Education and development *in Brazil, 1995-2000*

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This article analyses the education policies applied in Brazil in the six-year period from 1995 through 2000. After noting the need to prepare citizens and the country to face the twenty-first century, it addresses the long-standing lag in Brazilian education and the general characteristics of the educational system of that country. It then describes the educational policy options adopted in the period in question, which were aimed primarily at the expanding the system while improving its quality, and analyses the special features of the programmes in the field of basic education (understood as the education given from the earliest stages up to the end of secondary education); compensatory programmes aimed at keeping students in school; special education; literacy training plans, and the education of young people and adults. Next, it looks at the training of teachers, secondary and techno-professional training, and higher education, as well as matters connected with the transparency of information on the educational system and the possibilities of evaluating the system, the financing of education, and the implementation of the corresponding constitutional rules. The article ends with an analysis of the challenges and prospects of education in Brazil, noting that the main challenge is the pursuit of increasingly high levels of quality at all levels of education: an objective which is intimately linked with the upgrading of teachers and the financing of the system.

I

Preparing citizens and the country for the twenty-first century

With a population of 165 million, Brazil is the fifth most populous country in the world, surpassed in this respect only by China, India, Russia and the United States. It is the fourth biggest in terms of area, and is among the ten largest economies in the world.

Its society and economy are diversified and complex, with enormous potential but also with serious problems inherited from the past. There is now a clear awareness in the country that investment in education is the most important way of tackling those problems and making the great hopes that its people have in the future come true.

Since it is aware of the strategic importance of education for incorporating the country in a global economy which is increasingly based on knowledge and innovation, Brazil has come to view education as a national priority. As well as taking measures to ensure the financing of this sector, over the last six years it has consistently applied a coherent set of policies at all levels of education.

These policies have as their background the awareness that the world is going through a great process of structural change in terms of its economic history, with all the social and political consequences that that implies. The form of production in Brazil has taken a great leap forward, which has had an enormous effect on consumption, employment, wages and, in particular, the productivity of labour.

The appearance of informatics revolutionized industrial production technology, making old specialized skills obsolete and requiring a new type of worker, more versatile and better-equipped intellectually. The great leap forward in communications, furthered by the development of space technology, literally pulverized national barriers: countries could no longer keep themselves isolated in a world with instant access to information, and autochthonous national development processes were no longer viable.

In this world which is globalized and interdependent to a degree never before seen in universal history, the objectives of overcoming poverty and building firm foundations for democracy necessarily depend on the capacity for the appropriation and generation of scientific and technological knowledge, which is the rootstock and driving force of present-day capitalism, and on the consolidation of a body of citizens endowed with the necessary means for understanding, criticizing and influencing decisions affecting the course of those changes.

For education, there is a dual challenge: to train individuals and to prepare the country both for understanding a new world founded on completely reorganized bases, and for participating in that world. Making up for lost time, overcoming fundamental and essential shortcomings inherited from the past, and at the same time implementing the educational reforms demanded by the new society is a giant task which means that governments and societies must give clear priority to education.

II

The long-standing lags in Brazilian education

In spite of all the shortcomings and inequalities in its elitist and concentrative development model, Brazil nevertheless occupied second place among the countries with the greatest economic growth in the world between 1890 and 1980. It was the last country to abolish slavery, however (in 1889), and the Brazilian agrarian model kept the great peasant masses –mostly descendants of slaves and indigenous peoples who had lost their own cultural characteristics– in a state of exclusion and ignorance.

The industrialization process –between 1930 and 1980– was marked by import substitution without much

attention to competitiveness or innovation. Exports came only from the sectors making intensive use of natural resources and cheap labour, and a high degree of income concentration existed side by side with increasing social exclusion.

Up to 1950, almost 70% of the population still lived in rural areas. In 1960, only 60% of children between 7 and 14 years of age went to school, and the rate of illiteracy was 40%. By 1997, however, 80% of all Brazilians were living in cities. This frenzied process of urbanization was accompanied up to the end of the 1980s by high rates of population growth, and the big cities, in particular, with their already deficient systems of urban infrastructure and services, had to receive a massive inflow of young people of rural origin who were almost completely devoid of the skills needed for production activities in the industrial economy.

By the mid-1990s, 89% of all children were attending school, and the rate of illiteracy had fallen to 16%. This was a considerable advance, although it was still insufficient to meet the demands of the new knowledge-based society, especially considering that only 50% of the children beginning the first grade of primary schooling completed the full eight grades and took an average of twelve years to do this, because of the very high rates of repetition and dropping out.

This dismal educational situation -even today the country still has a legacy of 15 million illiterates over the age of 14- was coherent with and even "functional" to the development model prevailing up to then, which was designed to serve a policy of protectionism and was capable of maintaining domestic balances thanks to protection from international competition. For this form of industrial development favoured by the elites, it was sufficient to have a segment of good-quality education covering all the levels (primary, secondary and university), without bothering to expand its coverage, since ensuring that the whole population received education was not a priority.

Within these limits, the country pursued this educational model with a certain degree of efficiency, since under it -especially between the 1960s and 1980s- the best post-graduate specialized study facilities of any of the developing countries developed and flourished.

Especially from the 1990s on, however, there was increasing pressure to provide better educational conditions for the population as a whole. This pressure came not only from young people and families seeking upward economic and social mobility but also from the economy itself, which was increasingly urbanized and complex and increasingly exposed to outside competition.

III

Features of the Brazilian educational system

A special feature of the Brazilian educational system is that it is extremely diversified and decentralized. Brazil is a federal republic, made up of 26 federative states and the Federal District. In turn, the federated states are subdivided into municipalities, of which there are currently some 6,000.

Except at the higher level, the educational system is predominantly public. There are currently 54.7 million students enrolled in the different levels of education. This figure represents nearly a third of the entire population and is practically equal to the combined total populations of Argentina, Chile and Uruguay. The public sector schools provide free education to 89% of the 52 million students in the basic educational segment (kindergarten, primary and secondary), which is equivalent to the total population of Venezuela and Peru together.

The new Law on the Guidelines and Bases for National Education, which was officially published in December 1996, redefined the roles and responsibilities of each of the educational systems (federal, state and municipal). By giving greater independence to the individual schools, making curricula more flexible, and promoting the improvement of teachers' qualifications –it lays down that by 2007 all the teachers in basic education must have university-level training– the new law provided a suitable environment for the implementation of significant changes in the country's educational system.

Compulsory primary education (grades 1 through 8), as well as day nurseries (0-3 years of age), preschool education (4-6 years of age) and secondary education have always been the responsibility of the states and municipalities. At these levels, the central government

plays a normative role, laying down the main lines of the system of redistribution and subsidiarity and providing assistance and subsidies in order to reduce social and regional inequalities. Only the institutions of higher education and the middle-level techno-professional schools are maintained directly by the Union.

The adoption of the Law on the Guidelines and Bases for National Education set in motion an extensive process of municipalization of primary education and state-level responsibility for secondary education. In 1997 there were 18 million students in state schools and 12 million in municipal ones, but in 1999 the municipal and state-level systems drew level, with 16 million students each. Secondary education, which expanded at an average rate of 14% between 1996 and 1999, has been increasingly concentrated in the state-level systems. Preliminary data from the 2000 school census show that the 5.4% increase in enrollment was accounted for mainly by the state system, which grew by 7.9%, whereas all the other systems decreased: -10.2% in the case of federal-level education, -4.9% at the municipal level, and -4.2% in the case of private education.

This evolution is in keeping with the Law on the Guidelines and Bases for National Education, which envisages the provision of secondary education by the states.

IV

The main options of the federal government's new educational policy

The whole of the federal government's efforts are currently concentrated on **expanding** educational opportunities while at the same time promoting **higher quality**, from the most basic areas of the educational system to its highest levels; these efforts are directed in particular towards the school-age population, but they also seek to provide opportunities for entry to those who did not have access to education at the corresponding age, in view of the right of all Brazilians to enjoy full citizenship and to have access to the development model necessary for the full exercise of that right.

In primary education, the most important objective was to enroll children between 7 and 14 and keep them in school thereafter, guaranteeing them high-quality education. The second objective of the government, after universal access, was to ensure the success of the schooling provided, as represented by the progress of students up to the completion of the last grade within the scheduled time: an objective which necessarily included improvement of the quality of education.

Mention should also be made, however, in addition to the priority given to the universal coverage of primary education, of the measures for the reform and diversification of secondary and techno-professional education, the training and upgrading of teachers, and the expansion and evaluation of higher education.

The quantitative and qualitative aspects of these policies were subjected to continuous control through reliable information and educational appraisal mechanisms, so that, after starting from scratch five years ago, Brazil now has an educational system comparable with those of the most highly developed countries.

In addition, complementary programmes of a compensatory nature –some of them among the most comprehensive in the world– have been prepared in order to overcome the past history of inequality in Brazilian society. Among these programmes are the provision of free school lunches and textbooks in primary education, the supplementation of the incomes of the poorest families with children in school, and educational loans for young people who reach the level of higher education. In addition, the programmes of accelerated learning, literacy training and education for young people and adults and of support for the educational systems of the Northern and Northeastern regions are also designed to make up for regional and income-related inequalities and to contribute to the great effort to promote social inclusion currently under way in Brazil.

The educational programme of the government, based on the pursuit of equality of opportunities, includes not only the principles of universal coverage, high quality and decentralization, but also community

participation in the running of schools and greater social control over public expenditure and its results. To this end, the traditional allocation of federal resources to the federated elements of the country through negotiated agreements has gradually been replaced by systems of automatic transfers based on transparent and universal criteria, while the bureaucratic follow-up and evaluation arrangements have been replaced by community participation in collegiate supervision and accounting control bodies.

1. Primary ("fundamental") education

In five years there has been a big expansion in access to primary education. The proportion of children between 7 and 14 enrolled in school rose from 89% in 1994 to 96% in 1999, representing the incorporation of four million students into the system. Regional inequalities are also being reduced. Thus, in the Northeast region enrollment grew by almost 27%, compared with 13% for the country as a whole.

Contrary to what is usually assumed, it would appear that the public schools offering basic education have enough vacancies (naturally with adaptations to suit a different student profile) to absorb the entire population of children between 7 and 14 (corresponding to compulsory primary education) and 15 and 17 (corresponding to secondary education). According to the 1999 school census, Brazil had 44 million students enrolled in the public basic educational system, whereas the population aged between 7 and 17 was only 37 million. The difference is accounted for by repetition, which reaches very high levels in the earliest grades, and late entry into the system.

Although the age/grade distortion is still high –46.6% of all students could be in higher grades– Brazil is improving its performance in primary education.

Between 1994 and 1999, the number of students graduating from primary education soared from 1,588,000 to 2,383,000 - an increase of 50.1%. Over the same period, the number of students graduating from secondary education grew by 67.8%, from 915,000 to 1,535,000.

The promotion rate, which measures the number of students progressing from one grade to the next, rose from 65% in 1995 to 74% in 1998; the expectation of completing first grade increased to 63%, and the average time needed to complete all eight grades went down from 12 to 10 years. In 2000, enrollment in the primary cycle began to go down for the first time, but mainly in the first four grades, as it continues to grow in the case of the fifth to eighth grades. More students are completing primary education than are entering it, which means that the age/grade distortion and the indexes of repetition are going down. This greater efficiency lightens the educational burden on the municipalities and increases the challenge to the states, which are responsible for ensuring the expansion of secondary education.

An important element in the improvement in the age/grade distortion is the accelerated learning programme. Through it, the federal government finances special classes for students having a serious lag in this respect, in order to help them to progress rapidly to the grade corresponding to their age. Between 1998 and 2000 over 3.5 million students took part in this programme, and most of them succeeded in advancing in their studies.

It should be repeated that the main problem in primary education is not quantitative but qualitative. In this respect, in addition to the formulation and diffusion of national parameters and curricular guidelines for all levels and forms of basic education (pre-school, primary and secondary education, together with special programmes for young people and adults and indigenous groups) and programmes such as "TV Escola" or "Proinfo", which will be dealt with later, there are also the efforts made to improve and extend other programmes, such as those for the issue of school books and school libraries, in order to meet the challenge of raising the quality of primary education.

Primary school teachers were provided with more than 1.4 million copies of the curricular parameters and guidelines. In 1998, schools were issued with 20,000 sets of the "teacher's library", consisting of reference works on the historical, social and political formation of Brazil, and in 1999 a further 35,000 libraries of children's and young people's literature were delivered for use by primary school students.

Programmes of a compensatory nature, designed to correct the effects of the big social and income-related disparities affecting a large proportion of Brazilian families, also helped to create suitable conditions for the successful education of students from low-income families.

2. Compensatory programmes

The National School Nutrition Programme (PNAE), commonly known as the "school lunch programme", provides during the 200 days of the school year at least one meal per day to the 36 million children in the

primary and pre-school levels of the public system and in private philanthropic educational establishments. The population thus served exceeds the total population of Canada and is equal to the combined population of Australia, Greece, New Zealand and Singapore. The coverage of the programme is practically universal: in 1999 it operated in 96.7% of all urban public schools and in 98.1% of the rural schools. Many school headmasters (75% of those in rural schools and 61% in urban schools) believe that the "school lunch" is the main meal of the day for most of their students.

The programme has been improved, expanded and completely decentralized. The present government has almost doubled the expenditure on these meals: between 1995 and the end of 1999 the country invested 3.6 billion reales in feeding primary school students. In 1999 alone the investment came to 903 million reales, representing 33% of the total budget authorized for the National Educational Development Fund (FNDE). The resources are sent directly to over 5,000 municipalities, where the community and the schools freely decide on the menu in line with local and regional eating habits and are responsible for controlling the quality of the food. Since 1999, the formation of a municipal school lunch council has been made an essential condition for the transfer of the resources to the municipalities.

The existing National School Book Programme (PNLD), through which the federal government acquires and distributes primary school textbooks, has been improved and expanded since 1995. The old programme left much to be desired, as it was limited to the first four grades, suffered from chronic problems of unpunctuality in the distribution of the books, and lacked arrangements for the evaluation of the contents of the books and the methodologies followed in accordance with appropriate national curricular guidelines.

As from 1996, the PNLD began to serve all first to eighth grade primary school students. Between 1994 and 2000, the FNDE (directly) or the states of São Paulo and Minas Gerais (autonomously) acquired 597 million school books, selected by the teachers from a catalogue of books evaluated by an independent commission of teachers. In 1999, 502 different works from 27 publishers were distributed to 170,000 schools all over Brazil.

A joint company formed by the Ministry of Education and the Brazilian Postal and Telegraph Company ensures that 100% of the books are delivered to the schools before classes begin, even in the most remote municipalities. The programme is designed on the assumption that the books can be re-used for three years, to which end the publishers were required to improve the quality of the paper and binding, and an educational campaign was carried out among students and their families to encourage them to take care of this study material; the rate of return has been surprisingly high. According to an independent survey, 93.5% of school headmasters considered that their students "were happy to use the books" and approved of the choice of texts.

The most important and effective initiative for ensuring that children from low-income families stay in school is undoubtedly the National Guaranteed Minimum Income Programme (PGRM), better known as the "Every child in school" programme. Within the worldwide tendency towards the decentralization of resources and the targeting of attention, the programme provides monthly financial aid to deprived families (with a family income of less than half a minimum wage per member) with school-age children.

The PGRM is implemented by municipalities where the average family income is less than the average for the state in question, and those municipalities which are not in a position to cover the total cost of the programme may receive financial aid from the Union. In 2002 the aim is to cover the entire universe of over 3,000 municipalities eligible for participating in the scheme. At the end of 1999 the programme had already benefited over 500,000 families, representing almost a million children between 7 and 14, in over a thousand municipalities. The programme also helps in eradicating child labour and reducing the exodus of families to the big cities.

The Northeast Project was established in the light of the extremely unfavourable situation of education in that region of the country, which registers indicators far below the Brazilian averages. In addition to providing substantial resources for municipal and state education programmes, this project supports research to help formulate effective strategies to overcome educational shortcomings.

Between 1993 and 1998, the Northeast Project invested national and external resources (the latter came from a World Bank loan) amounting to nearly US$ 500 million. It was reformulated in 1998 under the new name of Educational Strengthening Fund (Fundescola) and was also extended to the North and Centre-West regions.

The educational indicators in the Northeast and Northern regions have grown faster than the national average in both quantitative and qualitative terms. This

favourable evolution, which has become even more marked in recent years, shows that regional differences are rapidly being reduced. In those regions, primary education has grown by 27.2% since 1994, compared with 13% in the country as a whole, while enrollment in the fifth to eighth grades has grown by 49%, compared with a nationwide 27%. Over half of the students attending accelerated learning classes (50.6%) are in the Northeast region. In secondary education, while nationwide enrollment grew by 5.4% between 1999 and 2000 it increased by 11% in the Northeast and by 8.3% in the Northern region.

3. Infant education (0-6 years of age) and special education

Two advances are worthy of note in infant education: adoption of the concept that educational attention for children between 0 and 6 years of age is a first stage in basic education, and the expansion of enrollment at this level. The inclusion of day nurseries (0-3 years of age) in educational systems and the definition of the responsibility of municipalities for infant education complete the institutional changes made in this field. Pre-school enrollment (providing attention for children between 4 and 6 years of age) grew from 35.4% of that age group in 1990 to 50.4% in 1998. Another positive aspect is that although the indicators of coverage of pre-school education are still unsatisfactory, regional disparities are much smaller than at the other levels of education and the distribution of enrollments between rural and urban areas is better.

Improving the records of infant educational establishments (especially those that have day nurseries) is a difficult task, as many such establishments operate informally in connection with churches, associations and non-governmental organizations. In order to include this informal system of establishments in the statistics of the Ministry of Education, as from October 2000 the National Institute for Educational Studies and Research (INEP) carried out the first census of infant education, the data from which will be of vital importance for defining educational policies for the sector. The school census published each year by the INEP currently collects data on both day nurseries and pre-school establishments. A survey exclusively on infant education is planed, in order to expand the coverage of the information collected.

In the field of special education, analysis of the progress made in the 1990s shows that there has been a marked increase in the access to education of those with special needs. This is the result of the efforts made to overcome both the idea and the practical application of segregation and to progress towards an "inclusive" form of education within the regular educational system, with respect for the diversity of students being the guiding principle in education. Between 1988 and 1998 there was an increase of 102.8% in the enrollment of students with special needs.

4. Literacy training, and education for young adults

The constant growth in the rate of school attendance throughout the country has been reducing illiteracy, raising the level of education of the population, and gradually reducing the marked regional disparities. The percentage of children between 7 and 14 who do not go to school, which stood at 16.2% in 1989, went down from 9.8% to 4.3% between 1995 and 1999.

In the 10-14 age group, in which children are expected to be at least able to read and write, the rate of illiteracy went down from 14.8% in 1989 to 9.9% in 1995 and 5.5% in 1999. The heavy inherited burden of illiteracy and low average educational level of the population, however, which was the result of past quantitative and qualitative shortcomings in primary education, makes it necessary to continue to tackle these serious deficiencies with specific programmes.

According to the Constitution, it is the duty of the State to further the free provision of education for all, including those who did not have access to it at the corresponding age. Various initiatives have therefore been implemented to provide literacy training for adults and secure the reincorporation into regular primary education of young people who had dropped out of school.

There is an increasing conviction, however, that the education of young people and adults (EYA) calls for special policies as well as curricula and methods specially adapted to the needs of young people and adult workers. Since 1994, the federal government has begun to invest in solutions of this type, with programmes for the production of suitable teaching material and the training of specialized teachers. Special importance has been attached to initiatives in the field of association and other successful efforts made by employers, by various civil organizations, by universities, and by the state and municipal departments of education.

As a result of these policies, already in 1998 the school census registered 2.8 million persons enrolled in courses for young people and adults, the great

majority of whom were completing their primary education.

In 2000, enrollment in all levels of EYA special education for young people and adults totalled 3.1 million. Following the same trends as in regular education, there was a small increase in the literacy training groups (3.7%) and in first to fourth grade education (2.3%), but a considerably larger expansion in fifth through eighth grade classes (9.9%). There was a particularly marked increase in secondary education, which grew by 33.3% compared with the previous year, involving 807,600 students. Compared with the 1995 census, the increase was 169.6%.

In order to tackle illiteracy in the 12-18 age group –a problem which is concentrated in the poorest municipalities of the country– an initiative called "Supportive Literacy Training", which was a new project of the "Supportive Community" programme of the Office of the President of the Republic, was put into effect. This project, which was set up in January 1997 and operates in association with universities and private initiatives, had some 300,000 students in 866 municipalities as at December 1999, mostly in the Northern and Northeast regions.

5. Teacher training and the quality of education

Improving the quality of education is the main battle that the Ministry has begun to fight on various different fronts. Extensive reform of school curricula at all levels is under way. For the first time in the history of Brazilian education, the federal government has established national parameters for the curricula of all eight grades of primary education, as well as guidelines for infant education, and it has reformulated the whole system of teacher training. Parameters have also been laid down for the education of young people, adults, and indigenous groups. The latter is one of the most interesting aspects of the policies of the present government, since it seeks to make a clear effort to preserve and enhance the culture of indigenous groups.

One of the most innovative features of the parameters laid down for school curricula is their broad coverage, which goes far beyond the subjects making up the traditional curricula, since it includes subjects connected with the formation of citizens and deals with questions of ethics, citizenship and cultural diversity, as well as education in the fields of the environment, health, and sex.

For distance education, new programmes have been created, such as school television ("TV Escola"), in order to provide sixty thousand schools all over the country with backup educational programmes, assistance for the work of the teachers, and ongoing teacher training. This school television, which is transmitted on a dedicated channel by satellite, provides three hours of high-quality programmes per day, repeated four times a day.

The National Educational Informatics Programme (PROINFO) has proved to be another important initiative. Under it, over 20,000 teachers have so far been trained in the use of computers in education. To date, the government has installed 30,000 computers and peripherals in over 2,000 schools in the 26 states and the Federal District, directly benefiting nearly 200,000 students. The programme aims to install 100,000 computers in 6,000 schools by 2001, thus reaching 7.5 million students. In 2000, through the establishment of the Universal Telecommunications Services Fund (FUST), the federal government will spend 300 million reales on connecting public schools to the Internet.

In order to raise the quality of primary education another great challenge must also be faced: that of training teachers. This means raising the status of teachers and improving their working conditions and salaries. The Fund for the Maintenance and Development of Primary Education and the Improvement of the Status of Teachers (FUNDEF) has begun to correct the salary problem by devoting a mandatory 60% of its resources to upgrading the qualifications and salaries of teachers. After a year of operation of this Fund, the nationwide average salary of teachers has increased by 13%, but in the case of teachers in the municipal education systems of the Northeast, where salaries were lower, the increase has amounted to 50%.

In addition to the increase in the number of teachers over the last five years –10% in primary education and 36% in secondary education– the school census reveals that they are now better qualified, since their level of training has improved considerably. Between 1994 and 1999, the proportion of teachers without full training –the so-called lay teachers– went down to 41% in primary education, the number of teachers with full secondary education increased by 8%, and the number with full higher education grew by 24%.

The Law on the Guidelines and Bases for National Education provides that by 2007 all teachers in basic education must have higher education. There are currently 600,000 teachers without such training in the country, of whom 95,000 do not even have the minimum qualifications required at present

(intermediate-level teachers' training). Almost 80% of the teachers in the first four grades of primary education will have to upgrade their qualifications, as will almost 25% of the teachers in the last four grades.

This will call for a major joint effort by all three levels of government in the coming years, as the task is enormous and the time available only short. Big changes are being made in the organization of the teacher training system. The idea of higher institutes of education and a career system for graduates of such institutes, the definition of special teachers' training programmes and the formulation of new guidelines for the curricula of teachers' training courses and university-level degrees in general are measures that are bound to have a strong impact in the short term.

At the same time, there is general agreement among specialists in education that no initial training, even of the best quality and at the highest level, is sufficient of itself for professional development. This means that it is essential to establish a system of ongoing permanent training for all teachers.

The government is investing more and more resources in distance training courses in order to make it possible to upgrade the qualifications of working teachers. Some states, with the support of universities, are also carrying out effective in-service training programmes for thousands of teachers in their respective school systems.

The "TV Escola" school television programme, which is transmitted on a dedicated channel by satellite, promotes the upgrading of teachers by providing systematic support for their classroom activities. When it installed the programme, the government trained 200,000 teachers in its use, and there are now 56,506 schools equipped to receive three hours of the programme each day. The programme has been on the air for three years now and serves nearly a million teachers and 28 million students.

6. Secondary and techno-professional education

The growth rate of the number of enrollments in secondary education has soared by 11.5% in 1999 and 57% between 1994 and 1999. In the Northeast region the growth has been even faster: 62%.

The impressive expansion of enrollments in secondary education is due to three main factors: there are more students completing their primary education; more students are now completing it at an earlier age and are therefore in a position to continue with their studies, and there has been an increase in the demand from young people for better schooling to meet the demands of an increasingly competitive labour market. Supplementary secondary education (education of young people and adults over 18) grew by 169% between 1995 and 2000.

Secondary and techno-professional education is undergoing profound reforms. Previously, secondary education had no identity of its own and was divorced from the requirements of the modern world, so that it was not fulfilling the functions demanded of it. What was required was that it should teach students to learn on their own, provide them with guidance on practical everyday matters and their future working careers, and prepare them for the exercise of citizenship and democracy. It should also be able to train young people in the use of new technologies and ways of producing goods, services and knowledge.

The first step in the reform of secondary education was of a structural nature: secondary education was separated from techno-professional training. These areas of education now operate independently, and the latter is now complementary to the former. This will facilitate the achievement of another of the government's great goals in education: the attainment of universal coverage of secondary education too.

In addition to these structural changes in secondary education, the Ministry has also made changes in the areas of teaching itself and the curricula. At the teaching level, the new form of secondary education will associate knowledge with the practical life of students, providing them with guidance on their future and not merely being a preparatory stage for future entry into higher education.

The national curricular guidelines laid down for secondary education are compulsory for all the schools in the country. After their definition, the Ministry prepared the corresponding curricular parameters and a set of guidelines and recommendations for supporting the work of teachers under this new concept of secondary education.

The curricula have been made more flexible: 75% of their content is in line with a common national base, while the remaining 25% is defined by the schools themselves in the light of local economic and social characteristics or the interests of the school community. Through this innovation, students now have greater freedom to design their own curricula.

In addition to these changes in secondary education, the Ministry has also embarked on the reform of techno-professional education, as provided for in the Law on the Guidelines and Bases for National

Education. That area of education is now divided into three independent levels: basic (independent of whatever previous schooling the students have), technical (simultaneous with or subsequent to secondary education), and technological (of a higher level, subsequent to secondary education). The secondary-level, post-secondary and higher courses in this area were previously given in full-time schools with rigid curricular structures linked with very clearly-defined occupations and aimed primarily at young people.

Today, however, as well as being separate from the secondary cycle, techno-professional education offers courses that meet the needs of local and regional labour markets. The authorities are promoting the diversification of post-secondary techno-professional education, both technical and higher-level, to give broad flexibility to the curricula and freedom for young people and adults to enter and leave the educational system several times. The organization of the curricula in modules allows students to take various short courses at different times in their lives and allows for flexible contents which take account of the students' preferences. With this restructuring, techno-professional education will be able to effectively train students to work in various different occupations. Furthermore, it will only attract young people who really do want to work as middle-level professionals.

Through the Brazilian Support Service for Micro- and Small-scale Enterprises (SEBRAE), 10,000 technical education teachers are being trained to give their students a basic knowledge of business management, thus preparing students to work on their own account, if they so desire, or open a small enterprise after completing their training.

The Techno-Professional Expansion Programme (PROEP), which is financed by the Ministries of Education and Labour with support from the Inter-American Development Bank (IDB), is spending US$ 500 million on the re-equipment of public technical schools and the establishment of a network of community techno-professional schools in association with municipalities, trade unions and civil organizations.

7. Higher education

Although the Brazilian higher education system is quite small for the size of the country and displays enormous differences in quality, it has never been a serious impediment to Brazilian development.

The percentage of the population with completed higher education among adults over 25 is similar to the levels for countries such as Austria, Chile, Italy and Uruguay and is higher than in China, India, Indonesia and Turkey.

In 1997, 7% of the population between 25 and 34 years of age had higher education. In the 35-44 age group the percentage rose to 9%, while in the 45-54 and 55-64 age groups the percentages went down to 8% and 5% respectively. The indicators for Italy for each of these age groups are similar to these figures: 8% (25-34), 11% (35-44), 8% (45-54) and 5% (55-64).

In higher educational policy the challenge to be faced –ensuring the expansion and diversification of the system while maintaining or improving its quality– was very clear in view of the big increase in the rates of completion of secondary education and the demands of an increasingly sophisticated and segmented labour market.

Expansion of this area of education recovered in quantitative terms from 1994 on, after a long period in which the number of students remained unchanged. In the four years from 1994 the enrollment in higher education grew more in absolute terms than in the previous 14 years, with 424,000 new enrollments.

Thus, in 1998 there were 2.1 million students in higher education: 28% more than in 1994. The total number of graduates now represents 9% of the population aged 21 or over (7% in the case of men and 11% in that of women).

With regard to diversification, the curricula of the higher courses are being reformed in two aspects: their structure is more flexible, thus permitting partial certification of short courses, and the establishment of minimum curricula for each course has been abandoned and replaced with curricular guidelines for each area of study.

As far as quality is concerned, up to 1995 the expansion of the system was only subject to *ex ante* bureaucratic controls, without there being any system of evaluation that enabled the accreditation of institutions to be linked to judgements on their performance and quality.

The legislation on the accreditation of courses and institutions has been substantially modified, and evaluation of performance as the main mechanism for accreditation and re-accreditation has been institutionalized. An innovative system of final examinations, which must be taken by all students in order to graduate, has been established as an indirect means of evaluating the performance of the courses in question. The results of these examinations, together with the evaluation of the operating conditions carried

out by specialist commissions appointed by the Ministry, enable society to know which institutions and courses have the best performance. As well as making this information more democratically available, favouring social supervision and control and highlighting shortcomings, these results serve as the basis on which the Ministry decides whether or not to renew the accreditation of institutions and courses.

Since the creation of this integral system of evaluation, there has been greater freedom for the private sector to expand its activities in the field of higher education, subject to the fulfillment of established patterns of quality under the supervision and systematic evaluation of the Ministry of Education. Significant expansion of higher educational activities towards the interior of the country and correction of regional imbalances have been observed. Thus, almost one-third of the increase in the number of vacancies in private-sector institutions has been in the Northern, Northeast and Centre-West regions.

Since much of the expansion in the supply of higher education is taking place and will continue to take place in the private sector, the government has concerned itself with improving the support mechanisms to help students from low-income families to have access to higher education.

The new Student Finance Programme (FIES), which was set up in 1999, provided loans to more than 80,000 students enrolled in institutions all over the country in its first six months of operation. This is 173% more than the last selection process made in 1997 by the former educational credit system, and in 1999 the resources used for this purpose exceeded 150 million reales.

In public higher education, which is free of charge, measures were taken to increase the productivity of the system, which had one of the lowest student/professor ratios in the world. Under the present government, the resources devoted to higher education by the federal public system have increased by 28%, and efforts have been made to use them in the most transparent and efficient manner. Federal resources are now distributed to the public universities according to the number of students and graduates, and a system of remuneration of the professors linked to their academic performance has been introduced.

Consequently, the expansion of higher education now includes an important new feature: the public system has recovered its dynamism. The number of undergraduate students grew by 17% between 1994 and 1999, while the number of postgraduate students also increased significantly: between 1995 and 1998 the number of students studying for masters' degrees rose from 43,000 to 51,000, and those studying for doctorates increased from 16,000 to 27,000. This means that Brazil is training 13,000 graduates with masters' degrees and 4,000 with doctorates each year.

Investment is being made both in human resources and in physical equipment and installations. The average level of qualifications of the faculty members has improved, since the proportion with doctorates rose from 22% to 29%. Priority has been given to undergraduate education, and over 100 million reales has been spent on libraries, computers and information infrastructure. International tenders were invited for the supply of US$ 300 million of laboratory equipment for undergraduate education and university hospitals, and this equipment is already being delivered to public higher educational institutions.

8. Information and evaluation

Under the present government, there has been a veritable revolution in terms of educational information and evaluation. The high quality of the studies carried out has made them an indispensable instrument for the planning and execution of the public policies of the Ministry of Education. Thanks to them, the government is not only spending more on education but is using these resources more effectively.

The starting point for this was the conversion of the National Institute for Educational Studies and Research (INEP) into an autonomous body with its own resources. In this capacity, the INEP has taken over responsibility for the entire system for the collection, evaluation and storage of information on all aspects of education in the country.

The System for the Evaluation of Basic Education (SAEB), which studies the performance of primary and secondary school students, is recognized as one of the most sophisticated in the world in matters of the evaluation of school performance.

The National Secondary Education Examination (ENEM), which was held for the third time in 2000, is becoming firmly established as an important instrument for evaluating the performance of students and schools. In that year, 350,000 students took the examination, which is already accepted by 130 institutions as valid proof of eligibility to enter higher education, either alone or in conjunction with the traditional entrance examination.

As from 2001, enrollment for this examination will be free of charge for all students of public schools. The

aim is to pressure the federal universities to accept the examination: at present, out of over 50 federal universities in Brazil, only 7 accept it as one of the forms of entry. It is expected that out of a total of 1.8 million students graduating from secondary education in 2001, some 900,000 will be enrolled for the ENEM.

In higher education, the National Degree Course Examination ("Provão") has also been gaining acceptance after four years of application; it now covers 18 higher education courses and serves to evaluate 2,889 course modules through an examination taken by 214,000 students in the country (70% of the total number of undergraduate students). This national examination, which is essential for evaluating the quality of undergraduate courses in higher education, is playing a notable part in improving the level of higher educational institutions.

The quality of the work done by INEP over the last five years has won international respect. Thanks to the advances made in systems of evaluation and information, Brazil now takes part in international comparative studies such as the *World Educational Indicators* (WEI), prepared by UNESCO in conjunction with the OECD, and the *PISA 2000* study of the Organization for Economic Cooperation and Development (OECD), which make possible a precise diagnostic study of the situation of Brazil compared with the other countries.

V

Public resources for education

Brazilian legislation provides for a regular flow of public resources to education. Brazil's public expenditure on education, as a proportion of GDP, is one of the highest among the countries participating in the WEI project and is equal to the average of the OECD countries.

In 1997, public expenditure on education came to 37 billion reales. This was equivalent to 4.8% of the country's GDP: more than in Argentina (3.7%), Chile (3.2%), Philippines (3.0%), Mexico (4.6%), Malaysia (4.4%), Thailand (4.3%) and Uruguay (2.6%), and comparable to that of Spain (4.8%) and the average of the OECD countries (4.9%).

Total expenditure in that year was 43.3 billion reales, made up of 8.6 billion from the Union (19.8%), 21 billion from the states (49.8%) and 13.1 billion from the municipalities (30.4%). The federal government provides 62% of the resources invested in higher education and plays an important supporting role in primary and secondary education.

In that same year, expenditure on staff costs absorbed 57.6% of the direct resources provided by the three levels of government. This proportion is tending to increase because of the policies for the training and upgrading of the teaching staff. Between 1994 and 1999 there was an increase of 45.3% in the number of teachers with full higher-level training and a reduction of 65.8% in the number of lay teachers (i.e., without secondary-level qualifications).

The 1988 Constitution lays down that the states and municipalities must devote at least 25% of their tax revenue to education, and of that amount at least 60% must be spent on primary education. At the level of the Union, the corresponding minimum is 18% of tax revenue.

Primary education also receives supplementary resources from the "education wage", a social contribution equal to 2.5% of their payroll that enterprises must make for this purpose. One-third of these resources goes to a federal fund, the FNDE, which prepares support programmes devoted exclusively to the state and municipal primary educational systems, while two-thirds goes directly to the states where the tax is collected. In 1998, the resources allocated by the three levels of government exclusively to primary education amounted to 18.3 billion reales.

If it had not been for the faulty distribution of the existing resources, plus their faulty application, the available resources would have been enough to maintain an educational system of much better quality and coverage than that which actually existed in the country up to 1995.

The faulty distribution was due to the big differences in revenue collection capacity between the richer and poorer states and municipalities. The former did not devote the mandatory 25% of their revenue to compulsory primary education or infant education: they invested a considerable part of those resources in secondary education, and even in some cases in higher

education. In the poorer municipalities, for their part, especially in the Northeast, the resources available were not sufficient to provide good-quality education. In many such localities the average expenditure per student per year was less than 100 reales, and teachers' wages did not even amount to the official minimum wage. There was therefore no relation between the resources available and the number of students served by the different educational systems.

The forms of faulty application of resources ranged from the use of resources that were supposed to be for primary education for other levels of education, and even the straightforward diversion of resources to other uses, so that they were lost in the nooks and crannies of bureaucracy before they ever arrived at the schools, both because of the lack of a clear definition of "expenditure on education" and because of the lack of accounting and administrative controls.

It was in order to correct such distortions and ensure the implementation of the objectives of the new Law on the Guidelines and Bases for National Education that in 1996 the present government proposed and approved Constitutional Amendment No. 14 which set up a Fund for the Maintenance and Development of Primary Education and the Improvement of the Status of Teachers (FUNDEF).

VI

The Fund for the Maintenance and Development of Primary Education and the Improvement of the Status of Teachers (FUNDEF)

Constitutional Amendment No. 14, which set up FUNDEF, laid down that for ten years from the date of its promulgation states and municipalities must assign to primary education no less than 60% of the resources already earmarked for education under the 1988 Constitution. Although FUNDEF does not cover all the taxes collected by states and municipalities, this commitment applies to all the revenues making up the budgets of those levels of government.

The resources previously earmarked for education in general –without there being any clear definition of what should be considered as expenditure on education– were not necessarily allocated in line with the real priorities defined for the country: primary education, an increase in the number of students, better pay for teachers, and a level of resources which would improve the quality of the schools in the poorest regions.

FUNDEF, which was set up in 1998 in all the units of the federation for a period of ten years, is an administrative fund (that is to say, it does not generate new resources but simply distributes the existing resources differently) extending to all the main sources of state and municipal revenue.

Before this fund was set up, the way tax income was distributed between states and municipalities bore no relation to the division of educational burdens between the state and municipal educational systems. This further exaggerated the inequalities between the richest and poorest municipalities in each state and did nothing to combat the traditional regional imbalances in the country.

With the creation of FUNDEF, the redistribution between each state and its component municipalities of the resources making up the fund takes place automatically, according to the number of students enrolled in the respective primary education systems.

With the new definition –now endowed with the force of law– of what can be included in expenditure on education, the amounts redistributed by the fund are deposited in a special bank account, thus notably improving public control over their use.

The resources received by state or municipal educational systems in the account in question must be allocated in line with the following requirements:

i) a minimum of 60% must be used for the payment of teachers actually working in primary education, although part of those resources may be used for the upgrading of lay teachers up to 2001;
ii) the remaining 40% must be used for actions defined by the law as corresponding to the upkeep and development of education: construction,

expansion, completion or remodelling of schools, acquisition of teaching material and equipment, miscellaneous services, and payment of pensions.

The federal government undertakes to make up the amounts provided when the resources distributed by the fund in a state do not reach a certain minimum level per student which is determined annually and is currently 333 reales per student/year in the first four grades of primary education and 349.65 reales in the last four grades.

In 1998, which was the first year of operation of the fund, almost 13.3 billion reales was distributed to the compulsory primary education system. In 2000, the projected income of the fund was 17 billion reales, to be distributed as follows: Southern region, 2.5 billion reales; Southeast, 8 billion; Centre-West, 1.1 billion; Northeast, 4 billion, and Northern region, 1.4 billion. The poorest states, which did not reach the minimum expenditure per student, were to receive supplementary amounts: 511.6 million reales for the Northeast and 122.6 million for the Northern region. In the other regions the states exceed the minimum expenditure per student.

The constitutional amendment under which the fund was set up also provided for the establishment of councils made up of members of civil society at the various levels of government in order to keep a check on the expenditure made.

In the light of recent complaints of irregularities in the allocation of FUNDEF's resources (failure to allocate 60% of the resources to primary education; financing of activities not considered to correspond to the upkeep and development of education) in some 5.5% of the municipalities, the government decided to permanently do away with the banking secrecy of the accounts of all the prefectures and state governments in which educational resources are deposited. It also brought legal actions in the official auditing bodies and public prosecutors' offices of the states where irregularities were reported, which has already led to the dismissal of five prefects and more than 100 official investigations in 20 states.

In addition to the members of the above-mentioned supervisory councils, local members of parliament, mayors, and members of the public prosecutor's office and of the official auditing bodies now have free access to the statements of accounts of the fund. FUNDEF is thus an innovative example of a transparent social policy which links together the three levels of government and promotes the participation of civil society in supervising the way the funds are used.

VII

Other sources of finance

1. International resources

Foreign loans can be important means for carrying out special projects, provided the regular financing of the system is not dependent on such resources. In this respect, international cooperation has been very important for Brazil, in the form of technical assistance and the financing of studies and projects. The Inter-American Development Bank (IDB) and the World Bank are both important sources for the financing of projects fundamentally designed to improve the quality of education and the equity of the educational system.

The main project supported with resources from the World Bank is the Northeast Project, aimed at the poorest areas of the country, which has now been reformulated and expanded under the name of FUNDESCOLA to cover also the Northern and Centre-West regions of the country. The IDB, for its part, is providing support for the important Techno-Professional Expansion Programme (PROEP) which will cost US$ 500 million, including resources from the Ministries of Education and Labour; it is also contributing to programmes such as the International Virtual Education Network (RIVED), which brings together specialists from Brazil, Venezuela and Colombia to promote the development of computer programmes to support the teaching of mathematics and science in public schools.

In conjunction with domestic resources, including resources from the states, the IDB will also finance half of the US$ 500 million to be spent on the innovative PROMED-Escola Jovem project, the aim of which is to provide schools with the necessary conditions for the full application of the reforms in secondary school curricula. PROMED is aimed above all at the creation of

school spaces intended specifically for young people, through the construction, expansion and improvement of physical facilities and the installation of libraries, science laboratories and information processing equipment. The programme will also stimulate active participation by young people, providing for the incorporation of projects to be developed by the students themselves in any area -science, arts, sport, community initiatives- of the regular activities of schools.

2. Association with the community

The main objective of the extensive programme of association with the community being developed by the Ministry of Education –*Acorda, Brasil! Está na hora da Escola!*– is to foster within the country a climate of commitment to education, and especially primary education. For example, a housewife who turns her house into an enrollment centre; a student's father who paints or repairs his child's school; a renowned artist who takes part free of charge in school promotion campaigns, or a retired teacher who gives classes, likewise free of charge, to students who need to make up for lost time: there are thousands of actions whose value cannot be measured in monetary terms.

As well as encouraging spontaneous collaboration between the state and the community in order to solve educational problems, however, the programme also seeks to build formal associations with the social agents. Up to September 1998 it had organized 121 such associations, involving investments of almost 25 million reales and benefitting some 20 million students in public schools all over Brazil, for the purpose of carrying out educational projects, donating teaching material and equipment, contributing advertising space and training teachers.

As the community gradually adopts a more proactive approach to schooling, there is an increasing number of enterprises, organs of communication, foundations and non-governmental organizations, state and municipal governments, business associations and financial institutions which collaborate with education, even though they may not be formal "partners" of the government. Thus, for example, one financial institution itself maintains 36 schools in 23 states offering preschool, primary, secondary, complementary and technoprofessional education to nearly 95,000 students, with an investment of 80 million reales per year.

Donations of computer equipment, television sets, educational videos, encyclopedias, contests and prizes, out-of-school sporting and artistic activities, participation in parents' associations and school councils, and supervision of programmes and of the allocation of public funds are all forms of participation which are on the increase and are helping to create the social capital which is both a prerequisite for and a consequence of the silent revolution that Brazil is carrying out in education.

VIII

Challenges and future prospects

The current great challenge for Brazilian education is no longer the achievement of universal primary education or the elimination of illiteracy, but rather the quest for ever-improving indices of quality at all levels: an objective which is intimately associated with the upgrading of the teaching staff.

Between 1991 and 1998 there was a reduction in the number of illiterates in absolute terms, from 19.2 million to 15.2 million, and there was a particularly rapid reduction in the rates of illiteracy among the younger groups benefitted by the increased coverage of the school system. Brazil has succeeded in providing universal access to primary education, expanding the coverage of secondary and higher education, and raising teachers' qualifications.

Much more is needed, however: it is necessary to apply the reforms in curricula to the full, increase the number of teachers with higher education, expand enrollments in secondary education while improving its quality, and increase the average number of years of schooling of the population. It is no longer enough to ensure universal coverage of eight-year primary education: in order to be able to exercise full citizenship and live a productive life it is essential to have at least twelve years' schooling.

The speed at which Brazil has managed to expand the coverage of secondary education is probably unparalleled in any other country. However, the net enrollment ratio (33.4% of the population between 15

and 17) is still considered to be low, even though it grew by 57% between 1994 and 1999.

The challenge of training and upgrading teachers for the new stage of expansion of secondary and techno-professional education is enormous. It will be necessary to make use of new technologies, with a growing combination of in-school and distance education, and to develop computer programmes, television programmes, interactive learning modules by Internet, and new technologies in which the teacher acts in the classroom as a kind of versatile monitor who uses the resources of distance education while at the same time learning and upgrading his skills himself.

The universities are preparing to take the lead in this process by organizing themselves into virtual education networks. The "Uni-Rede" is a consortium set up in January 2000, made up of 65 public, federal and state universities which cover the entire country by Internet and cable television in order to meet the demand for public higher education throughout the country. Each institution will produce programmes in the areas in which it is most competent, and these programmes will be transmitted and shared. The first programme will offer undergraduate degrees in areas defined according to national, regional and local needs. The training of working teachers to meet the higher training requirements laid down in the Law on the Guidelines and Bases for National Education is one of the priority objectives of the Uni-Rede, which aims to serve 100,000 students per year, bringing educational content and teaching resources prepared by the best universities of Brazil to the furthest-flung corners of the country.

The tendency to combine distance education with traditional in-school education is increasingly marked not only in the field of undergraduate studies but also in higher education as a whole. The universities will be able to have access to compact versions of courses from the best world centres: courses prepared, for example, by a Nobel prizewinner in macroeconomics or the best world specialist in a particular type of surgery, and, within their own faculties, by professors trained to work with these methods and pass them on to their students. This is nothing like the old model of distance education, in which students downloaded material from the Internet at night and then did their homework at home. That is not much of a system: the important thing in the future will be the combination of in-school study with the new resources of technology.

Financing education is of course a big problem all over the world. Brazil's public expenditure on education, as a proportion of GDP, is one of the highest of all the countries participating in the UNESCO/OECD project and is similar to the average for the OECD countries as a whole. The government's efforts to achieve fiscal balance have not had a significant effect on its investments in education. Great progress has been made in improving productivity within the system, but the increases being achieved are now only marginal.

Brazil will have to continue to resort to international finance to ensure the expansion and improvement of the physical system of educational establishments on the one hand and the intensive use of the most advanced in-school and distance educational technologies on the other. It would be highly desirable, not only for Brazil but also for all borrower countries, that these loans should not be counted within the limits on indebtedness that form part of the objectives of fiscal adjustment programmes.

The prospects for the national educational system are very promising. Great progress has been made, and the country is much better than it was, but there is still a long way to go.

(Original: Portuguese)