# Brazil's Secondary School Crisis and Its Victims <br> Maria Helena Guimarães Castro <br> helenaca@uol.com.br | Fundação Sistema Estadual de Análise de Dados, Brazil <br> Haroldo da Gama Torres <br> hgtorres@uol.com.br | Fundação Sistema Estadual de Análise de Dados, Brazil <br> Danilo França <br> d.franca@uol.com.br | Centro Brasileiro de Análise e Planejamento, Brazil 

ABSTRACT
Public secondary schools continue to be uninspiring and often disorganized, unsafe places. This article looks specifically at the issue of Brazil's secondary school education, which is showing clear signs of stagnation in terms of coverage and quality. Only half of Brazil's young people aged 15 to 17 attend secondary school and the proportion of students dropping out of school has doubled over the last ten years. Those who neither work nor study account for $24 \%$ of 18 year-olds and $25 \%$ of 20 year-olds. Furthermore, the majority of those who neither study nor work come from households with incomes of under 2 minimum wages. Addressing this issue involves inter alia revising of the curriculum, integrating secondary with vocational education and introducing policies to diversify secondary education.

## KEY WORDS

Public policies; Secondary education; Student drop out; Vocational and technical education; Educational evaluation.
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# Brazil's Secondary School Crisis and Its Victims 

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## INTRODUCTION

Brazil continues to face serious problems in terms of child and youth education. These problems are reflected in the figures on educational performance and grade lag produced by national evaluation tests such as SAEB/ Prova Brasil and PISA. While the provision of elementary education has expanded significantly and is now approaching universal coverage - and the most acute educational financing problems (especially in the less developed states of the Federation) have been addressed - access by young people to quality schooling nevertheless remains a major problem.

This article is concerned specifically with Brazilian secondary school education. This is the stage after elementary education which, in contrast to the other education levels, presents clear signs of stagnation from the point of view of coverage and quality. In the period i999 to 20II, the proportion of students who dropped out of secondary school more than doubled, from $7.4 \%$ to $16.2 \%$, only partly explained by the increased numbers entering this level.

As in other countries, the substantial number of young people who are neither working nor studying (up to $24 \%$ of 18 -year-olds and $25 \%$ of 20 -yearolds) is of particular concern. In Brazil, this group is mainly concentrated in the poorer sectors of the population: $58.3 \%$ of those who do not study or work come from households receiving under two minimum wages.

Despite considerable institutional activism over the last few decades, public policies directed to secondary education have failed to make substantive inroads into this situation. Many of the changes introduced in recent years have had no impact on classroom reality. Recent studies show that public secondary schools continue to be uninspiring and often disorganised, unsafe places (Torres et al., 2013). Teacher absenteeism is very pronounced (IBOPE, 20II) and, coupled with infrastructure problems and excessively crowded school curriculums, the school environment is rendered generally unattractive, frequently engendering among students a perception that school makes no sense and "serves no purpose whatsoever" (Torres et al., 2013, p. II2).

This dire situation is, however, considered normal by some public managers. The Federal Government, for example, possesses no far-reaching plan for reforming this level of education, seeking rather to focus its most recent investments on short-term 'vocational' courses (PRONATEC) which, although considered somewhat important in terms of access to the job market, are run separately from the formal education system. As a result, middle-income families tend to turn their backs on the public school system whenever they can. Meanwhile, in areas of greatest poverty, secondary schools become a magnet for a range of negative behaviours, including drug-trafficking in the more extreme cases.

This article first describes key aspects of Brazil's educational policies, and is followed by a discussion on the development of schooling in this country and educational inequality among young people attending secondary school. The main indicators referring to school infrastructure are then addressed and, finally, a brief conclusion summarizes the salient points of the current debate on Brazil's secondary education crisis.

## GENERAL ASPECTS OF EDUCATIONAL POLICIES

Social policies and education in Brazil have always followed a decentralised model, with the states and municipalities playing a key role in the provision of social services as a whole. The federative social policy model continued over many years and was consolidated in the 1988 Constitution, which established the principle of decentralisation in the provision of social services in general (including education), assigning a markedly more important role to the municipal governments than previously (Arretche, 2009).

Despite the 1988 constitutional ruling to decentralise educational policy, the Federal Government has nevertheless undertaken a formal, coordinating role in this policy, producing a model which is simultaneously decentralised in its execution but monitored at the federal level. The main instrument for this was the establishment of the Fund for Elementary Education Development and for Enhancing the Value of the Teaching Profession (FUNDEF), by constitutional amendment. This fund, aimed at the elementary education sector, specified mandatory spending by states and municipalities on education, as provided for in the 1988 Constitution.

The criteria included the allocation of state and municipal resources, obligatorily earmarked for elementary education, according to the number of students enrolled in each education system. The policy defined national expenditure benchmarks per student and teacher remuneration, and induced federal transfers to poorer states and municipalities. The policy also involved establishing an information system managed by INEP (the National Institute for Educational Research), using the School Census to generate the data required for determining the annual distribution of resources between states and municipalities (Gomes, 2008). ${ }^{1}$

While from the point of view of expanding and universalising access to elementary education FUNDEF can be considered a success, serious problems nevertheless persist in terms of quality, as shown by the figures for educational performance and grade lag reflected in the average scores obtained by students in the national evaluation tests such as PISA and the Prova Brazil (Veloso, 20II).

Despite major disagreements in Congress at the time over the proposed FUNDEF (Gomes, 2008), this new generation of policies based on the 1988 Constitution, the LDB/1996 and FUNDEF/i997 produced a policy model consisting of three main pillars (Veloso, 20ir) as follows:

> Decentralization of educational provision: At present, pre-school education is the responsibility of municipalities; elementary education is administered jointly by the states and municipalities; and the states are in charge of secondary education; ${ }^{2}$

[^0]Funding criteria defined by the Federation: Budgetary allocations for each level of government (states and municipalities), with resource allocation based on student enrolment figures;

Centralized evaluation: For the comparative assessment of educational provision in the separate states, and of school networks and schools.

Despite key differences in emphasis and approach between the Fernando Henrique Cardoso and Lula governments, this macro-institutional framework, consolidated in the I990s, was retained throughout the following decade. ${ }^{3}$ Although the educational levels covered by constitutional funds were expanded with the introduction of the Fund for the Maintenance and Development of Basic Education and Enhancement of Education Professionals (FUNDEB), this process did not modify the three-point scheme outlined above.

Moreover, despite the controversy surrounding the evaluation system, the instruments employed for assessing the quality of education were somewhat strengthened. The Basic Education Evaluation System (SAEB) was expanded in 2005 to cover assessment of the 4th through the 8th grades in all the public schools. The SAEB monitoring system continued to be applied in the secondary (public and private) as well as elementary schools, with questionnaires responded to by teachers, parents and students aimed at producing a historical series of the factors associated with learning. The Basic Education Development Index (IDEB), a synthetic indicator monitoring system, was also introduced, while despite undergoing major changes since 2009, the National Secondary Education Test (ENEM), continued to be applied.

By 20IO, however, the so-called 'basic education' triptych (pre-school, elementary school and secondary school) had fallen far short of providing universal coverage. According to the PNAD 2009, only elementary education presented a net enrolment rate that came close to universal provision. Meanwhile, the net enrolment rate (around $50 \%$ ) at the pre-school and secondary levels was far from satisfactory. ${ }^{4}$

Another important aspect of educational policy in Brazil is the existence of private schooling for students from the higher income groups. Basically, private schools are used by better-off families who have rejected the public educational system, particularly in the metropolitan areas. The private sec-

3 Key differences, however, exist at the execution level.
4 PNAD detailed data is available later in the body of this article.
tor is especially strong at the pre-school and higher education stages. Although this is not yet the case at the elementary and secondary levels, private elementary and secondary education has, according to the School Census, increased substantially over the past five years. Meanwhile, the boom in private higher education can be explained by the introduction of new federal initiatives such as PROUNI and the student credit programmes, which provide subsidies for lower-income students graduating from the public secondary schools to enter higher education. ${ }^{5}$

## INEQUALITY OF ACCESS TO SECONDARY EDUCATION

In view of the substantial and growing amount of education-related statistical information currently available in Brazil, there is a wide range of sources supplying data on the distribution of enrolments, characteristics of schools and teachers (taken, for example, from the School Census) and a wealth of information on educational performance at the different levels. Given the more limited objectives of this article, we will not tender a comprehensive description and analysis of all of Brazil's statistical data on education. Our focus is, rather, on identifying and working with selected sources and indicators that provide an adequate description of recent developments in secondary education.

Especially worthy of note is the data emerging from the National Household Sample Survey (PNAD) which provides a detailed picture of the socio--demographic characteristics of young people (students or not). Since the PNAD provides no details of the actual extent of educational performance, useful complementary data from the SAEB test was also analysed.

## EVOLUTION OF THE OVERALL <br> EDUCATIONAL SITUATION IN BRAZIL

According to the PNAD, the number of students in Brazil increased substantially between 1999 and 20Ir, from 50.4 million in 1999 to 55.5 million in 20II. The massive number of students in Brazil, exceeding the population of
a country such as Spain, gives an indication of the major role that education plays in the life of our country. Given that education is increasingly viewed as vital for economic and social development, it is worth pointing out that one in four Brazilians are students, with $94.4 \%$ of children and adolescents aged from 6 to 17 attending some type of school.

This increase in the number of students in absolute terms has not been accompanied by a corresponding increase in the actual Brazilian student population. While in 1999 students accounted for $3 \mathrm{I} .4 \%$ of the total population, by 2011 the proportion had fallen to $28.5 \%$. It should be noted, however that this does not necessarily reflect a worsening of educational conditions. Rather, it is the result of a number of different factors such as changes in the age structure of the population and improvements in the educational system flow.

Available evidence suggests that the flow has in fact improved, with an increase in the proportion of students actually attending classes at the grade levels most appropriate to their age range. This can be seen by examining the net enrolment rate, which reveals to what extent individuals of school age are attending school and which students are studying at the right level for their age. Based on this data, it is possible to detect improvements in secondary school coverage, as well as the amount of persistent grade lag (i.e. students in lower than appropriate grades) and drop-out rates.

Table i below indicates the number of students in Brazil according to age and education levels. Of particular note are the students in the correct grades according to their age level - i.e. nurseries and pre-school education for children up to 5 years of age, elementary education for children between six and I4 years old, secondary school for i5 to i7 year olds and higher education for young people in the 18 to 24 age bracket.

Between 1999 and 2011 the number of children up to 5 years old enrolled in school increased substantially. The total of children in nurseries (crèches), pre-school or elementary education increased from 4.2 million ( $23.3 \%$ of the total number in this age range) to 6.6 million ( $40.7 \%$ ), at a time when the total number of children in the Brazilian population in this particular age bracket declined from around 18 million to just over 16 million. ${ }^{6}$

[^1]

Source: IBGE, Brazilian Household Survey (PNAD), 1999 and 2011.

In the 6 to 14 age range the school-age population stabilised and enrolments increased. In 1999, $94.3 \%$ of individuals were in education, with $84.9 \%$ attending elementary school or literacy classes. In 20II, $98.2 \%$ of the total in this age range were studying, with $93.6 \%$ in elementary school. In other words, provision of elementary education increased in both absolute and relative terms, although it is worth noting that the rates were already relatively high in 1999 compared with the other education levels. Studies such as those done by Gouveia et al. (2009) suggest that the virtually universal coverage at this level in I999 was probably the result of the establishment of FUNDEF in 1996.

In the decade analysed, the absolute number of individuals in the 15 to 17 age range practically stagnated (just over to million adolescents were in this age range in both years) but there was some increase in school attendance during this period, from $78.5 \%$ to $83.7 \%$. In 1999, $43.5 \%$ of these adolescents were still attending elementary school and $32.7 \%$ secondary school; in 20iI, $29.5 \%$ were in elementary school and $5 \mathrm{~F} .8 \%$ in secondary school. This inversion shows the reduction in the high level of grade lag and the expansion of net enrolments at the secondary level, even though the figures remained far from ideal. A closer look at the PNAD historic series also shows that the improvement in the net enrolment rate occurred especially between 1999 and 2005, but virtually stagnated thereafter. ${ }^{7}$

In 20II, 3.1 million adolescents aged from 15 to 17 were attending elementary school ( $29.5 \%$ ), while around 1.7 million of similar age had already dropped out of school altogether ( $16.3 \%$ ). These figures reveal the dramatic situation of youth education in Brazil. Nevertheless, it is fair to say that 2.2 million young people between the ages of 18 and 24 were still attempting to complete their secondary school education. The desire to complete this level of education reflects the perception that a secondary school diploma opens doors to the labour market (Torres et al., 2013).

Given the establishment of FUNDEF in 1997, which provided a framework for change in elementary education policies and the major burst of activity by the Government in the secondary education area (with PROMED in 1999 and FUNDEB in 2006), it can be inferred that in terms of increased coverage, the results of the policies directed towards elementary education were more successful than those related to secondary education. ${ }^{8}$

7 A detailed description of all the developments over the years is not undertaken here, since the basic aim is to provide a more general description of the levels observed and the main differences.
8 In the final section, we look at the set of institutional innovations in the field of secondary education that have been introduced over the last few decades.

The majority of the Brazilian population between 18 and 24 are non-students: $66.1 \%$ in 1999 and $71.5 \%$ in 20II. The very large numbers of students who drop out of education at 18 suggest that most Brazilian families regard this age as a transitional point between student life and starting work. These data are summarised in Chart i below.

The following chart shows various worrying aspects of Brazilian secondary education. The data indicate that the 15 -year-old age band only partially represents the transition between elementary and secondary levels, given that a large cohort of youths of that age are still attending elementary school. As mentioned above, just over 3 million adolescents between 15 and 17 years of age attend elementary school, or almost $30 \%$ of the adolescents in this age band. A minority of individuals in this age group, 659,000 young people (6.2\%), consists of individuals who have dropped out of school and are working. This is a surprisingly lower number than the more than i million adolescents who neither work nor study.

The age of legal majority ( I 8 ) symbolises, to a certain extent, the end of school life, regardless of whether young people have graduated from secondary school or not. Even the substantial increase in higher education witnessed in Brazil in recent years has not led to an increase in school attendance. In fact, the increase in the proportion of young people not studying ('non-students') can be partly attributed to the improvement in the school flow, with the growth in the numbers completing their basic education at the 'ideal' age of $\mathbf{1 7}$. It is also possible that the spurt of economic growth over the past decade has increased employment opportunities for this age group in a more attractive job market than hitherto. However, data to endorse this hypothesis is not available.

In $1999,8.4 \%$ of those between 18 and 24 were enrolled in elementary education, $\mathrm{I} 3.9 \%$ in secondary school and $7.5 \%$ in universities. The proportion of youths in elementary education was higher than the number graduating, a fact which clearly and most perversely reflected the persistence of grade lag. In 20II, this picture changed significantly, with $2.4 \%$ of youths aged I8 to 24 attending elementary school, $9.9 \%$ secondary school and $14.9 \%$ in higher education. The decline in grade lag may be seen, therefore, not only in the light of the reduction of the numbers attending elementary school but also as a result of the fact that in 20II, the increased number of students in this age range was represented by individuals attending university. The growth in the cohort of undergraduate students is also, evidently, closely linked to the significantly larger number of places made available in higher education during the period.

| AGE | Total population | CHART 1 - WORK AND STUDY (INDIVIDUALS AGED BETWEEN 11 AND 24 YEARS). BRAZIL, 2011, IN PERCENTAGE |  |  |  |  |  | Do not work but study (regular high school) | Do not work but study (other courses) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Neither work nor study | Work but do not study | Work and study regular elementary school) | Work and study (regular high school) | Work and study (other courses) | Do not work but study (regular elementary school) |  |  |
| 11 | 3574384 | 1,07 | 0,07 | 3,20 | ○, ০০ | -, oo | 95,66 | 0,00 | -, oo |
| 12 | 3445997 | 1,05 | 0,07 | 3,88 | -, ০০ | -, oo | 94,99 | -, oo | -,oo |
| 13 | 3405084 | 1,57 | 0,34 | 6,56 | 0,10 | -,03 | 90,17 | 1,17 | 0,06 |
| 14 | 3580730 | 2,82 | 0,55 | 9,15 | 1,11 | 0,01 | 75,69 | 10,44 | 0,23 |
| 15 | 3563922 | 6,01 | 2,06 | 6,92 | 5,47 | 0,30 | 39,69 | 38,82 | 0,73 |
| 16 | 3594473 | 9,19 | 5,09 | 5,99 | 12,08 | 0,51 | 20,67 | 45,45 | 1,03 |
| 17 | 3385121 | 15,31 | 11,90 | 4,48 | 14,45 | 1,65 | 10,17 | 39,12 | 2,92 |
| 18 | 3268956 | 24,59 | 26,67 | 2,29 | 11,37 | 4,50 | 3,81 | 19,75 | 7,02 |
| 19 | 3126713 | 24,22 | 38,98 | 1,39 | 6,64 | 8,27 | 2,03 | 9,38 | 9,09 |
| 20 | 3069457 | 25,00 | 43,30 | 0,79 | 4,05 | 11,78 | 1,79 | 3,95 | 9,34 |
| 21 | 3114623 | 24,05 | 48,90 | -,69 | 2,82 | 11,54 | 1,01 | 2,91 | 8,08 |
| 22 | 3250076 | 24,32 | 54,03 | 0,53 | 2,01 | 9,90 | 0,61 | 1,80 | 6,80 |
| 23 | 3294930 | 24,45 | 57,29 | 0,32 | 1,54 | 9,16 | -,49 | 1,23 | 5,52 |
| 24 | 3244534 | 24,39 | 60,15 | 0,29 | 1,40 | 8,25 | 0,49 | 0,65 | 4,38 |

Source: IBGE, Brazilian Household Survey (PNAD), 2011.

In the older age groups, the proportion of individuals enrolled in supplementary courses (Youth and Adult Education-EJA) also increased. There was a decline in the number of enrolments in these courses at elementary level (from 845,000 to 721,000), whereas enrolments in the EJA at secondary level actually stabilised. The decrease of students enrolled in EJA (elementary level) may have been due to the substantial increase in regular elementary education coverage (which only occurred partially in the case of secondary education) and the reduction in grade lag at that level. The key difference to be noted between the two years, which strengthens the above hypothesis, is the fact that in 1999 the cohort of youths enrolled in EJA at the elementary
level involved virtually all age levels, while in 2009 over half were in the higher age bracket ( 30 and over). ${ }^{9}$

## ENROLMENT ACCORDING TO INCOME GROUPS

considering the evolution of enrolment rates within each income group, it is noteworthy that net enrolment rates among 15 to 17 -year-olds grew substantially in all income groups. ${ }^{10}$ This data is summarised in Chart 2.

The increase in school attendance in the 15 to 17 age range in the decade in question was most pronounced in the lower income groups. School attendance in households with up to two minimum wages increased from $70.4 \%$ to $79.5 \%$. The evolution in other income groups was much lower (a maximum of around $+3 \%$ ). This meant that the expansion of school enrolments of adolescents between 15 and 17 was mainly due to students from lower income households. However, it is worth assessing the distribution of the students on the basis of the different schooling levels to determine whether this increase in enrolment actually meant a reduction of grade lag and therefore a better match between age and school grade.

Considering the net enrolment rate at the secondary level, the gap between income levels continued to be very significant in 20II, notwithstanding the fact that they were lower than 1999. During the period, grade lag declined at all income levels, particularly in the income group receiving up to two minimum wages, where secondary school attendance increased from $16.7 \%$ to $38.2 \%$. Note that in spite of this improvement, the attendance by 15 to 17 -year-old students at secondary schools is still very low. This is a fairly large segment of the population, representing around 3.5 million adolescents in 20 II ( $35 \%$ of the population in this age group).

[^2]> CHART 2 - SCHOOL ATTENDANCE ACCORDING TO EDUCATIONAL LEVEL AND INCOME GROUP. 15 TO 17-YEAR-OLDS, BRAZIL, 1999 AND 2011


Source: IBGE, Brazilian Household Survey (PNAD), 1999 and 2011.
[Obs: Minimum wages of 2009]

Despite the low level of secondary school coverage, only a minority of young people from low-income households dropped out of school ( $20.5 \%$ ), most of whom had been held back at elementary level (39.1\%). These results indicate that a possible future expansion of secondary education will clearly involve
incorporating students from the poorer sectors of the population and improvement in school flow at elementary level.

The figures are clearly better for the higher social classes and worse for groups lower down the social scale, even though the growth rates are more evident among the latter. Educational inequalities in Brazil, even without considering aspects of performance at school, continue to be pronounced. Particular attention needs to be paid to the large number of adolescents between 15 and 17 who were not in formal education either in 1999 or in 20ir, especially when compared to the previous age group. In 1999, 2I.4\% of 15 to I7-year-olds were not in school, although by 20 II this proportion had dropped to $16.3 \%$. In addition, between 1999 and 2011, with the exception of individuals from the lower social level, there was no significant decline in the dropout rate among students from the income groups receiving over two minimum wages. On the contrary, the number of young people not attending school from income groups with over four minimum wages actually increased.

A significant percentage of 15 to 17 -year-olds not attending school, even in the higher income ranges, suggests that the issue of secondary education coverage is not only linked to students' dropping out in order to start generating income. Nor does it appear to be linked to shortcomings in public education supply, since the group with over six minimum wage salaries ( $9.6 \%$ of young people out of school) is served predominantly by the private education system. As other studies suggest (Torres et al., 2013), it is possible that a number of factors dealing with the very logic of Brazilian secondary school education encourage students to drop out.

In short, it could be argued that the main advances in adolescent education have taken place in the lower income levels. However, given the substantial inequalities, the levels observed are still highly problematic. In the other social strata, the advances were always small, as if a "limit to educational attainment" existed. Moreover, in the 15 to 17 -year-old age group, drop-out and grade lag problems were more evident in all the income ranges, indicating that a serious problem exists at the national level.

## 15 to 17 year-old dropouts

Given the high dropout rates, it is worth exploring at what point the highest rates occur. During the period under study, in addition to the decline in the absolute and relative number of 15 to 17 year olds not in school (from
2.2 million to I .7 million or $2 \mathrm{I} .5 \%$ and $\mathrm{I} 6.3 \%$ respectively), a further major change took place: a general downward trend in dropout rates in the early grades of elementary school and an increase in the final grades, as well as at the secondary school level. In 1999, $63.6 \%$ of students dropped out of school between the first and fifth grade of elementary school. However, by 2oir, this had fallen to $28.9 \%$, while $70.2 \%$ dropped out between the 7 th grade and secondary school (See Chart 3 for details).

While in 1999 the peak dropout rate by 15 to 17 -year-olds occurred in the fourth grade of elementary education, a decade later the dropout rate was higher in the seventh and eighth grades ( $18.9 \%$ and $\mathrm{I} 7.9 \%$ respectively). In other words, according to the PNAD 20II, 54.1\% dropped out of school during the 'second cycle' of elementary education. It follows that, in national terms, we should regard this cycle as a possible source of greater non-attendance and grade lag at the secondary level. ${ }^{\text {. }}$

CHART 3 - LAST GRADE CONCLUDED BY 15 TO 17 YEAR-OLD DROPOUTS. BRAZIL, 1999 AND 2011


Source: IBGE, Brazilian Household Survey (PNAD), 1999 and 2011.
[Obs: Given the change in the number of years of elementary education (from 8 to 9 years), the two series are not strictly compatible]

11 Given this information, the net enrolment rates above $90 \%$ need to be relativised for secondary education. Since they are calculated using a very broad age range (6-14 years), they probably fail to reveal the much lower enrolment rates at the very end of the primary school stage.

Regardless of the fact that dropouts have decreased somewhat in the first cycle of elementary education, indicating a degree of success of educational policies at that level, it is nevertheless of great concern that at the end of the elementary school cycle, as well as at the secondary level, a substantial increase in the dropout rate has occurred. At this stage, students are a little older and tend to have more choices to attend school or not. In fact, the data show that a major problem exists right at the end of the elementary cycle. This is demonstrated by both the dropout rate at that point and the low skill levels of students entering the secondary cycle. ${ }^{12}$

There are students at the secondary level without even the minimal knowledge of mathematics who also encounter difficulties in reading and writing. These students flounder when faced by the average school curriculum, which assumes basic literacy and numeracy levels that should have been achieved during the previous stage. Yet in addition to the serious educational shortcomings students experience at the end of the elementary stage, in secondary school they are also faced with a series of difficulties that have to do with their socioeconomic backgrounds.

A number of studies, such as those by Cratty (2012) and Stratton, O'Toole and Wetzel (2008) provide some understanding of the events that can prevent young people from pursuing their studies. These include work, pregnancy and failure at school. Young people from low income families often have to face material pressures (including becoming parents) and need to start working before they are able to complete their studies. The problem is especially acute among young adolescent girls who become pregnant and must face the additional burden of looking after their own families. One of the most common hypotheses in the literature is that because of poverty, young people must abandon their education in order to start working.

Table 2 contains interesting data on this phenomenon. It shows that the majority of dropouts are in fact individuals who neither study nor work: $38.3 \%$ work while $6 \mathrm{I} .7 \%$ do not. A further crucial point is that the lower the income, the more likely it is that the individual is not working, an observation which undermines the argument that youngsters dropping out of school do so because they need to earn a living. If this were the main reason, the

12 The poor results obtained by students in the gth year of education in the Prova Brasil is one indicator of this critical situation. A study done by the Victor Civita Foundation in 2012 on elementary education in Brazil focused on the need to establish closer ties with secondary education in order to ensure continuity of the learning and development processes, and to address the substantial gaps in schooling.
numbers of these individuals in the job market would be much higher. This argument is particularly relevant when considering the significant $20 \%$ of students aged 15 to 17 who also work. ${ }^{13}$

| TABLE 2 - WORK STATUS OF YOUTHS AGED BETWEEN 15 AND 17 NOT IN SCHOOL (BRAZIL, 2011) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Up to 2 MW | 2 to 4 MW | 4 to 6 MW | Over 6 MW | TOTAL |
| ONLY WORKING | 168,000 | 180,000 | 85,000 | 46,000 | 480,000 |
|  | 27.1\% | 44.3\% | 57.3\% | 59.9\% | 38.3\% |
| NOT STUDYING AND NOT WORKING | 451,000 | 227,000 | 63,000 | 31,000 | 773,000 |
|  | 72.9\% | 55.7\% | 42.7\% | 40.1\% | 61.7\% |
| TOTAL | 619,000 | 407,000 | 149,000 | 77,000 | 1,254,000 |
|  | 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.0\% |

Source: IBGE, Brazilian Household Survey (PNAD), 2011.
[Obs: MW = minimum wage]

The majority of young people who work are mainly from the middle and higher income groups. Most school dropouts who work are in fact from families who are better-off. In this case, work may have been viewed as a justifiable reason for leaving school since, in all probability, family connections made it easier for the ex-student to obtain a job (a benefit likely to be less accessible to poorer students). Meanwhile, individuals who neither work nor study are more concentrated in the lower income strata. Around 450,000 ( $58.3 \%$ ) of those who do not work or study are from families with incomes of under two minimum wages. This is obviously a worrying situation which is bound to reinforce the poverty cycle among such families, since in addition to failing to generate income for the household, the young people in this group are also missing out on an education which might eventually help them join the job market.

Of the non-attendees, $54.1 \%$ are males and $45.3 \%$ are females. In the lower income range the proportion of females rises to $56 \%$. In other words, despite

[^3]the fact that the drop-out phenomenon is generally a "male" preserve, it is a "female" one in poorer households. This calls for greater attention to teenage pregnancy among girls in the lower income brackets.

Table 3 shows that among the females who drop out of school, the proportion who have borne children ( $34.4 \%$ ) is high, but not predominant. Moreover, of the approximately 300,000 girls aged between 15 and 17 with offspring, around 200,000 (two thirds) had dropped out. Pregnancy, it appears, often causes girls to drop out, although this does not necessarily mean that it is the main cause. Furthermore, of the non-attending teenage girls who had babies, the vast majority were also among the poorest; but even in their income bracket, it was not the main cause of non-attendance.

Table 4 illustrates the extent of the link between dropping out and having children during adolescence. This applies to females as well as males (who may also have dropped out to support their pregnant partners). The gender differences regarding the status of the families of dropout youngsters are striking - 80.8\% of the males are in the "dependent child" category (i.e. still dependent on parents), a proportion which varies little across the various income levels. But it is worth noting the higher proportion of males described in the statistics as the "reference person" (head of household) in the lower income range ( $9.1 \%$ ). It follows that having children does not appear to be a good explanation for why young males drop out of school.

| HAVE YOU HAD A LIVE BIRTH? | TABLE 3 - FEMALES AGED BETWEEN 15 AND 17, WHO HAVE GIVEN BIRTH AND WHO ARE NOT IN SCHOOL, BY HOUSEHOLD INCOME (BRAZIL, 2011) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | UPTO 2 MW | 2 TO 4 MW | 4 TO 6 MW | OVER 6 MW | TOTAL |
| YES | 144,000 | 38,000 | 10,000 | 4,000 | 198,000 |
|  | 41.7\% | 25.1\% | 19.9\% | 18.9\% | 34.4\% |
| NO | 202,000 | 114,000 | 43,000 | 18,000 | 377,000 |
|  | 58.3\% | 74.9\% | 80.1\% | 81.1\% | 65.6\% |
| TOTAL | 347,000 | 152,000 | 53,000 | 22,000 | 575,000 |
|  | 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.0\% |

Source: IBGE, PNAD, 2011.

The females also exhibit another feature. Only $40 \%$ are considered "dependent daughters". This percentage varies greatly, from $30 \%$ in the lowest income range to $6 \mathrm{I} \%$ in the highest. Compared to the rates for males, the number of dropout "couples" ( $35.2 \%$ ) and "reference persons" (i2.4\%) are very high, mainly among the poorest. Thus, forming a family would appear to be a very important explanation of why females drop out (and some of them marry older males). Having children and establishing a new family unit is not necessarily associated with young girls getting pregnant: 274,000 not attending school formed families, outnumbering the almost 200,000 who had children.

| SEX | TABLE 4 - FAMAGED BETWEEN | MILY STATUS O 15 AND 17, BY | OUT OF SCH OUSEHOLD IN | LADOLESCEN OME (BRAZIL, |  | TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | UPTO 2 MW | 2 TO 4 MW | 4 TO 6 MW | OVER 6 MW |  |
| Male | Reference person | 9.1\% | 2.0\% | 0.0\% | 0.0\% | 4.4\% |
|  | Spouse | 0.8\% | 0.5\% | 0.7\% | 0.0\% | 0.6\% |
|  | Dependent son | 78.4\% | 81.1\% | 82.5\% | 88.6\% | 8o.8\% |
|  | Other | 11.7\% | 16.4\% | 16.8\% | 11.4\% | 14.2\% |
|  | Total | 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.0\% |
| Female | Reference person | 17.7\% | 3.8\% | 7.7\% | 0.0\% | 12.4\% |
|  | Spouse | 44.5\% | 23.8\% | 17.5\% | 11.8\% | 35.2\% |
|  | Dependent daughter | 30.8\% | 52.3\% | 59.0\% | 60.9\% | 40.3\% |
|  | Other | 7.1\% | 20.1\% | 15.8\% | 27.3\% | 12.1\% |
|  | Total | 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.0\% |

Source: IBGE, PNAD, 2011.

In sum, the data show (as suggested in the literature) that both premature working and pregnancy in adolescence are linked in some way to dropping out, but these circumstances are not necessarily the exclusive or predominant causes of this phenomenon.

## INEQUALITIES IN STUDENT PERFORMANCE

This section aims to assess whether the expansion of secondary school coverage would result in an improvement in student performance indicators. To determine this, we examined indicators linked to third year students' performance in the SAEB secondary school Portuguese and mathematics tests for 1999 and 20II. For the latter period, SAEB results are published jointly with the results of the IDEB Basic Education Development Index, but this does not preclude their comparison. Taking into account the recent changes in the Brazilian public education system, it was decided to present the figures for the public schools separately from those of the private network.

Table 5 shows the decline in the average proficiency of public school students in the Portuguese tests between 1999 and 2005 . Post-2005, the performance indicator increased. Over the entire period, however, the indicator (which by any criterion was already very low) virtually stagnated, increasing only marginally from 257.0 in ig99 to 26 I. 38 in 20II. In mathematics, the level remained stable throughout the period. This result can be interpreted as clear evidence of the difficulties of the education system in combining increased coverage with better quality of content delivery. ${ }^{14}$ Meanwhile, the private schools presented stable results in Portuguese (around 3Io points) and mathematics (around 330 points).

| TABLE 5 - AVERAGE PROFICIENCY OF THIRD YEAR PUBLIC AND PRIVATE SECONDARY SCHOOL STUDENTS IN THE SAEB TESTS N MATHEMATICS AND PORTUGUESE, BRAZIL (1999 AND 2011) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1999 | 2005 | 2007 | 2009 | 2011 |
| MATHEMATICS | Public school | 268.15 | 260.81 | 263.66 | 265.92 | 265.38 |
|  | Private school | 329.97 | $333 \cdot 31$ | 329.55 | 329.29 | 332.89 |
| PORTUGUESE | Public school | 257.01 | 249.27 | 254.07 | 262.16 | 261.38 |
|  | Private school | 306.06 | 306.88 | 306.32 | 310.16 | 312.75 |

Source: Brazilian Bureau for Education Statistics (INEP), 1999 and 2005.

14 Much of the expansion of secondary education which took place in the period 1999 to 2005 resulted from the increased number of students doing evening courses (Gouveia et al., 2009).

The IDEB, basically a synthesis of the results of student performance in tests such as the SAEB and Prova Brasil, also contains information about approval rates in the grades under consideration. The Index ranges from zero to Io, calculated on the basis of a standardized average school performance obtained from the results in either the SAEB or Prova Brasil Portuguese and mathematics tests, and the so-called school performance index based on the pass rate at a particular stage of education. ${ }^{15}$

The National IDEB for the third year of secondary school increased by one tenth for each year that the tests were applied (from 3.4 in 2005 to 3.7 in 20II). In the public schools alone, the index rose from 3.1 in 2005 to 3.4 in 2009, and remained stagnant up to and including 20ir. All these results matched or exceeded the Government's projected targets. Since the data in Table 5 indicate relative stagnation in performance levels (except for Portuguese between 2005 and 20II), it can be concluded that the results produced by the IDEB mainly reflect advances in school flow.

From the foregoing it can be inferred that a slight increase occurred in the flow, representing an improvement over the 2005 results. With regard specifically to student performance, this is apparently a recovery from the decline noted between 1999 and 2005, when the expansion of coverage reached its highest levels. However, since the overall performance level has always been low, this rate of evolution is obviously extremely frustrating.

Trends observed in recent years indicate that the development of good quality education systems in Brazil is still largely a goal to be achieved over the long term, given that the 6.0 target planned for 202I is still a distant dream. It is probable, nevertheless, that the indicators analysed in this section could be influenced by the conditions under which the education systems are operating. This will be explored below.

[^4]
## INDICATORS ASSOCIATED WITH EDUCATIONAL

## OPERATING CONDITIONS

In an attempt to ascertain whether advances have been made in the operating conditions of education, information was sought on the number of students per class, the number of students per teacher, and the percentage of high school students attending evening classes (night school). Any improvement in these indicators can be interpreted as progress in the operating conditions of the educational system, without of course necessarily reflecting improvements in the coverage and performance indicators discussed above.

Table 6 shows a reduction in the average number of students per class and per teacher nationwide. This improvement can be partly ascribed to improved funding (arising from economic growth and policies such as FUNDEB, which are aimed at this level of education) and a reduction of demographic pressures due to the general decrease in birth rates. ${ }^{16}$ The lowest ratios of students per class are currently in the south and centre-west regions of the country, with the highest in the northeast and southeast.

| TABLE 6 - RATIO OF STUDENTS PER CLASS AND STUDENTS PER TEACHER IN BRAZILIAN PUBLIC SECONDARY SCHOOLS |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | STUDENTS PER CLASS |  |  | STUDENTS PER TEACHER |  |  |
|  | 1999 | 2005 | 2011 | 1999 | 2005 | 2011 |
| Brazil | 40.1 | 37.4 | 32.2 | 22.7 | 20.2 | 17.9 |
| North | 40.8 | 37.0 | 31.1 | 26.3 | 25.7 | 22.9 |
| Northeast | 42.4 | 40.8 | 33.8 | 24.3 | 25.5 | 20.2 |
| Southeast | 40.7 | 37.8 | 33.9 | 23.2 | 17.9 | 17.0 |
| South | 36.3 | 32.1 | 27.3 | 19.8 | 16.8 | 14.8 |
| Centre-West | 38.1 | 34.5 | 29.9 | 19.6 | 19.8 | 17.2 |

Source: INEP statistical synopses (prepared by authors).

As in the case of the number of students per class, a substantial decrease in the number of students per teacher can also be observed. Taken together, these indicators show that the rise in secondary school enrolment was accompanied by the increased number of classes on offer and, consequently, by a higher number of teachers recruited throughout the country and/or a significant increase in the latters' workload. In short, the expansion of coverage did not occur within a context of worsening basic operating indicators.

Finally, the proportion of students attending evening classes in Brazilian public schools was examined (Table 7). In I999, evening students accounted for the majority ( $60.7 \%$ ) of secondary school students. This percentage declined to $48.8 \%$ in 2005 and $36.8 \%$ in 20II. All the regions of the country showed values close to the national average. While the proportion of slightly more than one-third of all secondary school students studying in the evenings can be considered high, there can be no doubt that the drop in numbers over this period was substantial.

The three above-mentioned indicators reveal that notable progress was made in the operational aspects of Brazilian public schools, in parallel with the robust efforts to boost access to secondary education in general. However, these more positive signs do not appear to have had much impact on the performance indicators discussed above. Given the advances made in terms of flow and overall operating conditions, the key remaining question is why the quality indices continue to lag behind. In other words, why does student performance not improve in line with the improvements in educational operating conditions?

| TABLE 7 - PERCENTAGE OF STUDENTS ATTENDING <br>  <br> EVENING CLASSES IN BRAZILIAN PUBLIC SCHOOLS |  |  |  |
| ---: | :---: | :---: | :---: |
|  |  |  |  |
| BRAZIL | $60.7 \%$ | $48.8 \%$ | $36.8 \%$ |
| NORTH | $64.8 \%$ | $54.2 \%$ | $38.4 \%$ |
| NORTHEAST | $58.6 \%$ | $51.2 \%$ | $36.6 \%$ |
| SOUTHEAST | $62.2 \%$ | $47.8 \%$ | $37.8 \%$ |
| SOUTH | $57.3 \%$ | $44.1 \%$ | $35.2 \%$ |
| CENTRE-WEST | $60.0 \%$ | $47.0 \%$ | $33.0 \%$ |

Source: INEP statistical synopses (prepared by authors).

The literature reveals a fairly complex picture of the different ingredients influencing educational performance. It is clear that the operational aspects discussed here are only one of the elements to be taken into consideration. Aspects such as "school environment" (Anderson, i982; UNESCO, 2008) and "quality of management" (Neubauer et al., 20Io), for example, may have deteriorated during the period under study, counteracting the positive effects of the improved operating indicators. The changing social composition of the student body, resulting from the influx of less socioeconomically privileged students into the secondary system, is also a key consideration. Whatever the reasons, these results clearly highlight the continuing crisis in public secondary school education in Brazil and the major problems involved in expanding opportunities for young people from the poorer echelons of society.

## PROSPECTS FOR SECONDARY EDUCATION

The scenario outlined in this brief diagnosis reaffirms all the evidence regarding the continuing crisis of the system, and its implications for the education and training of our young people. Of particular note has been the difficulty of adequately addressing the crisis in secondary school education. Following 25 years of the failure of Law 5692 (1971), which made vocational education compulsory in all secondary schools, the past i5 years have witnessed an avalanche of reforms announced by the Federal Government. These reforms reveal an abysmal gap between policy formulation and actual implementation of the much-needed changes. The upshot is that the secondary education crisis continues to baffle governments, managers and teachers alike and, most crucially, to thwart the introduction of new educational and training opportunities more in tune with the aspirations of the majority of young people.

The main recent reforms include:
I. In 1996, the new LDB (Law of Directives and Bases of National Education) determined that secondary school would mark the final stage of basic education - general education to which every young citizen is entitled.
2. In i998, the establishment of FUNDEF set the seal on universal elementary education and increased the supply of this level of education by the municipalities.
3. In 1998, the Ministry of Education (MEC) released new National Curriculum Guidelines for Secondary Schools, based on the principles of contextualization and
interdisciplinarity. These guidelines established a common core consisting of three broad areas of knowledge and a 'diverse' base integrated with this core, while preserving the freedom of schools to plan their own curricula. The ENEM was introduced in the same year. This was a national voluntary examination inspired by the new guidelines, and was aimed at assessing the skills and abilities of students on completion of basic education.
4. The 1998 reform also established that vocational training should be provided in parallel to secondary school (after regular school hours) or at the post-secondary level. From 2004 onwards, new federal legislation restored the possibility of "integrated enrolment" (i.e. regular secondary schooling together with technical training).
5. In 2006, changes in legislation made the teaching of philosophy, sociology, history and Afro-Brazilian culture mandatory by 20 I.
6. In 2007, the Federal Government established the FUNDEB, thereby substantially boosting the funding available for secondary education, especially in the poorer states. MEC also launched an extensive programme to expand the federal technical schools network.
7. In 2009, MEC launched a new reform: the Innovative Secondary Education Programme, focused on improving the quality of teaching, supporting the development of curriculum proposals in the state-run network system, fostering curriculum innovation and restructuring the secondary school system by combining general, scientific, technological, cultural and technical-experimental knowledge.
8. In 2009, MEC also introduced radical changes in the ENEM, turning it into a national centralized university entrance exam.
9. In January 2012, MEC went further by announcing new curriculum guidelines for secondary schools, insisting on 12 compulsory subjects (including the Spanish language), and recommending the inclusion of crosssubject material such as Food and Nutrition Education, Environmental Education, Traffic Education and Human Rights Education.
io. In September 2012, the Federal Government launched the National Programme of Technical Education (PRONATEC), aimed at providing incentives for vocational courses and fostering partnerships with the private sector.

Despite this plethora of reforms, the results of the national assessments continue to surprise and disappoint those responsible for the conduct of educa-
tional policy in Brazil. As demonstrated in this article, student performance in the nationwide tests and the 'efficiency' indicators of the system indicate that the various policies have produced very little effect, despite the frenetic law-making activity by the government.

In Brazil, as in many other countries, secondary school began as a preparatory stage for university entrance. It was aimed at the minority of young people from better-educated families, with its typically over-crowded curricula (covering predominantly academic subjects) geared to meeting the requirements of university entrance exams and, thereafter, ensuring access to higher education. The entrance examinations for the public universities, generally highly competitive and aimed at selecting the best students, effectively ended up distorting the entire secondary school curriculum.

The recent reforms have not resulted in significant changes in the curricula of the state systems, which have continued to follow their traditional approach. Regardless of the expansion of secondary school enrolment between 1999 and 2005, the structure of the system has remained rooted in the past. While the decentralized entrance exams of recent years served as the major reference point around which the secondary school curriculum revolved, this changed after 2009 with the introduction of the ENEM curriculum as the benchmark. Given the model as it stands at the moment, it is virtually impossible to think in terms of alternative education approaches, or of a more diversified and flexible system geared to satisfying the different demands and aspirations of young people. In addition to selecting students for admission to higher education, the ENEM has become an obligatory requirement for access to innumerable federal funding programmes for students (PROUNI, PRONATEC, scholarships etc.). It has become, in practice, a basic requirement of the system: without it, students have access to nothing.

The relative stagnation in the number of students graduating from secondary education, the high dropout rates and the below-standard results obtained in the national examinations, continue to be of concern to the education authorities, and have led to organised civil society forming NGOs and movements calling for improvements in education. In 2007, the then Minister of Education, Fernando Haddad, announcing the results of the national assessments, admitted that secondary school education was in deep crisis. In an attempt to find inspiration for further reforms, a series of surveys and seminars organized by the MEC focused on proposals and models deployed in different countries, but the outcome of these initiatives never reached
as far as the classroom. In mid-20I2, the new Minister of Education, Aloisio Mercadante, shocked with the results of SAEB 20ir, engaged state secretaries of education, experts and organized movements to think of a new model for secondary education. As recently as July 20I3, led by the MEC and the National Council of State Secretaries of Education (CONSED), the Federal Government announced its intention to submit a new plan for secondary school reform to Congress. Yet another new 'reform' process will therefore soon be underway.

The current debate on secondary school education is revisiting the ageold dilemma about the purpose of this level of schooling. While integrating (or not) secondary education with vocational training is not a solution, the old debate about the reforms nevertheless continues to invoke this false dilemma, as if no other option were available for resolving the problems of educating the young.

A pressing question is whether simply integrating secondary education with vocational training is likely to solve the problems of low educational performance and encourage unmotivated young people to attend schools that have nothing to do with their real aspirations. Is everything that is expected to be taught in secondary school genuinely necessary for everyone, regardless of the student's future technical course or area of expertise at a higher level? What areas of the curriculum should be reinforced? Should the school curriculum be more varied and flexible? How can the architecture of the system respond to different educational attainment levels, expectations and living conditions of young people? How varied should the degrees of flexibility be?

In a Knowledge Society, with its increasing levels of complexity, preparing all citizens for the world of life and work requires mastery of skills and abilities in reading and writing, as well as problem-solving for a better understanding of the world around them. These are all skills that only a minority of young Brazilians possess by the time they reach adulthood.

In addition to moving towards resolving our dire problems of school management, thought must be given to dealing with two other crucial issues: (i) re-designing the curriculum to reflect learning expectations, enabling students to gain a thorough grasp of general skills, and (ii) re-designing the architecture of the secondary system to ensure that educational flexibility and diversity at this level remain at the core of the contemporary educational agenda.

In sum, the debate on the new secondary school reform should give serious consideration to curriculum changes and overall organizational structure:
a) Regarding the curriculum, the guidelines of the 1998 reform and the 2012 guidelines already provide an outline of the areas of knowledge and skills that all learners need. These guidelines can be used to inform the state curricula; yet it would be advisable to revisit them with a critical eye, building a consensus around learning expectations and fostering a permanent bond between the curriculum and educational technologies and innovations in the classroom.
b) As for the integration/coordination of secondary school with vocational education, it is important to keep all options open with regard to alternative training, obviously within feasible financial boundaries. At the same time an outlet should be provided for individuals who wish to continue studying prior to access to higher education. The same should be available to those who choose to leave school at age 18 for professional reasons.
c) In terms of a more flexible organizational structure that will bolster diversification in secondary education, vocational training programmes can be created with planning and logistical assistance provided by the municipal authorities or through public-private partnerships, as envisaged by PRONATEC and along the lines of certain experiments already undertaken by the states.

Finally, it is essential to encourage serious debate on how to render the curriculum truly flexible. In particular, we must look at the different degrees of difficulty of the areas that appeal most to students, provided that core subjects and basic skills have been learned by all. It is a controversial, but urgent topic that has to do with the single secondary school model. It would also be of interest to discuss organizational alternatives that combine general basic instruction for all with particular areas of interest to the students, both in the preparatory courses for higher education and in the vocational training courses, without prejudice to future choices. And, whatever direction the reform takes, it is vital to pay attention to the concerns of organized society and especially the concerns of young people themselves, since they are generally excluded from the educational debates that have a direct effect on their future.

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[^0]:    1 The evaluation systems SAEB (1995) and ENEM (1998) focused specifically on primary and secondary education.
    2 This division of attributions was established in the LDB and consolidated by the constitutional amendment which created the FUNDEF.

[^1]:    6 Over the next few years, the falling birth rate in Brazil, indicating 1.9 children per woman in 2010, according to the 2010 Census (below the replenishment rate) will affect the number of children entering pre-school. This is undoubtedly a major opportunity to increase coverage rates, even in the event that no new facilities are built to accommodate the pre-school intake.

[^2]:    9 The EJA (secondary level) declined in absolute and relative terms in the 15 to 24 age range. This fact would appear to contradict the expectation that the low expansion of regular secondary school education would continue on account of the EJA, which is seen as a quicker way of securing the final school-leavers' diploma. In fact, the number of students doing the EJA (secondary level) increased, especially in the over 25 age range. In other words, the hypothesis above would only hold true in the case of youths dropping out of school and returning to their studies at a later stage in life. Worth noting, however, is the fact that in the older age ranges, the absolute number of enrolments at the regular secondary education level is higher than that of those enrolled in the EJA. 10 The income groups considered here refer to the minimum wage (MW) as at 2009. The 1999 data were inflated and the 2011 deflated in order to allow for comparison.

[^3]:    13 This argument does not mean that this variable is not significant.

[^4]:    15 The IDEP calculations are based on the general formula: Ideb $(\mathrm{ji})=\mathrm{N}(\mathrm{ji}) \times \mathrm{P}(\mathrm{ji})$, in which " i " represents the year of the test (SAEB and Prova Brasil); " $\mathrm{N}(\mathrm{ji})$ " is the mean proficiency in Portuguese and Mathematics, standardised for an indicator of between o and 10 , of the students in unit " j "; and, finally, " $\mathrm{P}(\mathrm{ji})$ " is a performance indicator based on the pass rate in a given grade of students in unit " $j$ ". Further details can be found in the Technical Note on the Basic Education Development Index (available at www.inep.gov.br).

