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Education for the 21ST CENTURY

THE
CHALLENGE
OF
QUALITY
AND EQUITY



República Federativa do Brasil

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OF
THE CHALLENGE OF QUALITY AND EQUITY**

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INTRODUCTION

In the present context of globalisation of economic, political, and cultural relations and the increased pace of change in the technology basis and the means of production, education has become a strategic vector for sustainable and equitable development. In fact, the idea is generally accepted today that education has become the greatest comparative advantage of countries and companies when challenged by international competitiveness. In addition, level of schooling is one of the main factors that decide the individual's employability.

While education alone certainly does not create employment, it is however essential to keep the worker in a job and to help his/her social entry into the sphere of production. And, to this end, it is not sufficient just to ensure the expansion of the educational system. It is necessary to generate an improvement in the quality of the teaching that is *provided*, without which it will be impossible to meet the demand for increasingly *more* qualified human resources to *keep up with* the changes presently under way. Thus, the satisfactory performance of the education system will be one of the decisive factors in the self-sustaining development of Brazil in the foreseeable future.

This premise, which is equally applicable to other countries in Latin America, implies a new focus for the challenges and dilemmas of developing societies, which *now* have to give high priority to investments *for the development of* the social and human capital; *this*, according to Kliksberg (1998), "is currently deemed to be fundamental to the productivity and competitiveness of nations"¹. *The action of education* in this area *plays* a key role *among* the policies *intended to* decrease the levels of social inequity and encourage better income distribution, thus helping to overcome the major obstacles to sustainable economic growth in the region.

This topic has been the subject of recent studies on the relationship between the performance of educational systems and the economic performance of developing countries — an attempt to show that those that have achieved a rapid increase in the average level of schooling among their population, as is the case of Korea, have had greater economic success and taken greater steps towards lower indices of poverty and inequity.

The list of policies that were recommended to developing countries by international organisations, based on the principles of economic reform and reforms of the State, which dominated the 80s, eventually gave way to a new agenda for the 90s, with the reduction of inequity as top priority, thus reviving the role of social policies. Behind this change lies the

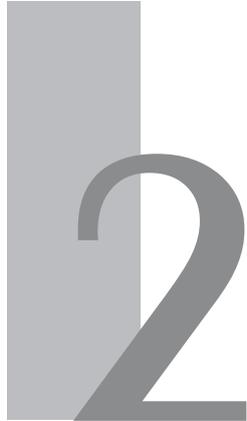
¹ "*Inequidad en América Latina: un tema clave*" "*Inequity in Latin America: a key theme*". Supporting document at the conference, given by the author at the International Seminar on Educational Management – Trends and Perspectives, organised by the Conselho Nacional de Secretários de Educação – CONSED (National Council of Secretaries of Education) held in Rio de Janeiro from the 17th to 20th August, 1998.

recognition that macro-economic processes for new structure building resulted in an increased concentration of income and, consequently, in increased social exclusion and poverty. More than just a paradox, these perverse effects of liberalising reforms represent, from the point of view of social equity, a serious obstacle to economic stability and to the consolidation of democracy in the region.

It is within this context that education emerges as a central element in a new development strategy, linking the quest for economic efficiency to the encouragement of equity and citizenship. To achieve this goal – a pre-requisite for productive and autonomous entry into the globalised economy – Brazil will have to overcome a challenge: to successfully conclude its drive for universal basic education and, at the same time, to raise the quality of teaching provided by public schools, which today account for 92% of enrolments in primary education and 81% of enrolments at secondary level. Educational changes implemented in the 90s by all three levels of government that share responsibility for maintaining and developing public education, attempt to apply strategies that may help overcome the history of backwardness accumulated by the country in this field.

This paper attempts to identify some of the principal obstacles that Brazil will have to overcome in order for its educational system to reach the levels of efficiency, equity and quality demanded by society – levels that may guarantee support for the nation's sustainable development plans in the 21st century. To this end a brief analysis of the educational system is presented, highlighting the major changes that have taken place in the past ten years and the difficulties that are being faced. The paper then goes on to discuss the new focus of educational policies in the 90s, based on the quest for quality and equity. Next, a study is made on the effectiveness of educational assessment as an encouragement to efforts in order to improve quality, and chief results of the Sistema Nacional de Avaliação da Educação Básica – SAEB (National System for Evaluation of Basic Education) are described. Finally, we examine the prospects for the definition of national standards, and suggest some possible solutions to this problem, which now occupies the international debate on strategies for improved quality in teaching.

The central argument for this paper may be described as follows: if there is a virtuous circle involving education, equity and sustained development, the effectiveness of this process increasingly depends on expansion of the education offered – with quality. Because one can only attain full citizenship and actively participate in the worlds of society, work and politics – if one can develop the basic skills required by one's presence in the society of knowledge, which include: the ability to solve problems; autonomy to discover information; the ability to make choices and decisions. Creating citizens with this profile will be the major challenge for education in the next century.



A BRIEF BALANCE SHEET OF EDUCATIONAL INDICATORS IN THE 90s

Analysing the situation of education in Brazil – a task which is made easier today by the availability of an updated large scale supply of quantitative and qualitative data provided by educational censuses and national evaluation systems² – provides two contradictory interpretations. The first, deliberately optimistic, emphasises the positive aspects that stand out in the present educational scene, such as the remarkable increase in enrolments at all levels, a phenomenon that is accompanied by a trend towards improved effectiveness indicators in the system, especially in primary education. This evidence leads us to the conclusion that education in Brazil has advanced considerably in recent years. The second interpretation of the indicators, from a comparative point of view, shows aspects of the educational system that are still unsatisfactory, such as continuing high levels of repetition, drop-out and student age gap, as well as the low level of student achievement indicated by SAEB.

This apparent contradiction is explained when we look more closely at the evolution of the major educational indicators in the 90s. In fact, if the Brazilian educational system achieved reasonable levels from the point of view of expansion, bringing the country closer to the goal of universal primary education, the same cannot be said concerning the indicators of quality and equity, which are still far from the levels demanded by society, and which are necessary for national development. This is the dilemma that Brazil now faces in the sphere of education. A dilemma to which the government has turned its attention.

2.1 Universalisation of Primary Education and the expansion of Secondary Education

During the past thirty years, the priorities of the nation's educational efforts were directed towards universal access to primary education, a goal which has almost been reached. When it is, the State will have formally achieved the requirement set by the 1998 Constitution, which stated the obligatory nature of this level of education and the duty of the public system to ensure its availability. In fact, the net schooling rate in the 7-14 age-group jumped from

² Since 1995 the Ministério da Educação (Ministry of Education) has been making a great effort to institute a consistent system of educational information, recognising the importance of such an instrument to aid the efficient management of programmes and policies in this area. The advances made in this period are well-known, starting with the complete re-structuring of the Instituto Nacional de Estudos e Pesquisas Educacionais – INEP, which is responsible for the development and implementation of policy of the different levels of government.

67% in 1970, to 95.8% in 1998³. The growth in enrolment increased in the 90s in response to more defined and focused policies towards universal provision, carried out in partnership by the three levels of government. In this way, Brazil managed to anticipate by five years the goal set in the Plano Decenal de Educação para Todos (*Education for All Ten-Year Plan*): to raise educational provision for the school-age population to at least 94% by the year 2003⁴.

The success of this effort for universal primary education, provision of which is greatly affected by the existence of deep regional inequalities, has created the phenomenon of accelerated increases in the educational system. Brazil has today, counting all levels and types of basic education, about 51 million students. If we add to these the enrolment numbers for higher and post-graduate education, this figure rises to 53 million, the equivalent of little less than one third of the country's total population. Nevertheless, in spite of increased access, which is proved by the concentration of about 36 million enrolments in primary education, Brazil's educational system still has the shape of a funnel, for only a very small proportion of each age cohort manages to complete basic education, which comprises primary and secondary education, and an even smaller proportion enters higher education.

Distribution of Enrolment by School Level and Participation in the Public System Brazil – 1998

Level/Type of Education	Total Enrolment	State System	% State System
Pre-School	4,110,448	3,121,368	75.9
Literacy Classes	807,171	550,837	68.2
Primary Education 1 st to 4 th grades	21,377,130	19,562,110	91.5
Primary Education 5 th to 8 th grades	14,461,242	12,878,010	89.1
Secondary Education	6,967,905	5,740,611	82.4
Education for Special Needs (1)	293,153	137,201	46.8
Education of Young People and Adults	2,881,231	2,516,690	87.3
Higher Education	2,125,958	804,729	37.8
Total	53,024,238	45,311,556	85.5

Source: INEP/MEC

Note:

(1) The number of pupils with special needs who attend special schools or special classes in conventional schools does not include those pupils with special needs who are integrated into conventional classes.

To illustrate this situation, only about 30.4% of 15-17-years-old are enrolled in secondary education, which suggests that the recent large growth in the number of enrolments at this level was achieved by the inclusion of older learners. A part of this clientele is made up of young people and adults who are returning to school in order to complete their basic education, thus meeting a need that is being imposed by the labour market⁵. This pupil profile is also reflected in the high rate of student age gap which produces the apparent paradox between the accelerated increase in enrolment and a rate of overall schooling among 15-17-years-old that remains very low. Since only one in every four young brazilians reaches sec-

³ Three indicators are used to measure the scope of educational coverage. *Rate of Net Schooling*, which shows the percentage of 7-14-years-old enrolled in primary education in relation to the total number of the age-group; *Rate of Provision*, which shows the percentage of 7-14-years-old whose needs are provided for by the school system, regardless of the level of teaching; *Rate of Overall Schooling*, which shows the relationship between the total enrolments at primary level, regardless of pupil age-group, and the total number of 7-14-years-old.

⁴ This plan states the commitments taken on by Brazil as a signatory of the 1990 Jomtien Declaration.

⁵ The 1998 School Census shows that 54.8% of enrolments in secondary education are concentrated in night school courses. This percentage, which was 56.1% in 1996, show slight signs of falling. The restriction of availability of places in day schools has contributed to the fact of secondary education being mainly an evening activity. In primary education, night school classes make up 11.6% of total enrolments, a phenomenon associated with the age/ grade gap.

ondary education at an age considered as suitable, this level of education has a great potential for increase in future years⁶.

The gradual improvement in the effectiveness of primary education has already started producing positive effects on other levels of education, especially on secondary education, which has shown higher rates of enrolment in recent years. This shows that the strategy adopted by the Ministério da Educação (MEC) in the last four years, giving top priority to primary education, is helping stimulate the development of the educational system as a whole. In this way, Brazil is repeating, some years later, the successful experiments of other countries, in which the change in the population's educational profile was initially spurred by a rapid universalisation of primary education, followed by an effort to expand the other levels of education⁷.

It is important to note that this growth in primary education enrolments has also been accompanied by a gradual improvement in the efficiency of the system, as shown by the declining trend in repetition, drop-out and student age gap rates. Clearly, these rates are still quite high. The main evidence of improvement is the considerable growth in enrolment in the final grades and the corresponding rise in the numbers of those completing school. In fact, the development of enrolment rates in the 1989-1998 period shows that while the national average enrolment in 1st to 4th grades grew by 13.4%, enrolment in 5th to 8th grades showed an impressive expansion of 66.1%. Thus the relative size of enrolment in the first four grades within total primary school enrolments fell from 68.4% to 59.6%, while enrolments in the four final grades increased their share from 31.6% to 40.4%.

However, it is from a regional point of view that we can see the major changes in the profile of enrolment in primary education. The South and Southeast regions, obviously at a more advanced stage of socio-economic and educational development, have shown over the last ten years a negative growth in enrolment in the 1st to 4th grades, accompanied by an accelerated expansion of enrolment in the final grades. This phenomenon, besides reflecting a change in demographic dynamics, is directly related to the creation of the 'basic cycle', to the struggle against repetition and, more recently, to results obtained by the accelerated learning classes, and other initiatives that have led to the considerable drop in repetition rates, helping to even out progress through school. In this way, the South and Southeast regions already show almost equal numbers of enrolments in the first four grades (52.1% in the Southeast and 53.4% in the South) and enrolments in the last four grades (47.9% in the Southeast and 46.6% in the South), a situation which will probably be consolidated in the near future.

This situation is reversed in the rest of the country, although there has been a consistent expansion in enrolment at all grades in primary education between 1989 and 1998. The Northeast and Northern regions have the greatest increase rates of enrolment in the early grades – 39.1% and 35.8% – which reflect the efforts to universalise primary education. The enrolment increase in these regions was also greater in the final four grades. In spite of this improvement, almost 70% of total primary school enrolment is still concentrated in the first four grades. We note, therefore, when comparing the profile of enrolment distribution between the early grades and the final grades, that the Northeast and Northern regions have an accumulated deficit of ten years in relation to the South and Southeast regions. The Centre-West region, in its turn, has a very similar structure to the Southern and Southeastern profiles, a picture that is distorted by the presence of the Federal District. The three states in the region – Mato Grosso, Mato Grosso do Sul and Goiás – have profiles more in line with those of the Northern and Northeastern regions.

⁶ In spite of only about 25% of 15-17-years-old being enrolled in secondary education, when we look at enrolments in this age group in primary education the rate of school provision is 66.9%. To calculate these rates enrolment data taken from the 1996 School Census and data from the 1996 IBGE national census were used.

⁷ "Analyses relating to the role of education in the economic success of Southeast Asian countries has emphasised equally the speed with which that region's educational system was able to expand, and the fact that this expansion concentrated on the lowest educational levels, passing on to the higher levels when the possibility of expanding the lower levels was exhausted. Such a manner of expansion has been felt essential for the ability of those economies to combine economic growth with low levels of equity that are often becoming lower". Cf. Relatório sobre o desenvolvimento humano no Brasil 1996. [*Report on human development in Brazil 1996*] Rio de Janeiro: IPEA; Brasília, D.F.: PNUD, 1996. p. 35.

Primary Education – Initial Enrolment by Grade – Brazil and Regions 1989-1998

Region/Year	Total	1 st to 4 th grades (*)	%	5 th to 8 th grades	%
Brazil					
1989	27.557.542	18.851.075	68,4	8.706.467	31,6
1991	29.203.724	19.383.791	66,4	9.819.933	33,6
1996	33.131.270	20.027.240	60,4	13.104.030	39,6
1997	34.229.388	20.568.128	60,1	13.661.260	39,9
1998	35.838.372	21.377.130	59,6	14.461.242	40,4
Growth % 89/98	30,0	13,4		66,1	
North					
1989	2.155.068	1.645.834	76,4	509.234	23,6
1991	2.246.339	1.671.491	74,4	574.848	25,6
1996	2.820.531	1.954.909	69,3	865.622	30,7
1997	3.011.865	2.087.265	69,3	924.600	30,7
1998	3.208.587	2.235.750	69,7	972.837	30,3
Growth % 89/98	48,9	35,8		91,0	
Northeast					
1989	8.105.453	6.036.485	74,5	2.068.968	25,5
1991	8.650.474	6.314.964	73,0	2.335.510	27,0
1996	10.475.469	7.245.010	69,2	3.230.459	30,8
1997	11.184.186	7.707.699	68,9	3.476.487	31,1
1998	12.261.780	8.399.253	68,5	3.862.527	31,5
Growth % 89/98	51,3	39,1		86,7	
Southeast					
1989	11.300.227	7.271.258	64,3	4.028.969	35,7
1991	11.965.480	7.417.955	62,0	4.547.525	38,0
1996	12.958.674	7.014.934	54,1	5.943.740	45,9
1997	13.020.903	6.933.486	53,2	6.087.417	46,8
1998	13.248.533	6.908.570	52,1	6.339.963	47,9
Growth % 89/98	17,2	-5,0		57,4	
South					
1989	3.992.351	2.574.270	64,5	1.418.081	35,5
1991	4.201.369	2.613.396	62,2	1.587.973	37,8
1996	4.475.774	2.458.130	54,9	2.017.644	45,1
1997	4.512.267	2.446.789	54,2	2.065.478	45,8
1998	4.553.460	2.429.921	53,4	2.123.539	46,6
Growth % 89/98	14,1	-5,6		49,7	
Centre-West					
1989	2.004.443	1.323.228	66,0	681.215	34,0
1991	2.140.062	1.365.985	63,8	774.077	36,2
1996	2.400.822	1.354.257	56,4	1.046.565	43,6
1997	2.500.167	1.392.889	55,7	1.107.278	44,3
1998	2.566.012	1.403.636	54,7	1.162.376	45,3
Growth % 89/98	28,0	6,1		70,6	

Source: MEC/INEP/SEEC

Notes:

(1) Includes non-graded students

The substantial growth in absolute terms of primary education enrolment observed in the 90s had a favourable impact on the increase in the net schooling rate among 7-14-years-old. According to the 1998 School Census, only three states in the Northeastern region show net schooling rates under 90% among 7-14-years-old: Piauí (85.9%), Alagoas (87.6%) and Maranhão (89.7%). On the other hand, all the Southern and Southeastern states had already reached net schooling rates over 97%, especially the Federal District, which had the best score in the country (98.2%)⁸.

School Provision Rates for 7-14-years-old and Rates of Net and Overall Schooling in Primary Education Brazil and Regions - 1998

Brazil and Regions	Rate of Provision	Rate of Schooling	
		Net	Overall
Brazil	96.5	95.8	127.6
North	95.3	91.9	138.0
Northeast	94.4	92.0	139.5
Southeast	97.9	97.6	127.4
South	98.1	97.1	118.6
Centre-West	96.2	94.3	140.7

Source: MEC/INEP/SEEC

Notes:

(1) The estimates refer to data from the School Census

(2) The rates of primary education are preliminary, and subject to change

(3) Rate of Provision – identifies the percentage of the school-age population that attends school, regardless of level of schooling

(4) Rate of Net Schooling – identifies the segment of the population in the 7-14-years-old age range enrolled in primary education

(5) Rate of Overall Schooling – identifies if the availability of enrolments in primary education is sufficient to meet the demand of the 7-14-years-old age range. It evaluates the amount of enrolments in primary education as a function of the potential demand in the 7-14-years-old age range.

2.2 The Quality Deficit in Primary Education

It is clear that the present challenge in primary education is no longer in terms of access democratisation, but rather in offering an education that meets minimum standards of quality. The systematic monitoring of the educational system – carried out annually by means of the School Census and every two years by SAEB – has shown that the capacity of the school networks is now sufficient to guarantee a place for all children from 7 to 14 years of age, although there are still some deficits in specific parts of the country. Thus, the main objective has now shifted to promoting the permanence of pupils in school, that is, to provide the conditions for them to achieve educational success. To this end, a set of actions has become necessary, ranging from the improvement of the physical facilities of the school system⁹, to a complete eradication of the deep-seated culture of grade repetition. The guarantee of an adequate level of quality requires the introduction of a school day of at least five hours, and the adoption of policies for training and improving the teaching body.

⁸ This result indicates the success of policies against truancy, such as the Programa Bolsa Escola (School Grant Programme) which guarantees a monthly financial grant equal to a minimum salary to low-income families who undertake to keep children under 14 years of age, in school.

⁹ This situation was highlighted in a recent survey carried out by INEP, on the infrastructure of public and private schools in the country. It was found, for example, that in the Northeast, 8.4% of primary school pupils attend schools that do not have running water. In the North, 18.1% of pupils, and 9.3% of those in the Northeast, attend schools that have no sewage system. Also, a large number of pupils study in institutions that have no electricity: 19.6% in the North and 14.6% in the Northeast. Cf. *Caracterização física das escolas*. Brasília: INEP, 1999. p.85.

The false premise that it is good for the under-achieving pupil to repeat the same grade so as to reinforce the contents of that grade has contributed to one of the major anomalies of the Brazilian educational system: the high levels of student age gap. This happens because pupils take, on an average, about 11 years to complete the eight grades of compulsory education. There are in primary education alone, 8.5 million pupils aged 15 or over, who should be in secondary education. This excess in enrolment, giving an overall schooling rate of 127.6%, increases the costs of the educational system by about 30%. The most drastic consequence, however, is for the learners themselves with the student age gap, for this situation affects self-esteem and has a negative effect on student performance, often resulting in dropping out of school altogether¹⁰.

The identification of causes for repetition and drop-out, the recognition of the severe consequences of the student age gap, as well as the cost increases, lower performance levels and school failure, all of these factors have led the educational system to create accelerated learning programmes, and other plans in order to correct the school flow. Student age gap, which was 66% in 1994, fell to 46.7% in 1998. In spite of this reduction, there are still about 16.7 million pupils – out of a total 35.8 million enrolments at this level – who are at least one year behind in their schooling. The decrease in the student age gap has been most noticeable in the first four grades, a trend that certainly has to do with the launching of the 'basic cycle' which eliminated the problem of end-of-school-year failure. This policy has not yet had the same effect on the final grades, which carry on their history of high age gap levels, especially in the 5th grade (54.3%).

Thus, although some recent improvements are no doubt significant, the general picture still requires serious efforts on the part of school systems, to fight the causes of student age gap and, at the same time, to create opportunities to speed up the learning process of the huge number of pupils who are out of step in their schooling. From a regional point of view, again the Northeastern and Northern regions are worthy of notice, for their rates are well above the national average: 64.2% and 61.3% respectively. In contrast, in the Southern and Southeastern regions the rates are much lower: 25.8% and 34.2% respectively. The Centre-West region, with an age gap rate of 45.5%, is much closer to the national average.

With the accelerated learning classes there is a falling trend in the rates of student age gap, which shows, on the one hand, the positive results of the programmes that are being carried out, and on the other, the effect of improvements in the chief performance indicators in primary education¹¹. The passing rate rose from 70.6% in 1995, to 77.5% in 1997. During the same period the failure rate dropped from 15.7% to 11.4% and the drop-out rate fell from 13.6% to 11.1%.

This positive development in performance rates – brought about by the systematic decrease in failure and drop-out rates and by the increased pass rate – has resulted in a systematic increase in the number of pupils completing primary education. The accumulated increase in the past four years was 34.4%, while enrolments only increased 12.2% in the same period. In 1997 the number of school graduates passed the two million mark for the first time. This trend, which is expected to continue in the coming years, is already bringing strong pressure to bear on the growth of enrolment at secondary level. Suffice to say that in the period 1989-1998 the number of pupils in this level of education doubled, going from 3.5 million to about 7 million. The number of graduates also doubled, going from 658,000 in 1990 to 1.3 million in 1997.

¹⁰ The findings of the Sistema Nacional de Avaliação da Educação Básica – SAEB and of the Avaliação dos Concluintes do Ensino Médio – ACEM (Evaluation of Secondary School Graduates) show that the performance levels of pupils falls in proportion to increases in the student age gap.

¹¹ According to the 1998 Educational Census, enrolment in school flow correction courses – the so-called 'accelerated learning classes' – reach 1.2 million pupils from 1st to 8th grade throughout the country.

Primary Education - Rate of Student age Gap - Brazil and Regions 1991-1998

Region/Year	Grades (%)							
	Total	1 st Grade	2 nd Grade	3 rd Grade	4 th Grade	5 th Grade	6 th Grade	7 th Grade
Brazil								
1991	64.1	59.5	62.6	63.3	62.7	70.2	68.6	67.4
1996 ⁽¹⁾	47.0	40.0	44.1	46.4	46.6	55.6	53.2	49.2
1998 ⁽¹⁾	46.6	38.2	43.9	44.5	45.7	54.3	52.5	52.0
North								
1991	79.0	72.5	81.0	81.6	81.4	84.3	83.1	81.8
1996 ⁽¹⁾	62.3	54.7	63.1	65.0	64.9	69.1	67.5	60.7
1998 ⁽¹⁾	61.3	51.2	62.3	64.5	64.9	69.7	67.4	65.7
Northeast								
1991	80.6	75.7	82.9	82.6	81.6	84.5	82.9	82.6
1996 ⁽¹⁾	65.7	58.4	66.9	68.0	67.3	72.8	70.2	67.1
1998 ⁽¹⁾	64.1	54.1	65.0	67.7	66.2	72.2	69.2	70.2
Southeast								
1991	54.7	39.6	49.0	53.8	54.1	64.5	63.5	61.6
1996 ⁽¹⁾	34.8	16.7	26.5	32.1	34.4	47.4	46.1	42.9
1998 ⁽¹⁾	34.2	14.7	22.6	25.6	34.3	43.9	45.5	45.4
South								
1991	43.8	33.3	38.1	40.0	44.3	52.5	53.0	52.6
1996 ⁽¹⁾	2.72	12.8	20.0	23.8	26.7	38.2	38.1	34.7
1998 ⁽¹⁾	25.8	10.5	17.6	21.4	24.0	35.8	33.1	32.2
Centre-West								
1991	65.9	55.0	63.1	65.0	65.5	73.9	72.9	72.1
1996 ⁽¹⁾	47.1	30.0	40.0	44.9	47.4	60.6	58.9	55.6
1998 ⁽¹⁾	45.5	25.1	36.3	42.2	43.4	56.7	58.0	57.5

Source: MEC/INEP/SEEC

Note:

(1) Note the recommended age for each grade/level of schooling, that is, 7 years for 1st grade of primary education, 8 years for 2nd grade, and so on.

Primary Education - Rates of Passing, Failure and Drop-out Brazil and Regions - 1995-1997

Brazil/ Regions	Pass			Fail			Drop-out		
	1995	1996	1997	1995	1996	1997	1995	1996	1997
Brazil	70.6	73.5	77.7	15.7	14.2	11.4	13.6	12.3	10.9
North	58.9	62.9	66.2	17.9	19.0	16.7	23.2	18.1	17.1
Northeast	60.3	63.6	68.1	18.9	17.6	15.5	20.7	18.8	16.4
Southeast	79.7	82.5	87.5	13.0	10.1	6.6	7.1	7.4	5.9
South	76.7	77.7	82.2	15.2	14.9	11.5	8.1	7.4	6.3
Centre-West	68.5	70.9	74.0	14.9	14.8	12.5	16.6	14.2	13.5

Source: MEC/INEP/SEEC

Note:

1 – Pupils in non-graded schools are not included in this indicator

The fast expansion of secondary education in the 90s repeated with even greater intensity the phenomenon that was seen in the 70s and 80s in primary education. But the similarities go beyond the speed of the enrolment increase process. Democratisation of access to secondary school has also been accompanied by a lowering of educational quality. There is also a great concentration of places offered by the public sector, which now accounts for

80.9% of enrolments. The participation of the private sector in secondary education enrolment fell from 46.5% in 1980 to 19.1% in 1998. During this same period, private sector enrolments also suffered a drop in absolute terms, going from 1.3 million to 1.2 million pupils. It will, therefore, fall to the public sector to absorb a growing demand, and to ensure the progressive universality of secondary education, as determined by the Constitution.

However, the challenge is not restricted to the expansion of supply. Just as complex and urgent is the reform of secondary education, requirements for which were established in the Lei de Diretrizes e Bases da Educação Nacional (Law of Guidelines and Foundations of National Education) (Law No. 9,394/96) and the guidelines set down by the Conselho Nacional de Educação (National Council for Education). This involves solving the problem of the shortage of qualified teachers in core subjects – Chemistry, Physics, Mathematics and Biology; the up-grading of under-equipped schools and the gradual introduction of curriculum reform. As a result of this intended re-organisation, it is hoped that secondary school systems will be able to carry out their task of preparing citizens who are able to fit into society and the world of work. As this level of schooling became less of an elite type of education, it has started to receive a more varied clientele, a fact that is already being reflected in performance indicators.

As we have already pointed out, secondary education also presents high levels of student age gap, repeating the same picture found in primary education. This happens because most pupils enter secondary school with an age gap accumulated through the eight grades of compulsory education. Nevertheless, the rate of student age gap is dropping, having gone from 71.5% in 1995 to 53.9% in 1998. This trend is in line with the improved indicators of transition from primary education. The problem is most acute in the regions of the North (73.2%) and Northeast (69.5%), in contrast with the rates in the South (39.1%) and Southwest (48.4%). Secondary education performance rates have also improved in recent years. The pass rate jumped from 68.2% in 1995 to 78.8% in 1997. In the same period the failure rate fell from 10.1% to 7.5% and the drop-out rate from 21.6% to 13.7%.

Secondary Education – Student age Gap Rate Brazil and Regions - 1996-1998

Brazil/ Regions	Overall Total		1 st Grade		2 nd Grade		3 rd Grade	
	1996	1998	1996	1998	1996	1998	1996	1998
Brazil	55.2	53.9	57.7	56.4	54.6	52.8	51.0	51.3
North	74.8	73.2	77.2	75.6	73.2	71.9	71.8	70.0
Northeast	69.6	69.5	72.6	72.3	68.8	68.4	64.7	66.0
Southeast	50.0	48.4	52.2	49.7	49.8	48.0	46.3	47.1
South	41.4	39.1	43.3	41.6	41.4	36.6	37.6	36.2
Centre-West	58.9	57.7	62.4	60.8	57.5	55.9	53.4	53.9

Source: MEC/INEP/SEEC

Secondary Education - Rates of Passing, Failure and Drop-out Brazil and Regions - 1995-1997

Brazil/ Regions	Pass			Fail			Drop-out		
	1995	1996	1997	1995	1996	1997	1995	1996	1997
Brazil	67.7	73.2	78.8	10.3	9.7	7.5	22.0	17.1	14.0
North	56.3	66.9	66.3	10.9	11.0	7.9	32.7	22.1	24.5
Northeast	63.2	70.1	74.4	10.1	8.6	7.5	26.7	21.3	17.9
Southeast	71.3	76.7	82.8	9.2	9.0	6.3	19.5	14.4	11.0
South	69.6	71.6	80.0	13.0	12.5	10.0	17.4	15.9	12.6
Centre-West	64.2	67.2	73.7	12.2	11.2	10.1	23.6	21.6	17.0

Source: MEC/INEP/SEEC

Note:

1 Pupils in non-graded schools are not included in this indicator.

2.3 Growth in the Demand for Higher Education

Gains in effectiveness in primary and secondary education, although still far from desired levels, have already started to have positive effects on the higher education system. The selective and excluding nature of primary school, which is responsible for the high rates of repetition and drop-out, was the greatest obstacle to the expansion of higher levels of education. Nevertheless, as educational policies show their ability to encourage the universalisation of primary education, as well as the improvement in transition rates from primary education, a synergy is created that activates all other levels of education. This is, of course, a long-term effect, but an increase in productivity is already to be seen in the Brazilian educational system, that directly benefits secondary and higher education.

Among the indicators that best show this change we would like to point out the speed at which enrolments at these levels are increasing. This trend has been most striking at secondary level, as has already been mentioned. In higher education the pace of enrolment growth has increased in the last four years after a long period of relative stagnation. In fact, between 1980 and 1993 there was an increase of 217,000 enrolments, which represents a modest annual increase of 15.78% in 14 years. In 1998 the number of students in higher education rose to 2.1 million, a rise of 464,000 enrolments in comparison to 1994, a 27.9% growth over the last four years. With this performance, higher education was one of the areas of greater relative growth in the period, second only to secondary education.

This trend towards greater and faster expansion in higher education will probably continue for the next ten years, responding to a demand that is expected to remain intense. It is important to note that, in spite of greater enrolment growth over the past four years, the number of places offered at university entrance examinations is still growing more slowly than the number of secondary school graduates. As a result, this relationship, which was 1.2 graduates for each place in 1990, rose to 2:1 in 1997. This deficit is expected to increase in the coming years, for, as previously mentioned, enrolment at secondary level has been showing an annual growth of over 10% and is rapidly increasing.

As compared to countries with similar salary levels and a similar stage of development (or even less developed countries), Brazil has a very unfavourable situation as regards access to higher education, with a gross schooling rate of 13%¹². This rate is three times lower than that of Argentina (39%) and twice as low as Chile's (27%). In this respect, Brazil is also clearly at a disadvantage with regard to Bolivia (23%). Another parameter for international comparison used by the Organisation for Economic Co-operation and Development (OECD) is the net rate of schooling within the 18-21-years-old age group. In Brazil, this rate is only 6.1%, 22.4% in Argentina and 11.3% in Uruguay, as opposed to an average of 23.3% in OECD countries¹³.

Progression of Enrolment in Higher Education, by Administrative Organ Brazil 1980-1998

Year	Total	Federal	State	Municipal	Private
1980	1,377,286	316,715	109,252	66,265	885,054
1985	1,367,609	326,522	146,816	83,342	810,929
1990	1,540,080	308,867	194,417	75,341	961,455
1991	1,565,056	320,135	202,315	83,286	959,320
1992	1,535,788	325,884	210,133	93,645	906,126
1993	1,594,668	344,387	216,535	92,594	941,152
1994	1,661,034	363,543	231,936	94,971	970,584
1995	1,759,703	367,531	239,215	93,794	1,059,163
1996	1,868,529	388,987	243,101	103,339	1,133,102
1997	1,945,615	395,833	253,678	109,671	1,186,433
1998	2,125,958	408,640	274,934	121,155	1,321,229
94/98 (%)	28.0	12.4	18.5	27.6	36.1

Source: INEP/MEC

¹² The Overall Schooling Rate when referring to higher education, shows the relationship between the total number of enrolments, independent of students' age group and the total number of the population within the 20-24-years-old age group.

¹³ *Education at a Glance*. Annual Report published by the OECD.

It is clear, therefore, that Brazil's ability to provide higher education is far below that of other countries. The size of the system has also become inadequate to cater to the needs of the country's social and economic development. The recent expansion in secondary education, and the increasing selectivity of the labour market – which now demands a workforce of high professional quality – tend to exercise a growing pressure on higher education, requiring an increased number of places offered, as well as the diversification of courses, flexibility of *curricula*, improvement in teaching quality and partnerships with the production sector. These are the great challenges that higher education will have to face in order to cope with the socio-economic and technological changes as the 20th century comes to an end.

Notwithstanding the problems that have been described, the balance-sheet of the past ten years is a positive one for Brazilian education, showing a leap forward in terms of quality in primary education, an improved school flow, reduced rates of repetition and drop-out, increased passing rates and numbers of graduating pupils. In secondary education, the picture is also promising, especially in the rapid growth of enrolments and the steady improvement in transition indicators. Higher education, which went through a period of stagnation in the 80s, has begun to grow again, now that it is under pressure from the numbers of secondary school graduates.

In this context, a new concern has emerged that is central to the educational policy debate: quality improvement and the search for equity. Knowing what and how learners learn, which schools are the most effective and why they have a better performance; discussing the new teacher profile. and the organisational pattern of the schools; creating mechanisms that guarantee equal conditions in public education provision, stimulating school success: these are the new themes that have begun to occupy the agenda of educational policies in the 90s.



THE NEW FOCUS OF EDUCATIONAL POLICIES IN THE 90s

The 1990s represent a new stage in the design of educational policies in Brazil. Three factors have been decisive in bringing about this change in the profile of governmental actions in the field of education. First, a reasonable degree of agreement has been reached in the diagnosis of the causes behind the lack of effectiveness of school systems. Second, a great convergence of actions developed by different levels of government has evolved, especially in regard to primary education. Third, society has started to value education more highly, getting organised in order to demand better quality teaching in public schools.

In spite of different rhythms and emphases, respecting local and regional differences, we may claim that Brazil is now past the stage of exclusive priority to increased access to school, that is, of placing priority on the physical plant¹⁴. The quest for quality and the promotion of greater equity in the system have come to occupy a major role in the new agenda of policies for primary education.

These new guidelines are linked to the main policies and programmes implemented by the federal government since 1995 and have also come to guide the plans of states and municipalities in the field of education. The actions undertaken by all three levels of government have a common axis; that may be seen in the strong emphasis on decentralisation of educational management, aiming at the promotion and reinforcement of school autonomy.

Recent institutional reforms in the educational sphere, ratified by Constitutional Amendment No. 14 of 12th September, 1996, the creation of the Fundo de Manutenção e Desenvolvimento do Ensino Fundamental e de Valorização do Magistério – FUNDEF (Fund for Maintenance and Development of Primary Education and of Teacher Status), the Lei de Diretrizes e Bases da Educação Nacional (Law No. 9,394/96) and the re-organisation and re-definition of the terms of reference of the Conselho Nacional de Educação – CNE – have re-inforced the role of the federal government as co-ordinator of national policies, and at the same time have re-defined the responsibilities of states and municipalities in the provision of educational services¹⁵. Furthermore, mechanisms were created to encourage the asso-

¹⁴ It is evident, however, that the problem of physical plant is far from satisfactorily solved, for the unacceptable conditions of buildings and of infra-structure in the great majority of the country's public schools is a fact that cannot be ignored when policies are developed for the improvement of educational quality. Cf. *Caracterização física das escolas*. Brasília : INEP/MEC, 1998.

¹⁵ In accordance with the new text given by Constitutional Amendment No. 14 to Art. 211 of the Federal Constitution, municipalities must participate, especially in primary and early childhood education, leaving secondary education to the states and the Federal District. Art. 211 also determines that states and municipalities must establish co-operation, so as to ensure universal compulsory education. The Union, for its part, is required to exercise, in terms of education, "a re-distributive and supplementary role, so as to guarantee equity of educational opportunities and a minimum standard of educational quality by providing technical and financial assistance to the states, the Federal District and the Municipalities".

ciation and co-operation of the three levels of government around a common theme: the improvement of educational quality, and the quest for the effective school.

The leadership of the federal government in the field of policies for the promotion of equity and quality in the educational system only began with any degree of boldness in the 90s, and was consolidated in the past four years. At the same time, the growing importance of states and municipalities in the process of formulation and implementation of national policies in basic education – a phenomenon which is integral to the development and the democratisation of the country – has led the Ministério da Educação to play a new role, concentrating on the development of links and the follow-up of these policies¹⁶.

This new approach still includes a strong emphasis on developing national systems of assessment/evaluation and educational indicators, covering all levels of education. Thus, the federal government has ceased to be a direct executor of initiatives – especially in the area of basic education – having adopted as its major intervention strategies in the educational system, the decentralisation of its programmes, and co-operation with the states and municipalities.

The state and municipal education systems in turn, have started to promote new teaching methods including in their priorities the improvement of management, and the implementation of evaluation instruments. In the field of management, among the major improvements we would like to cite specifically the introduction of new methods for the selection of school principals, combining direct elections and selection criteria based on the qualifications and professional competence of candidates; this has led to the reinforcement of the school's administrative and pedagogic autonomy. This practice has also encouraged better planning, and the participation of parents and teachers in school management, strengthening the link between school and community. Thus the school has come to take greater responsibility for its own outcomes.

In the area of evaluation, we see an important cultural change among principals and school system managers, who have come to recognise external evaluation procedures administered to the schools as an indispensable tool for monitoring policies. This new position has not only led to the participation of state and municipal educational groups in nation-wide evaluation projects, especially that of the SAEB, but also to the efforts that many systems of education have undertaken in order to create their own evaluation/assessment systems¹⁷. The emphasis on management and evaluation stands out as the central component in the reforms effected by state and municipal educational systems that have proven to be most successful in the 90s.

3.1 Principal Federal Government Policies in the Period 1995-1998

While recognising the role of states and municipalities in the provision of basic education, the federal government has directed national policies towards the promotion of improvements in quality and equity. The following were the most important initiatives since 1995:

3.1.1 Policies for Decentralisation, Promotion of Equity and Strengthening of Public Schools

- creation and implementation of FUNDEF, which assures greater equity in the distribution of educational resources – thus guaranteeing suitable conditions for improved teachers' salaries, as well as restating the social prestige of the profession – and which also ensures

¹⁶ The Conselho Nacional de Secretários de Educação – CONSED, a forum of state secretaries of education, plus that of the Federal District, and the União Nacional de Dirigentes de Educação – UNDIME (National Union of Municipal Education Directors), have been important associates to the federal government in promoting national policies for basic education.

¹⁷ Some states are further ahead in developing mechanisms to assess their systems' performance, and to fund their educational policies. This is the case of São Paulo, Minas Gerais and Paraná.

an annual minimum investment per pupil of R\$ 315.00 in 1999, to be complemented by the federal government in those states where this sum per capita is not attained¹⁸ ;

- creation and implementation of the Programa Dinheiro na Escola (Money in School Programme), that follows the decentralisation policies, and enables the automatic transfer of money from the federal quota of the Education-Salary directly to state schools. This guarantees greater efficiency in the use of resources, and greater financial autonomy to schools; and also stimulates the organisation and participation of the community on issues such as the creation of the educational project, and school management¹⁹ ;

- increment and decentralisation of the Programa Nacional de Alimentação Escolar – PNAE (National School Meals Programme), ensuring regular transfers of funds to the states and municipalities, and greater accountability in resources application;

- funding of initiatives focused on the poorer regions, where there are greater shortages in terms of education, through “Projeto Nordeste” (“Project Northeast”) and “Fundescola”, that help in the development of primary education²⁰ , as well as of the “Programa Alfabetização Solidária” (“Literacy Solidarity Programme”), which provides for municipalities with the highest levels of illiteracy, offering young people and adults an opportunity for education;

- development of a modern and efficient system of educational information that reaches all levels of education and produces quantitative and qualitative indicators to support governmental action in different areas of educational management²¹ .

3.1.2 Policies for Improving the Quality of Basic Education

- improvement and consolidation of the SAEB, which provides qualitative data on the effectiveness of the primary and secondary school systems – in terms of student performance – and which identifies factors that influence the learning process, thus supporting policies for improving teaching quality;

- pedagogical evaluation of the quality of school textbooks, and preparation and distribution of the Guia de Avaliação do Livro Didático (Guide to Textbook Evaluation), to help teachers in their choice, drawing attention to serious questions such as the repetition of theoretical errors, and the expression of discriminatory and prejudiced points of view;

- discussion, formulation and diffusion of references and standards of quality by means of the Parâmetros Curriculares Nacionais – PCNs (National Curriculum Parameters) for pri-

¹⁸ Constitutional Amendment No. 14, which instituted this fund, determines that the states and municipalities should assign to primary education at least 60% of the resources earmarked for education, over the next ten years. That is, 15% of total state and municipal revenue, including whatever comes from inter-governmental deals, should be devoted to compulsory education. FUNDEF is made up, in each part of the Federation, of 15% of the resources coming from: the Fundo de Participação dos Estados – FPE (State Participation Fund); the Fundo de Participação dos Municípios – FPM (Municipality Participation Fund); a part of the Imposto sobre Produtos Industrializados – IPI (Tax on Industry Products) that goes to the states and the Federal District; a part of the Imposto sobre Circulação de Mercadorias e Serviços – ICMS (Tax on the Circulation of Goods and Services) that goes to the Federal District, the states and the municipalities; financial compensation paid by the central government to states and municipalities for exemption of exports – Complementary Law No. 87, of 1996. These resources are divided among each state and its municipalities, according to the number of students enrolled in the respective primary education systems. Out of what each one receives, at least 60%, must be directed to payment of teachers working in classrooms.

¹⁹ Having first started in 1995, this programme has transferred over R\$ 1 billion to about 137,000 schools in the past four years, benefiting an average of 29 million pupils a year. The money may be used for the following ends: maintenance, conservation and minor repairs in school building; purchase of consumables necessary for running the school; professional qualification and training of educational staff and acquisition of teaching materials.

²⁰ These two programmes are partly financed by the World Bank (BIRD). The Projeto de Educação Básica para o Nordeste (Northeast Basic Education Programme), which will come to an end this year, invested in the past six years about R\$800 million, in the nine states in the region. The Fundo de Fortalecimento da Escola (School Consolidation Fund), which started to be implemented in 1998, anticipates spending US\$1.3 billion in the next six years. The first stage will be concentrated on the North and Centre-West regions. From 1999 on, the programme will be extended to the Northeast.

²¹ This initiative was consolidated by the re-structuring of INEP in 1995. With Law No. 2,448 of 14th March, 1997, INEP was strengthened and received new authority to carry out educational censuses and implement national assessment systems. The data obtained from these initiatives is widely disseminated, both by means of traditional publications and by new electronic methods, especially the INEP home page on the Internet (www.inep.gov.br).

mary education; the *Curriculum Proposal for the Education of Young People and Adults*; the *Curriculum Reference Book for Early Childhood Education*, and the *Education of the Indigenous Peoples*; works that provide the education systems and schools with an instrument that encourages the renovation and up-dating of curricula;

- elaboration and diffusion of *References for Teacher Training*, focusing on training teachers for early childhood schools and the early years of primary school, discussing the new professional profile required by the LDB, and providing support in decision-making for educational system managers and teacher training institutions;
- creation and implementation of the Programa de Aceleração de Aprendizagem (Accelerated Learning Programme), which encourages and supports efforts on the part of teaching systems to even out the school flow, facing one of the major obstacles to better education: the high level of student age gap, caused by repetition and drop-out;
- creation and implementation of the Programa TV Escola (TV-School Programme), which allows teachers in the state primary school system to receive in-service training and up-dating of skills, and also distributes videos that may be used in support of classroom activities;
- implementation of the Programa Nacional de Informática na Educação – Proinfo (National Programme Information Technology in Schools), which aims to give public schools access to new technologies and which encourages in-service teacher training by means of a network of Núcleo de Tecnologias Educacionais – NTEs (Educational Technology Nuclei), carried out in partnership with state secretaries of education;
- launching of the reformed Programa Educação à Distância (Further Education Programme) which, having separated Professional from secondary education, was able to increase the number of places offered, acquire curriculum flexibility and diversification of courses in order to comply with the new demands of the labour market;
- design and approval of the secondary education reform, defining curricular requirements in line with the new demands of the information society and of the world of work, as well as establishing the necessary requisites to allow this level of education to expand with quality and to fulfil the role of completing the educational process, as determined by the new LDB;
- introduction of the Exame Nacional de Ensino Médio – ENEM (National Examination for Secondary Education), with the aim of evaluating student performance at the end of primary education, assessing the development of basic skills and abilities and the practices of citizenship as well as guiding students for further choices, both in relation to the labour market and to continued studies;
- the permanent attempt to social mobilisation, and to the creation of strategic partnerships through the “Acorda Brasil! Está na hora da Escola” (“Wake up Brazil! It’s time for school!”) programme, the “Toda Criança na Escola” (“Every Child in School”) programme and other stimulating projects that have helped speed up changes.

3.1.3 Policies for Expanding and Improving Higher Education

- re-organisation of the higher education system (Decree No. 2.306/97), based on the principles laid down by the LDB. This introduced, among others, the following changes: institutional diversity, creation of new legal structures for University Centres and Integrated Colleges, encouraging the expansion of places offered, and granting greater freedom for the creation of new courses in non-university institutions which are outstanding for their quality in secondary education, according to periodic evaluations; the guarantee of the right of students to be informed of the conditions and performance of institutions, making the annual publication obligatory, showing courses offered, profile of the teaching staff, and infra-structure available (laboratories, libraries, etc.);
- consolidation of the higher education evaluation system – through the creation of the Exame Nacional de Cursos – ENC (National Course Examination), otherwise known as “Provão” (“Big Exam”), and by strengthening the authority of Higher Education Secretariat’s commissions of specialists to investigate the conditions of supply – setting up transparent mechanisms to assess undergraduate teaching throughout the country and supplying new parameters for the re-accreditation of institutions and approval of courses;
- development of the new Guidelines and Foundations for Undergraduate Curricula. This resulted from an ample process of debates, starting in early 1998, and involving higher

education institutions, academic and professional organisations²² – for the following objectives: expansion and improvement of courses on offer; widening and integrating different fields of knowledge; creating curriculum flexibility; fight against drop-out, and increasing the learners' ability to make decisions in designing their own academic curriculum;

- creation of the Gratificação de Estimulo à Docência – GED (Teaching Stimulation Bonus) – which means pay rises between 20% and 50%, based on qualification, teaching hours, academic production and teaching performance – a benefit that was offered to all teachers in Instituições Federais de Ensino Superior – IFES (Federal Higher Education Institutions) as an encouragement to improved teaching at undergraduate level, and an appreciation of the principles of academic dedication and merit;

- creation of incentives to improvements in teaching, through continued regular programmes in support of teacher qualification for higher education (Social Demand, PICDT and Scholarships Abroad), extending the CAPES scholarship programme²³ and adopting the policy of filling the vacancies made available in IFES by early retirements. This was accomplished by the authorisation for 8,871 public examinations between January and April, 1998, thus allowing a renewal of 21% of the total number of active teachers, and an increase in the proportion of doctoral level staff from 22% to 29% in the colleges of these institutions, with the proportion of master's level staff remaining unchanged and the numbers of specialists reduced (22% to 18%), as was that of graduates (18% to 15%);

- making more investments in repair work and general improvement of IFES infrastructure, including the up-dating of library stocks for the undergraduate level, setting up of information networks and purchase of equipment for undergraduate laboratories and university hospitals;

- definition of more accountable and democratic criteria for the process of selecting university executives, and the composition of committees (Law No. 9,192/95). This strengthened the role of the faculty within the institution, as a weight of not less than 70% was assigned to faculty members, in any of the stages of nominees' listings;

- reformulation of the Graduate Schools evaluation system, working towards improvement and expansion, with quite impressive results both in relation to numbers of courses – which grew from 1,713 to 2,014 between 1994 and 1997 – and to the number of completions per year - with an increase in the numbers of qualified students from 7,627 masters' degrees and 2,081 doctors' in 1994, to 11,920 masters' degrees and 3,620 doctors' in 1997²⁴.

Also included as one of the highest priorities in the agenda of higher education policies, is the definition of the legal landmark that will allow the implementation of complete autonomy, encompassing administrative and financial areas of the federal universities. The search for consensus in this debate, which involved very complex questions, is crucial to the elimination of one of the greatest obstacles to the development of the public university system. As a compensation to autonomy, mechanisms must be created so that society may be able to demand greater efficiency, accountability and social responsibility from the IFES. Freedom from the bonds that hold budget and personnel management immovable in the public sector, is vital. Public universities need it, in order to offer students more places, to avoid unoccupied capacity, and improve student/teacher and student/management relations, until they reach the standards of the best international systems, without quality loss.

The Ministry's guidelines for higher education in the coming four years²⁵ include the following measures, for implementation in the short and medium term: introduce new proce-

²² More than 800 suggestions were received which are being analysed, and incorporated into the proposal that will be sent to the Conselho Nacional de Educação by the Ministério da Educação.

²³ The number of scholarships at master's, doctoral, and post-doctoral level granted by Capes increased from 16,902 in 1994 to 19,764 in 1997; during the same period the number of scholarships abroad grew from 1,535 to 1,996.

²⁴ Capes decision to link the granting of scholarships to course results, measured in terms of masters' degrees and doctorates, had a great effect on the increase in the number of titles recorded in this period.

²⁵ *Avança, Brasil: proposta do governo Fernando Henrique Cardoso*. Brasília, 1998. p. 125-130.

dures for educational institution re-accreditation, based on the results of evaluations, and on the system of quality indicators, built on Higher Education Census data, up-dated annually; adopt a new curricular structure, stimulating greater curricular flexibility and greater diversification of subjects offered, including the creation of “*sequencial*” courses, as determined by the LDB; re-organise and amplify the educational funding programme, linking it to the process of private institution evaluation, combining criteria of income and educational performance in order to benefit 15% of students in higher education institutions; stimulate distance learning and the use of technology in education, in order to widen higher education opportunities without jeopardising the quality.

3.2 The Redistributing Impact of FUNDEF

The most important educational reform implemented in Brazil in the 90s was the FUNDEF, created by Constitutional Amendment No. 14 in 1996 and first established on the 1st January, 1998. For its importance, this policy deserves to be highlighted as an example of the new focus of public educational policies, since it touches on three crucial variables for the improvement of basic education:

- it connects the decentralisation of primary education and the duties shared by states and municipalities, to the redistribution of resources based on the number of pupils served by the respective educational systems;
- it guarantees a minimum cost per pupil, as a means of reducing regional and interstate inequalities, providing greater equity in the distribution of public funds entailed to the development of primary education;
- it establishes the provision of at least 60% of funds for payment of actual classroom teacher salaries, it encourages the adoption of career plans and stimulates investments for teacher training.

Until the creation of FUNDEF, there was no correspondence between the sharing of tax receipts by states and municipalities, and the sharing of educational costs, especially with regard to the supply of compulsory primary education. Thus, there was no incentive for the “collaborative regime” recommended by the Constitution and encouraged by the LDB. This situation brought about two serious consequences: it favoured the non-observance of the constitutional obligation to “apply at least 25% of tax receipts, including those accruing from transfer, to maintaining and developing education”²⁶; and it caused evident differences between the state and municipal education networks, in defiance of the principle of equity in providing a basic service to the population.

In actual fact, there were rich municipalities with few pupils in their system, since the state schools provided the schooling and, at the other extreme, there were poor municipalities with many pupils and insufficient funds to guarantee compulsory education with a minimum level of quality. FUNDEF attacks one of the major roots of inequity in the Brazilian educational system: the unsatisfactory distribution of funds. This distortion contributes to the crystallisation of regional inequities and the contrasts between state and municipal systems of primary education – which are responsible for 32.4 million students, according to the 1998 School Census.

During its first year of operation FUNDEF re-distributed the impressive sum of R\$ 13.3 billion²⁷. The states, which in 1998 had been in charge of 59.3% of enrolments in public

²⁶ Art. 212 of the Federal Constitution.

²⁷ FUNDEF funds, as set out in Constitutional Amendment No. 14, come from 15% of the following sources: Tax on the Circulation of Goods and Services (ICMS); State Participation Fund (FPE); Municipal Participation Fund (FPM); Tax on Industrialised Products, proportional to exports (IPIexp); and the financial compensation to states for exemption of exports, in accordance with Complementary Law No. 87/96 (the Kandir Law). Part of the increased re-distribution by FUNDEF were also the resources supplied by central government – which came to R\$ 524.2 million – to make up for the deficit in those states which could not attain the minimum cost per pupil of R\$ 315.00: Pará, Alagoas, Bahia, Ceará, Maranhão, Paraíba, Pernambuco and Piauí.

primary education, received R\$ 8.2 billion out of these resources (61.6%) while the municipalities, which had provided for 40.7% of pupils, received R\$ 5.1 billion (38.4%). According to estimates for 1999, the municipalities' share in the division of the Fund's cake should rise by 43%, a reflection of the accelerated process of transfer of primary education to the municipalities. It is evident, therefore, that FUNDEF has ensured a well balanced division of resources between states and municipalities, thus correcting the previous distortion.

The municipal systems were the greatest beneficiaries, receiving a significant increase in resources that allowed for an impressive improvement in cost per pupil/year in relation to the previous situation. Out of the 5,506 municipalities in Brazil, 2,703 received additional resources, totalling about R\$ 2 billion. This group of municipalities is responsible for the education of 10.9 million pupils. It is important to note that within the total of Brazilian municipalities, there were 2,159 (39%) that lacked sufficient resources to grant primary education the R\$ 315.00 cost per pupil/year that FUNDEF legislation had fixed as the national baseline. In an even greater condition of destitution were 921 municipalities where the *per capita* cost was less than R\$ 150.00 per pupil/year. With the resources injected by FUNDEF into the educational systems in those 2,159 municipalities, the pupil/year cost showed an average increase of 129%.

Financial Effects of FUNDEF in Municipalities with a Pupil/Year Cost Under R\$315,00 – 1998

Pupil/Year Cost (*)	Municipalities		Pupils/97		Pupil/YearCost (R\$)		Gross Additional Receipts (R\$ million)	Variation	
	Nº	%	Nº	%	Before FUNDEF (A)	With FUNDEF (B)		In Cost Per Pupil (B/A)	% (B/A)
Up to 100	308	5.6	1,740,209	14.0	77.84	324.91	429.9	247.07	317
>100<=150	613	11.1	2,192,551	17.6	124.25	335.46	463.1	211.21	170
>150<=200	474	8.6	2,006,045	16.1	178.44	437.09	518.8	258.64	145
>200<=250	370	6.7	1,193,002	9.7	225.78	389.31	195.1	163.54	72
>250<=315 (**)	394	7.1	1,125,758	9.0	281.36	405.74	140.0	124.38	44
Sub-Total	2,159	39.2	8,257,565	66.4	163.72	375.29	1,746,9	211.57	129
Other Munic.	3,347	60.8	4,178,963	33.6					
Overall Total	5,506	100.0	12,436,528	100.0					

Sources: Resources: MEC/SAEDE Figures; Municipalities: IBGE; Pupils: School Census

(*) Calculated for each municipality by dividing the value of FUNDEF's contribution (15% from FPM, FPE, ICMS, IPIexp, e LC 87/96), by the total number of pupils in primary education (value prior to FUNDEF effects).

(**) The minimum national cost per pupil/year in 1998 was R\$ 315.00

The re-distributive impact of the Fund was more strongly felt in the Northeast and Northern regions, where the greatest needs in the field of education were to be found. A significant amount of resources was also allocated to some municipalities in eight metropolitan regions in the country, state capitals excluded, in which the respective state school systems provided most of the educational services²⁸. Thus, this reform brought the greatest benefit to the poorest areas of the country, where there are large numbers of out-of-school children, and the worst quality indicators in primary education.

The improvements in the profile of resource distribution brought about by FUNDEF may also be seen in increased teacher salaries, as a direct result of the obligation imposed on the states and municipalities to allocate at least 60% of resources to this end. According to

²⁸ FUNDEF provided financial gains to the municipal education systems in the metropolitan areas of Fortaleza (CE), Belém (PA), Vitória (ES), Recife (PE), Curitiba (PR), Rio de Janeiro (RJ), Natal (RN) and Porto Alegre (RS). In the metropolitan areas of Belo Horizonte and São Paulo, effects of the Fund were lessened by the great supply of enrolments by the respective state systems, with resources being transferred from the municipalities to the state government.

a study carried out by MEC, teachers' pay rose nationally an average of 12.9% between December 1997 and August 1998, considering both state and municipal educational networks, all levels, and any number of instruction hours. When we break down the data by administrative authority we see that the greatest average salary rises were found in the municipal systems (18.4%), as compared to 7.7% in state systems. From a regional point of view, the greatest average increase was in the Northeastern networks (49.6%).

Another important change brought about by FUNDEF was the improvement in teacher profile in public primary education. Between 1997 and 1998, the number of unqualified teachers in various categories fell considerably. As a matter of fact, last year there was a drop of 26% in the number of teachers who had not completed primary education and a 38% fall in those who had completed secondary level teacher training. At the same time there was an increase in the number of teachers with higher levels of education – with secondary level teacher training, and fully licensed. This trend, which had already been recorded in recent School Censuses, was accelerated after FUNDEF was created, and was, indeed, one of the Fund's most striking successes.

It is also worth mentioning that the Fund had a positive effect on the growth of enrolments in primary education²⁹. The criterion of resource redistribution – based on the number of students provided for by state and municipal systems – stimulated, by itself, efforts on the part of both education systems to enrol all school age children. This way, total enrolments in public primary education showed an increase of 6% from 1997 to 1998. In absolute terms, the number of students grew from 30.5 million in 1997 to 32.4 million in 1998. Enrolments increased more noticeably in the Northeast (12.1%) and the North (7.7%) regions, which had shown the greatest coverage deficits in compulsory education.

Another phenomenon associated to FUNDEF action was the accelerated transfer of primary education to municipalities. Between 1997 and 1998, enrolments in municipal systems grew 21.5%, going from 12.4 million pupils to 15.1 million. In the same period enrolments in state systems fell by 4.6%, with student numbers falling from 18.1 million to 17.3 million. The greatest rates of municipal network growth were registered in the North (40.2%) and the Northeast (22.1%). This performance reflects both the process of school municipalisation, which is more to be found in those regions, and the effort for greater enrolments. By encouraging the municipalities to a greater commitment to primary education, it was hoped that FUNDEF might induce a revival in the process of decentralisation, which had stagnated in the 90s after vigorous activity in the 80s.

3.3 New Perspectives for Brazilian Education

As a whole, the results attained by FUNDEF in its first year of operation suggest that this reform has achieved its main objectives. From the point of view of redistribution, it has resulted in clear improvements both in terms of greater equity, and in terms of greater accountability and efficiency in the administration of educational resources³⁰. There has also been a positive result in the raised levels of teachers' pay, and in the increased investments in teacher training, school transportation, school restoration and enlargement, and the purchase of teaching equipment and materials. It can thus be said that FUNDEF has begun a new stage in the process of development in primary education, providing solutions to some

²⁹ This received strong support from the "Toda Criança na Escola" ("Every Child in School") Programme, launched by MEC in the second half of 1997, for the co-ordination of efforts by the three levels of government, and mobilisation of society to ensure universal school attendance in the 7-14 age-group. This campaign reached its climax in National Enrolment Week, from the 7th to 14th February, 1998, resulting in about new 700,000 enrolments.

³⁰ FUNDEF's resources are managed in an exclusive bank account, which enables its control by councils, legislative assemblies and national auditors. Furthermore, Law No. 9,424/96 requires the creation, in each level of government, of a Council for Regulation and Social Control concerned with the distribution, transfer and application of the Fund's resources. Research carried out by MEC in August, 1998 indicated that 80.6% of municipalities had already created and installed this council.

of its major predicaments. The initial results of this reform will certainly be enlarged and consolidated in the coming years of its 10-year duration, with encouraging prospects for primary education.

All of these actions converge to a main strategic goal: to build a democratic public education system of quality, able to support the country's sustainable development in the 21st century. The advances towards this goal were quite significant in the 90s, drawing up a new scenario for Brazilian education, as we have seen from the indicators presented and analysed in the previous section. We must also recognise, however, that there is still great pressure exerted by what was inherited from the past, especially in the face of repressed demands resulting from many years of governmental omission. For Brazil to overcome this accumulated deficit, and at the same time get into step with the modern world, a high level of public investment is required in primary education, as well as the continuity of newly implemented policies.

The positive balance of national policies for primary education in the past ten years is mainly due to the level of co-operation achieved among federal government, states and municipalities. Another outstanding factor for the high profile in reforms has been the growing importance of educational topics in the media, creating greater participation on the part of society in the debate on public policies and the performance of teaching institutions. The diffusion of updated indicators and national evaluation results has helped to attract the attention of the media and capture the interest of public opinion³¹. The next section discusses the impact of evaluations on the education systems, and their validity as a means of encouraging policies to improve educational quality.

³¹ The space given by the press to the coverage of educational topics showed an increase of more than 300% in the first half of 1998 in relation to the same period in the previous year, according to the research journal ANDI – Childhood in the Media. Thus, for the first time the subject has reached first place in topics most touched on since this study began in June, 1996. The research, done by the Agência de Notícias dos Direitos da Infância – ANDI (News Agency for Children's Rights), in partnership with the Ayrton Senna Institute and UNICEF, studied 51 newspapers from all regions in the country and eight magazines with nation-wide circulation.

4

EVALUATION AS AN INDUCEMENT TO IMPROVING THE QUALITY OF EDUCATION

In the 90s, especially in the past four years, educational evaluation has taken on a very important role in the public policy agenda of Brazilian education, accompanying a trend that other countries have been following since the 70s. There exists today a united and high level of agreement among administrators, education experts, and other specialists on the relevance of evaluation systems to direct educational reform and above all, to encourage policies for improving the quality of teaching. For this reason, there has been an increasing concern with improved mechanisms of monitoring the performance of education systems, focusing on pupils' performance and on the various factors associated with school outcomes.

The agreement concerning the strategic importance of looking more deeply into the levels of quality in education, as well as the variables that affect the results of the educational process, has caused educational evaluation to be chosen, by different groups, as a priority area for multilateral co-operation in educational development. With the support of international associations and organisations, various projects that promote international comparative studies have flourished, intending to generate data that may support governmental decisions on educational policy³².

This co-operation has tended to spread throughout the hemisphere since the implementation of the Plano de Ação em Educação (Action Plan in Education) endorsed by the last meeting of heads of state at the Summit of the Americas, held in Santiago, Chile, in 1998. At the suggestion of Brazil, the document included a proposal to develop an inter-American educational assessment project, with the aim of promoting and strengthening national evaluation systems, facilitating the exchange of experiences and generating standards that will permit comparison of student performance³³.

4.1 Development of National Evaluation Systems

In the past four years, the Ministério da Educação has laid great emphasis on its educational evaluation policy, taking on the responsibility prescribed by the LDB, of "safeguarding

³² In 1997 Brazil participated in the First Comparative International Study carried out by the Latin American Laboratory for Evaluation and Quality in Education, linked to the Regional Office for Education for Latin America and the Caribbean (OREALC/UNESCO). This study, in which 13 countries in the region took part, aimed to evaluate the levels of performance in Language and Mathematics and the factors associated with them, of 3rd and 4th grade primary school pupils. Another ongoing project in which Brazil is taking part, is the Programa para a Avaliação Internacional de Estudantes – PISA (International Student Evaluation Programme), co-ordinated by the Organisation for Economic Co-operation and Development (OECD). This project, involving about 30 countries, aims to assess the performance of 15-years-old pupils and to produce indicators on the effectiveness of educational systems. Three batteries of tests will be applied at three-yearly intervals, the first in the year 2000.

³³ The recent bilateral co-operation agreements in the area of education signed by Brazil with the USA and Great Britain also pinpoint evaluation as one of the main areas of interest for the development of partnerships and technical co-operation.

the national system to evaluate school outcomes at primary, secondary and higher education levels, in co-operation with the educational systems, aiming at a definition of priorities and the improvement of quality³⁴. The progress achieved in this area is worth noting, especially on the following points: consolidation of the SAEB; implementation of the ENEM and of the ENC; and finally, re-shaping of the post-graduate evaluation system.

SAEB is a large-scale evaluation, carried out by sampling, administered to pupils at the end of primary education (4th and 8th grades) and of secondary education (3rd grade). Besides measuring academic performance, SAEB also provides information about pupils' socio-economic and cultural profiles, as well as about their study habits. Another important group of variables is produced by questionnaires replied by teachers (concerning professional profile teaching practice) and school principals (concerning their profile and school management practices). This wide-ranging survey is complemented by data on the equipment available and the physical nature and state of repair of the schools. This information, covering the most important elements of the teaching/learning process, gives an idea of student performance attained, and identifies the factors associated with it.

ENEM, is the initiative that completes the set of evaluation instruments created by MEC, to induce and direct efforts for educational quality improvement at all levels³⁵. It works in conjunction with the newly proposed National Curricular Guidelines for secondary education, approved by the Conselho Nacional de Educação (National Council for Education) through Resolution No. 15/98. Its main objective is to assess student performance by the end of basic schooling³⁶.

We are dealing, therefore, with an advanced proposal, both in its trans-disciplinary nature and in its emphasis on the "coming out profile" of secondary school graduates, thus strengthening the final stage of this level of education. While SAEB aims to evaluate educational systems, ENEM contributes with an assessment of individual performance, providing guidance for continued study or for entry into the labour market. For this reason, ENEM is voluntary; its target population are those finishing secondary school, or those who have already finished it in previous years.

Having been launched in 1996, the "Provão" ("Big Exam") has already evaluated ten (10) undergraduate courses – Law, Administration, Civil Engineering, Chemical Engineering, Mechanical Engineering, Veterinary Medicine, Dentistry, Language/Literature, Mathematics and Journalism. It has provoked a lively debate on the shortcomings of higher education in this country, and incited institutions to invest in the qualification of their faculty, and to improve their facilities, trying to raise the level of the courses offered. This examination is compulsory by law for all students who are graduating from courses subject to annual evaluation.

In spite of its prominence, "Provão" is not the only external evaluation instrument used by the Ministry to assess higher education courses and institutions, as required by Law No. 9,131/95. The undergraduate evaluation system embodies a complex battery of indicators, that include the results of evaluations and data collected by the Higher Education Census. In addition, MEC has been carrying out, through its specialist commissions in the Secretaria de Educação Superior – SESu (Secretariat for Higher Education)³⁷, an *in loco* evaluation of the conditions of courses being offered at undergraduate level³⁷.

³⁴ Cf. Art. 9, seção VI, da Lei nº 9.394 de 24 dez. 1996.

³⁵ ENEM was first administered on 30th August, 1998 in 184 municipalities in Brazil, including all state capitals, and involving 115,221 candidates.

³⁶ INSTITUTO NACIONAL DE ESTUDOS E PESQUISAS EDUCACIONAIS. *Exame Nacional do Ensino Médio*: documento básico. Brasília, 1998.

³⁷ These commissions of subject specialists have focused their visits on courses that have not received a favourable rating in the "Provão", specifically intending to identify the shortcomings that hampered average student results. The commissions analyse faculty's qualifications, the organisation of teaching and courses, and the physical facilities. 118 courses have already been visited. The results of these investigations are also incorporated into the system of indicators that will guide the process of institution re-accreditation, and approval of courses.

The evaluation system at post-graduate level is the most traditional and established of the evaluation mechanisms developed by the Ministério da Educação. This practice has been one of the main reasons why Brazil was able to create a diversified post-graduate education system, which is internationally recognised for the high standards it has attained. However, in spite of great respectability, the post-graduate evaluation model began to lose, over time, its ability to discriminate among programmes, in relation to the classification scales used. As a large proportion of the courses were given grades A and B, it became impossible to identify which of the programmes actually had levels of academic excellence comparable to international standards. For this reason, the evaluation system was subjected to external appraisal, effected by international specialists with the active participation of the Brazilian academic community. Based on this diagnosis, CAPES started a reformulation process in the post-graduate system, introducing a new classification scale, based on more strict criteria. In practice, this meant adjusting the system to a new phase in the development of post-graduate work.

Although rather new, especially when compared to other countries' traditions in this area, Brazil's national evaluation systems are innovative in several aspects, both methodological and institutional. They represent, therefore, important steps towards the improvement of data concerning student performance at the different levels of education; and, above all, they represent steps towards the introduction of a culture of assessment and evaluation, at the various stages of education. The impact that the findings of evaluations had on the media further contributed to introduce into the official agenda a concern with improved educational quality.

Large-scale evaluation systems such as the SAEB help in the quest for answers to some of the major questions met by educational policy-makers, enabling them to identify priorities and alternatives, so as to increase the efficiency of initiatives and optimize investments in this area. In this way, the survey tries to discover what learners are actually learning, to indicate what learners should be expected to learn in their school life in terms of the curriculum proposed, and to identify the factors – in or outside school – that aid or restrain the acquisition of the expected skills and abilities.

We see, therefore, that evaluation systems can fulfil an important role when they manage to establish a close connection to the efforts of school networks for educational quality. Among the reasons that justify the emphasis now given to periodical studies on student performance, and the associated factors that affect it, we may stress the following³⁸ :

- international competitiveness in the economic area, and the impact of technological change on production have come to demand that people achieve better and higher levels of schooling;
- educational quality (considering its elements of equity, effectiveness and excellence) is a goal for most countries; it may be permanently evaluated and monitored, from a objective data base;
- the increasing autonomy and decentralisation of educational systems has required the development of national evaluation systems that permit the comparison of results against minimum quality standards, guiding policies that intend to correct regional inequalities;
- regional integration in terms of Mercosul, together with globalisation, require greater educational uniformity to ensure Brazil's independent and competitive participation;
- the growth in public expenditure on education and the mobilisation of society to demand greater accountability in administrative areas as well as in schools, have made it necessary to consider other educational indicators besides performance in school.

³⁸ The Latin American Laboratory for Educational Evaluation and Quality: Structure, methodology and implementation of research into associated factors in the First International Comparative Study. Document presented at the 6th National Co-ordinators' Meeting - Havana, Cuba, 17th -19th March, 1999.

4.2 The National System for Evaluation of Basic Education (SAEB)

In this rather challenging context, Brazil decided to develop in the 90s a national evaluation system capable of producing information on the country-wide performance of basic education, encompassing the different conditions found in state and municipal school systems. This proposal resulted in the SAEB, which aims to evaluate the effectiveness of educational systems, focusing on quality, effectiveness, and equity. It is administered to a sample of pupils representing each one of the 27 states that comprise the Brazilian federation³⁹. In the first cycle of SAEB administration, 23 states participated, but as of 1995 it became a national system, with the presence of all educational networks – state, municipal, and private. Participation is still voluntary, which goes to show that educational authorities have recognised the importance of this tool, to enable the follow-up of educational policies.

From its creation, SAEB's general characteristics both in terms of objectives, structure and conception, have remained constant. However, after 1995 important methodological changes were introduced, especially in order to establish subject-specific proficiency scales, covering all three grades being evaluated, thus enabling pupils' performance to be arranged in a continuum. This is done by administering common items to all three grades, and adjusting the scales for each subject in the grades, in order to obtain a common scale.

4.3 Major Results and Trends Identified by SAEB/97

The results of SAEB/97, confirming findings of previous studies, show low levels of effectiveness in teaching and learning in the three subjects assessed – Portuguese language, Mathematics and Sciences. Furthermore, they show that the gap between what is planned in the curriculum and the actual performance of students increases after the final grades of primary education and during secondary education. Thus, it may be said that basic education in Brazil has the following characteristics:

A. Variation in teaching systems – average proficiency of pupils shows severe inequalities, both in a regional and state basis; the variation is considerable within each state and within an individual education system, reflecting the profound inequalities that exist in the supply of education; great differences are also evident between the average proficiency levels in urban and rural areas, with the latter being the lowest in the whole country⁴⁰. This picture suggests that the educational system acts as a mechanism to reinforce disparity, as the poorest regions have the lowest performance rates, signifying that they offer less effective opportunities for learning than those that are offered in more developed regions, where higher performance levels are found;

B. The gap between the intended curriculum and pupil performance – the results obtained confirm the low level of effectiveness of the planned or intended curriculum, showing that it is not being learned in a satisfactory manner, since only a small number of students perform close to what is expected in the curriculum. This gap may be due to the differences existing between the planned curriculum and what is actually taught, which suggests that the planned curriculum has not yet made an appearance in the classrooms;

C. Student age gap has a negative effect on pupil achievement – confirming the results of previous studies, SAEB/97 showed a marked fall in average performance as the gap widens between the pupil's age and that considered as ideal for that grade; this finding was true of all the grades and all subject areas surveyed;

D. Relation between pupil performance and teachers' level of qualification – SAEB/97 shows that average pupil performance is better as the teacher's level of education

³⁹ In SAEB/97 167,196 pupils participated, representing 5,659 year-groups from 1,933 public and private schools. In addition, 13,267 teachers and 2,302 head teachers took part. In 1999 the SAEB sample will be increased to include 300,000 pupils, 20,000 teachers and 6,000 head teachers.

⁴⁰ Regional differences are so acute that, in the 4th grade of primary education, in mathematics and Portuguese language, pupils from the country areas in the Southern region achieved better results than those of urban areas in the North.

increases; most surprising, however, was to find that the average proficiency of pupils who have teachers of degree level but no teacher training, surpasses the average level of pupils whose teachers have a teaching degree; a constant phenomenon in all the grades and subject areas surveyed;

E. Parents' level of education influences pupil performance – a tendency was detected for higher levels of proficiency in pupils, as the educational level of parents rises, in all grades and subjects, in the three educational systems; these results reflect, to a large degree, the link that exists between the family's socio-economic conditions and the pupil's ability.

The relation between the teacher's level of education and pupil performance pointed out by SAEB shows once more the importance of policies for initial- and in-service teacher training in the teaching-learning process. It is important to note that gains in pupil performance keep rising along with the teacher's level of education, in all the grades and subjects that were evaluated, even at higher education level.

Another relevant connection appears when the level of teacher education is connected to the length of teaching experience and contrasted with the performance of pupils. It is found, for example, that pupils whose teachers had university education, had more than ten years of experience and attended in-service courses in their subjects in 1977, had the best results in all subjects, mainly in primary education. When we compare the results of this group with those of pupils whose teachers did not have university education, had less than ten years' experience and had not attended in-service courses in 1977, greater proficiency was found in all subjects, mainly in Portuguese language, where the differences reached 22%, 24% and 18% in the 4th and 8th grades of primary education and the 3rd grade of secondary education, respectively.

It is clear, however, that although the level of teacher education and teaching experience have a positive influence on pupil performance, continued training – by means of in-service courses – is an important factor.

As for student profile, SAEB findings confirm other studies, that age is the variable that seems to have the greatest influence on the average proficiency level attained. This analysis considers as the ideal age for 4th and 8th grades of primary education and 3rd grade of secondary school, to be 10, 14 and 17 years, respectively. We find that as the difference in actual age and the ideal age increases, the students' performance in mathematics, Portuguese language and sciences (biology, physics and chemistry) decreases. This confirms that the fall in average proficiency levels seems to be associated with the increase in student age gap, in all subjects being assessed.

Average student proficiency in relation to teacher's educational level, by grade and subject Brazil, 1997

Education level	4 th grade			8 th grade			3 rd grade				
	M	L	S	M	L	S	M	L	C	P	B
Secondary Education in Teacher training	181	158	176	228	212	231	293	282	281	286	264
Secondary Education - other subjects	187	165	177	235	242	239	303	263	295	295	283
Higher Education - Teaching Degree	194	170	187	248	248	251	303	290	292	287	294
Higher Education - other subjects	208	180	195	254	260	255	313	308	321	306	301
Post-Graduate	196	179	193	269	256	252	322	299	323	328	323

Source: MEC/INEP/DAEB

Legend: M: Mathematics; L: Portuguese language S: Sciences; C: Chemistry; P:Physics; B: Biology.

Average student proficiency levels in relation to teachers' level of education, teaching experience and professional courses taken in 1997, by grade and subject Brazil, 1997

Education level of teacher	Length of teaching experience	Courses in 1997?	4 th grade			8 th grade			3 rd grade				
			M	L	S	M	L	S	M	L	C	P	B
Below University	≤10	Yes	180	153	174	237	222	245	309	276	297	284	276
		No	173	149	172	224	210	235	285	251	292	272	285
	>10	Yes	188	171	181	248	241	230	312	299	302	352	-
		No	177	152	175	239	231	223	321	264	270	312	301
University Level	≤10	Yes	191	170	185	248	245	253	304	289	299	297	299
		No	181	167	186	243	246	248	299	293	292	306	290
	>10	Yes	203	181	194	257	260	258	313	296	295	308	322
		No	193	159	185	254	249	245	309	297	320	316	296

Source: MEC/INEP/DAEB

Legend. M: Mathematics; L: Portuguese Language; S: Sciences; C: Chemistry; P: Physics; B: Biology.

Since SAEB/95, results have shown that pupils who go through a grade at an age greater than that considered ideal, are more likely to show low performance levels. Some of the theories about this situation say that the fact of learning at an appropriate age gives pupils psychological, emotional, physical, and pedagogical advantages. In terms of pedagogical aspects, they stress the use of teaching methods and materials that are suitable to the ideal age range and are, therefore, unsuitable for students who are not in the proper grade for their age.

This aspect needs to be discussed at length by those who are engaged in teacher training, and who design and produce teaching materials. It is only common sense that teacher training, the production and selection of teaching materials, should be compatible with and suitable for, the the pupils' actual conditions, for the brazilian educational system has one of the greatest rates of student age gap in the world, as mentioned earlier.

4.3.1 Comparison of SAEB/95 and SAEB/97 results

The compared analysis of SAEB results in the years 1995 and 1997 allowed for the first time the evaluation of the gains in student performance, in the various educational systems. It is evident that, as international experience clearly shows, a period of two years is too short to show significant differences in student performance. Nevertheless, some important trends were identified.

Before looking into them, however, two methodological explanations and a word of caution are necessary. The procedure used to construct the unified scale – which permits comparison of SAEB/95 and SAEB/97 results – was that of conjoint estimation of statistical parameters in all test items used in both SAEB surveys, in a process known as 'calibration'. This allowed the construction of a single scale for mathematics and Portuguese language, combining the results of both years⁴¹.

The second aspect that needs to be considered is that the statistical programme used in this study was different from the one used to analyse the specific results of SAEB/97 – shown in the previous item; therefore, the proficiency averages obtained for the two surveys now being compared (1995 and 1997), analysed below, have absolute values that differ from SAEB/97 results. However, the two groups of results show extremely similar behaviour patterns, suggesting that the trends observed in both cases were equal.

Finally, it should be recommended that these comparisons be treated with caution. Some changes were introduced in the definition of student population sample in SAEB/97, as compared to SAEB/95. In 1997, pupils in multi-graded classes and federal schools were excluded, as well as rural school students in the Northern region and 3rd grade secondary school pupils enrolled in vocational courses. As a result of these exclusions, variations in average proficiency levels may be attributed to changes in sampling, and not to actual changes in performance.

⁴¹ Data analysis was based on the Item Response Theory, using specific software. In this study, calibration was done using Bilog-MG statistical software (Zimowski, Murski, Mislevy and Bock, 1996). It is necessary, however, to point out that the Item Response Theory involves the estimate of probabilistic models, so that it is customary for small variations to occur in calibration results, due to the estimate variations underlying the model used.

Having made these observations, we now wish to highlight two positive trends, based on the comparison between SAEB/95 and SAEB/97 results: on the one hand, an improvement was detected in the performance of pupils in the Northeastern region and in some states that have advanced their educational reforms in recent years – such as Paraná, Minas Gerais, Santa Catarina and Rio Grande do Sul; on the other hand, the relative stability of proficiency levels in the other states of Brazil, shows that the rapid expansion of basic education in recent times has not been carried out at the expense of quality⁴².

Ranking of units in the federation, in relation to variation in average proficiency in Mathematics 1995-1997

Grade	Variation in averages between 1995 e 1997		
	Average Decrease (statistically significant decrease)	Stability (no significant statistical difference)	Average Increase (statistically significant increase)
4 th primary	RR, DF	BR, N, NE, SE, S, CO RO, AC, AM, PA, AP, TO, MA, PI, CE, RN, PB, PE, AL, SE, BA, MG, ES, RJ, SP, PR, SC, RS, MS, MT, GO	
8 th primary	RR, SP, DF	BR, N, SE, S, CO RO, AC, AM, PA, AP, TO, MA, PI, CE, RN, PB, PE, AL, SE, BA, MG, ES, RJ, PR, RS, MT, GO	NE SC, MS
3 rd secondary		BR, N, SE, CO RO, AC, AM, RR, PA, AP, TO, MA, PB, AL, SE, ES, RJ, SP, PR, MT, GO, DF	NE, S PI, CE, RN, PE, BA, MG, SC, RS, MS

Source: MEC/INEP/DAEB

Ranking of Units in the Federation, in relation to variation in average proficiency in the Portuguese language 1995-1997

Grade	Variation in averages between 1995 e 1997		
	Average Decrease (statistically significant decrease)	Stability (no significant statistical difference)	Average Increase (statistically significant increase)
4 th primary	CO RJ, GO, DF	BR, N, NE, SE, S RO, AC, AM, RR, PA, AP, TO, MA, PI, CE, RN, PB, PE, AL, SE, BA, ES, SP, PR, RS, MS, MT	MG
8 th primary	BR, SE ES, SP	N, S, CO AC, AM, RR, PA, AP, TO, MA, PI, CE, RN, PB, PE, AL, SE, BA, MG, RJ, PR, SC, RS, MS, MT, GO, DF	NE RO
3 rd secondary	BR, SE SP	N, S, CO RO, AC, AM, RR, PA, AP, TO, MA, CE, RN, PB, AL, SE, BA, ES, RJ, PR, SC, RS, MS, MT, GO, DF	NE PI, PE, MG

Source: MEC/INEP/DAEB

⁴² CASTRO, Cláudio de Moura. "O Ensino melhorou ou travou?" (Has teaching got better or stalled?) *Veja*, 27/01/99. p.20.

4.4 Effects of SAEB on Educational Policies and Initiatives

One evidence of SAEB's effect as a permanent mechanism for the improvement of education, and of the importance of its findings in the formulation of policies, has been the rapid expansion of accelerated learning programmes, which fight one of the major causes associated to students' low levels of achievement. In fact, the strong correlation, shown by SAEB/95, and confirmed by SAEB/97, between the average proficiency levels of pupils and their ages, has stimulated a reaction within education systems. This includes the adoption of measures to force down repetition and drop-out rates – the principal causes of the age gap – and efforts to push students that have fallen behind, back to a normal school flow. In 1998 accelerated learning classes were provided for 1.2 million pupils, which goes to show how this policy has expanded throughout the country.

SAEB results also provide valuable orientation for implementation of the Parâmetros Curriculares Nacionais – PCNs (National Curriculum Parameters) and curriculum reform in secondary education, for they help identify the major deficiencies in student performance. SAEB has already shown the low level of effectiveness of curricula. “This gap may be due to the existing differences between the planned curriculum and that which is actually taught, meaning that the proposed curriculum has not reached the classroom yet. Or, equally, it may also be attributed to the high levels of expectation to be found in the planned curriculum, making it difficult for students to fulfil its requirements.”⁴³

One of the distortions that the new Curricular Guidelines are trying to eliminate is precisely the encyclopaedic nature of curricula, which has had a negative effect on student learning. The reforms induced by MEC, in accordance with the new LDB, bring changes to the official curricula, reducing the emphasis on content that is unnecessary for general basic education, and encouraging a teaching approach that concentrates rather on problem-solving and the development of general skills and abilities. Furthermore, the PCNs emphasise cross-curricular themes such as ethics and multi-cultural issues, suggesting that they might be approached in an inter-and trans-disciplinary way, so as to form an integral part of education for the exercise of citizenship.

This connection between SAEB and the PCNs has already been introduced in TV School – a Ministry's distance education programme that serves public primary schools having over 100 pupils, providing teachers an opportunity for further training, and support for classroom activities. Within this same area of interest, some states have begun to use SAEB results to plan in-service and teacher training programmes – such as Paraná, Pernambuco, Rio de Janeiro, Goiás, Maranhão, Rio Grande do Norte and Minas Gerais. This interaction is decisive for its multiplying effect, causing SAEB results to promote changes in teaching practices and improvements in the teaching-learning process, thus fulfilling their main goal. The co-operation also helps to spread and consolidate an evaluation culture in Brazil.

⁴³ INSTITUTO NACIONAL DE ESTUDOS E PESQUISAS EDUCACIONAIS. *SAEB 97: Primeiros Resultados*. Brasília, 1999. p. 49.



THE NEW DEBATE ON THE USE OF STANDARDS IN EDUCATION

The development of standards in education is relatively new. For this reason, it has aroused a growing interest, and generated an intense debate among specialists and educational system managers. This debate is centred on two main themes: questions of equity, and impact on student achievement.

Underlying the arguments presented by participants in the debate, there are different opinions about what *standards* really are, and the role they can play as an instrument for quality improvement in education.

The theme of equity is now a central problem in public policy, especially in the field of education. As previously demonstrated, Brazil's educational system has a great deficit in terms of ensuring minimum conditions of equity, both from the point of view of access, and of quality in the teaching offered by public schools. This aspect has been strongly emphasised since national evaluations first started, their results showing the enormous disparities that exist among states and teaching systems. Therefore, the mere thought of establishing minimum standards – which would act as a reference for teaching systems performance – leads to an inevitable discussion of the problem of equity.

Two opposing points of view stand out in this debate. The first maintains that *standards* do not favour equity, for they discriminate negatively both in socio-economic and in cultural terms. It is also said that such differences hinder the use of common evaluation tests, and that the adoption of *standards* will lead to a tendency to homogeneity, and not to diversity. The second view, on the other hand, defends the validity of setting standards precisely because they allow the problem of inequity to be faced on the basis of more information, by educational policies. It is also argued that the social factor cannot be used as a justification for failing to attain quality standards, as that would doom the socially excluded to a second-rate education.

These controversial views intensify the present international debate about the development of standards in education. Meanwhile, they tend to converge towards acknowledgement of a need to define what all students are expected to develop in terms of abilities, basic skills, and knowledge of contents, throughout their school life. The idea of standards gains strength precisely because it is based on the premise that it is possible to define the desired levels of proficiency to be reached by the end of each stage in schooling. Those would be the patterns of quality to be sought by educational systems.

Paradoxically, although education has been identified as one of the major mechanisms for social mobility, educational systems continue to reinforce disparity, as they fail to promote access of the underprivileged to higher levels of education. By allowing cross-references of socio-economic and cultural variables, with test results, evaluation systems show quite clearly

in which subjects and content areas the major differences lie, thus guiding in the design of specific actions. For this reason, it is also important that results are widely diffused, so that schools, teachers and parents may know which shortcomings were identified and, from that knowledge, may develop the actions needed for the introduction of improvements.

5.1 The role of Standards in Equity Policies

The applicability of standards in education necessarily requires an emphasis on equity policies that may lead to an ideal situation in which all students have access to the same learning opportunities. However, as these conditions do not exist, it is necessary that the definition of standards bear in mind regional differences and the socio-economic and educational factors that affect students' performance. It is necessary, as well, to develop methods to evaluate performance in relation to the standards that allow a measure of the value added by the school, which assumes a knowledge of the pupil's level at the start. Thus, instead of discriminating, standards can become a powerful instrument to bring about improvements in educational quality, and fulfil their most important function.

The second theme that has been outstanding in this debate is the effect of standards on learning. Criticism runs on a similar level to that of equity. In short, it is feared that establishing patterns will tend to concentrate the educational process exclusively on those subjects for which they were designed. This way, curriculum might be reduced, for schools would be encouraged to give priority only to those contents identified as the objects of standards and evaluation. It is also questioned whether adopting minimum standards might lower the average attainment levels of pupils even further. On the other hand, the choice of adopting desired standards of excellence will tend to generate frustration among those who do not manage to reach them, encouraging repetition and drop-out.

This criticism needs to be duly considered when designing standards and when using together with evaluation procedures. What may be seen from recent experience is that standards exert a favourable influence insofar as they establish references for the development of curricula, textbooks, teaching materials and teaching methods. Thus, they guided actions for equity of opportunity, and come to be used as a basis for the school's pedagogical programme. Finally, they encourage social control and the participation of individuals and groups interested in education.

The role assigned to standards is that of clearly showing the results that may be expected from the teaching-learning process, in which educational systems and schools are involved. The process offers parameters of comparability and, what is more important, it provides the necessary elements to demand accountability from the various educational agents. Casassus (1997), on examining the scope of standards as a means of raising the quality of education, identified four dimensions to be considered in establishing standards⁴⁴. The first refers to the *prescribed*, that is, the pedagogical goals that are the basic element of standards; the second refers to what would be *desirable*, indicating levels of excellence in relation to what is expected of education; the third refers to what can be *observable*, that is, what has actually been achieved and is assessed in evaluations; the fourth shows what makes the former results *feasible*, that is, the conditions and production factors needed in order to attain the desired standards.

The first step in standards formulation is to answer a recurring question in the educational debate: what do we expect students to learn and what do we expect teachers to teach? The challenge, then, is to establish "in a clear and public manner which are the conceptual and practical skills that we expect pupils to achieve"⁴⁵ and the indicators that will permit their measurement. On a more general level, standards must relate to curriculum objectives and

⁴⁴ CASASSUS, J. *Estándares en educación* : conceptos fundamentales. Unesco, 1997.

⁴⁵ Idem.

to the results all students are required to attain. They are, therefore, *basic* standards. The emergence of the question of quality has raised general expectations about the role of education, leading to discussion on desirable profiles, the goals of the different levels of education, and the demands to which schools should submit, in order to achieve those goals. This debate takes place on the level of the *desirable*, which may be translated in terms of 'standards of excellence'. That is, ideal standards "attainable by some, although not necessarily by all, as is the case with basic standards". Their function is to establish a goal to be achieved.

In both interpretations of standards – basic or of excellence – we must be absolutely clear in defining the skills to be attained. And, in order for them to be effective, they must be expressed in such a way as to be observable, measured and evaluated. Therefore, in order to have any meaning, standards must be feasible, allowing for the development of indicators by which the progress in acquired skills and abilities may be evaluated. In this way, standards fulfil their role of providing information that accounts for the responsibility of educational systems and the schools themselves, concerning the results of the teaching-learning process.

However, for *feasible* standards to be established, it is also necessary to define strategies to ensure the conditions that will enable schools to achieve them. To this end, we must establish minimum standards concerning physical infra-structure and facilities, and inputs, both material ones – textbooks, equipment, etc. – and managerial ones: administrative autonomy, learning opportunity, etc.

These are the substantive aspects involved in the international debate on standards. When applied to the situation of the Brazilian national education system, with its well-known discrepancies in levels, this debate brings in other equally relevant questions: how can we think about national standards when it is known that in public schools not even basic infra-structure is always present? How can we link standards to teacher training policies? What should be the desirable level of performance among students by the end of basic education? What are the necessary skills for citizenship and entry into the work world?

6 FINAL OBSERVATIONS

The balance-sheet of the 90s in the educational area, sketched in this study, shows that there was a very positive change in the state of education in the country. We mention, among the major improvements:

- the marked drop in illiteracy levels, especially among the young;
- the remarkable growth in enrolment at all levels of education, especially in primary education universalisation, and the rapid expansion of secondary education;
- the adoption of policies aimed at improving teaching quality;
- the gradual improvement in transition rates from primary to secondary education, with a concurrent fall in repetition and drop-out rates;
- the improvement in teachers' level of qualification, linked to a policy of fostering the status of the teaching profession;
- the emphasis on accelerated learning programmes to correct school flow;
- the development of curricular parameters and terms of reference for early childhood education, further education, education of indigenous peoples, primary education, secondary education, and teacher training;
- the decentralisation of educational responsibilities, based on a mechanism for redistribution of funds (FUNDEF);
- the strengthening of schools, and encouragement for community participation in school management;
- the institutionalisation of national education evaluation systems encompassing all educational levels;
- re-formulation of the Sistema de Estatísticas Educacionais (Educational Statistics System), to provide support for diagnosis and formulation of educational policies in the various administrative levels and organs.

These changes formed a new constitutional landmark, consolidated by Constitutional Amendment No. 14, of 1996, and by the Lei de Diretrizes e Bases da Educação Nacional – Law No. 9,394/96. Decentralisation of basic education policies stimulated by this new educational legislation, is based on the implementation of national evaluation systems and the development of mechanisms to reinforce social control. Thus, federal government actions intended to promote greater equity in public education become more consistent. Among these actions, we cite: definition of curricular terms of reference and parameters for the different levels of education; guarantee of a minimum cost per pupil/year through of FUNDEF;

definition of minimum standards for schools, regarding facilities and inputs; and the discussion, caused by SAEB results, about the development of standards to be attained by all schools in the country.

However, in spite of these noticeable improvements – which have been accompanied by an increased managerial capacity in educational systems – the challenges that have to be faced in the coming ten years are very great and will require great efforts on the part of all three levels of government and society in general, so that Brazil may overcome the accumulated historic shortcomings in education and to achieve at last a stage of development compatible with the means and resources it disposes. Given the present educational situation, together with the changes in the demographic profile, the next ten years will see the following trends:

- a gradual slowing-down of demand in the earlier grades of primary education, followed by a marked growth in enrolment in the final grades, a phenomenon that is already noticeable in the more developed regions of the country;
- an explosion of demand for secondary education, putting pressure on the expansion of places in public education systems, and requiring increased investments in the enlargement and improvement of schools, teacher training, and maintenance and development of this level of education;
- a rapid expansion of higher education, accompanied by diversification of courses and curriculum flexibility;
- increased pressure for increased public expenditures in education, at all three levels of government;
- the inflexibility of public budgets will require the financial profile of the three levels of education to be re-considered, based on criteria of equity and of the priority given to social demands for basic education.

This situation indicates that the country's greatest challenge in the next ten years will be to eliminate the quality deficit found in all levels of teaching – most seriously in the public primary education system – thus responding to growing public pressure and to the demands imposed by the technological changes that have characterised the last quarter of the 20th century. The true dimensions of this challenge become evident when it is added to the urgent tasks of completing the process of attaining universal basic education, and expanding provision for the other levels of education, democratising educational opportunities and satisfying present demand.

Educational policies now prevailing seem to indicate a suitable strategy for providing at the same time an expansion of the system and a raise in educational quality patterns. The coming years will show Brazil's ability to gradually improve the equity and effectiveness indicators in its educational system. An important advantage is that the country already has international level instruments – such as the Educational Census, SAEB, ENEM and the “Provão” – to monitor this effort and adjust the policies, so that these goals may be achieved.