders in local communities.* International evidence suggests that the most successful measures involve action both *within* and *outside* school. Measures connecting schools to the world of work or to community service action, for example, can have a particularly beneficial effect (Lyche, 2010^[9]). These approaches can be helpful in reaching students who have already dropped out of education.

Step 9. Provide guidance and incentives to schools and teachers to help them effectively engage and support students at risk

The most effective way of encouraging success for all in school is through early intervention and strong early childhood education and care and basic schooling, in which the most disadvantaged students and schools receive the most support. Tackling dropout requires measures that support stakeholders at different levels. First, in the classroom, teachers and lecturers need to give sufficient attention to the weakest performers and most unmotivated pupils, to ensure their continued engagement. This requires an individualised approach to teaching. Second, students at risk require additional financial incentives and support systems to be able to continue in education. Third, institutions need explicit policies to combat dropout, backed by funding incentives, and a framework within which they can share best practice. Fourth, strong community engagement outside school can help reach students who have already disengaged.

Step 10. Directing resources where they are needed most

One of the key steps necessary to support equity is ensuring the redistribution of resources to schools and regions that are most in need. While this is a challenge faced by all OECD and partner countries, it is particularly prominent in Brazil, where disparities are extremely wide across the country, and where each municipality and state has its own approach to resource allocation.

At the national level, FUNDEB has played a valuable role in redistributing federal resources to states and municipalities. Current reforms to FUNDEB should further improve this mechanism (see Chapter 4). Still,

inequalities remain large, in particular between municipalities and between schools, and hinder teaching and learning. Improving the distribution of resources will require states and municipalities to rethink their own allocation mechanisms to ensure that their systems recognise and address different needs across different schools and student groups.

OECD and partner countries have taken different approaches to this challenge. Measures include directing extra resources to particular schools through funding formulas that give weight to measures of disadvantage; and/or providing targeted funding to offset disadvantage through grants outside the main allocation mechanism. A mix of such mechanisms is found in many funding systems. However, each approach comes with challenges and trade-offs, and the OECD's work on school resources has highlighted the importance in striking a balance between simplicity and transparency on the one hand, and accuracy and fairness on the other (OECD, 2017^[10]). Whatever the approach, access to high-quality data is critical. While Brazil has already developed strong education data systems, there is scope for improving the quality of the financial data.

Step 10. Direct resources to regions, schools and students with the greatest needs

A key element in equity is redistribution of the resources to schools, municipalities, and states with the greatest needs. This means building on the successful experience of FUNDEB to redistribute not only across, but also *within* Brazilian states and municipalities. Funding allocation mechanisms at the municipal, state, and federal level should prioritise equity and support the most disadvantaged students, schools and locations.

Implementing the 10 Steps through better governance, prioritisation, capacity and data

The 10 Steps set out in this chapter not only imply ambitious reforms at all levels, but would also need to be implemented by multiple actors in the education system, with a timetable for action backed by data and evidence. Four key elements are therefore required for effective policy implementation:

- *First, governance.* Implementation will require strong co-ordination and co-operation across and within government, to fully involve the federal government, states, municipalities, and learning institutions, including universities, schools, and teachers. Brazil already has many of the key elements that are required, including a national education plan laying out common goals and a framework for performance monitoring, and a high-quality data collection system that supports co-ordination, transparency and accountability. Where Brazil might go further is in clarifying and co-ordinating the respective roles of different federative entities, recognising not only that these overlap and duplicate more than in other federal systems — for example where both states and municipalities run schools at the same level of education side by side — but also that policies are highly fragmented both from a vertical and horizontal perspective (OECD, 2020^[5]). The development of a National Education System (*Sistema Nacional de Educação*, SNE) — a target of the PNE — would be a key step forward (see Chapter 1). Governmental bodies such as the National Council of Education Secretariats (*Conselho Nacional de Secretários de Educação*, CONSED) and the National Union of Municipal Education Managers (*União Nacional dos Dirigentes Municipais de Educação*, UNDIME), already play an important role in supporting cross-jurisdictional co-ordination. However, there is still scope for enhancing and systematising co-operation and regular communication across different levels of government to ensure that all entities are working together to strengthen Brazil's education system.

- *Second, prioritisation.* The urgent requirement to respond to the COVID-19 emergency will, for understandable reasons, dominate actions taken in 2021. However, the other steps catalogued here represent challenges that will only become larger with time, so the moment to start addressing them is now. In other words: both the immediate and the longer-term structural reforms need to be considered together. In some ways, the pressures of the COVID-19 crisis can help accelerate difficult, deeper reforms, such as those connected to more effective and equitable resource allocation. It is likewise clear that the success in tackling the crisis and pursuing education reforms will be determined by policies outside the education system, such as measures to support families whose lives have been disrupted by the crisis, including the unemployed, and wider macro-economic and fiscal adjustments (OECD, 2020^[2]).
- *Third, capacity.* Capacity refers to the means to carry out a specific task and encompasses the elements of time, resources, governance structures and processes, and knowledge. Stakeholders require knowledge of policy goals and consequences; they need the resources and tools to implement the reform as planned while adapting policies to local circumstances within specified guidelines. Inadequate capacity for implementation leaves any policy at risk of failure (Burns, Köster and Fuster, 2016^[11]). Building the necessary skills and expertise among all actors and stakeholders involved and, in particular, at the local levels will be critical to ensure that Brazilian stakeholders are able to manage their affairs – and all these reforms – successfully.
- *Fourth, data and evidence.* Across all these reforms, and the institutions and stakeholders that will need to deliver them, data and evidence will be critical. Better data on funding would be particularly useful, to show variations in funding per student across the country, and the factors driving them. Brazil in some respects has world-class data systems in education. However, these data will need to be used systematically to monitor, identify and support policy developments, and effectively by stakeholders to inform school and classroom-level practices and resource allocation. Like in many countries, the capacity to analyse and interpret data remain limited and need to be developed among stakeholders. Moreover, channels to disseminate information, best practices and policies in an accessible manner to those at the frontline of education in Brazil need to be strengthened.

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Education in Brazil

AN INTERNATIONAL PERSPECTIVE

The *Education in Brazil: An International Perspective* report was developed drawing on internationally comparative data on education in Brazil, in particular the extensive range of data collected by the OECD through its surveys. The experiences of other countries and how they have tackled challenges similar to those now faced by Brazil, along with the insights from consultations with key national experts, also inform the analysis. The report benchmarks with OECD and a set of comparator emerging economies the whole education system from early childhood education and care to tertiary education, focusing on:

- Access and participation
- Learning and labour market outcomes
- The allocation, use and efficiency of financial, human and material resources
- School leaders, teachers and teachingThe school climate and student well-being

The report highlights the many strengths of Brazil's education system, identifies the main challenges ahead and offers policy implications for the future.



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