ational Content and Learning Strategies for Living Together in the 21st Century

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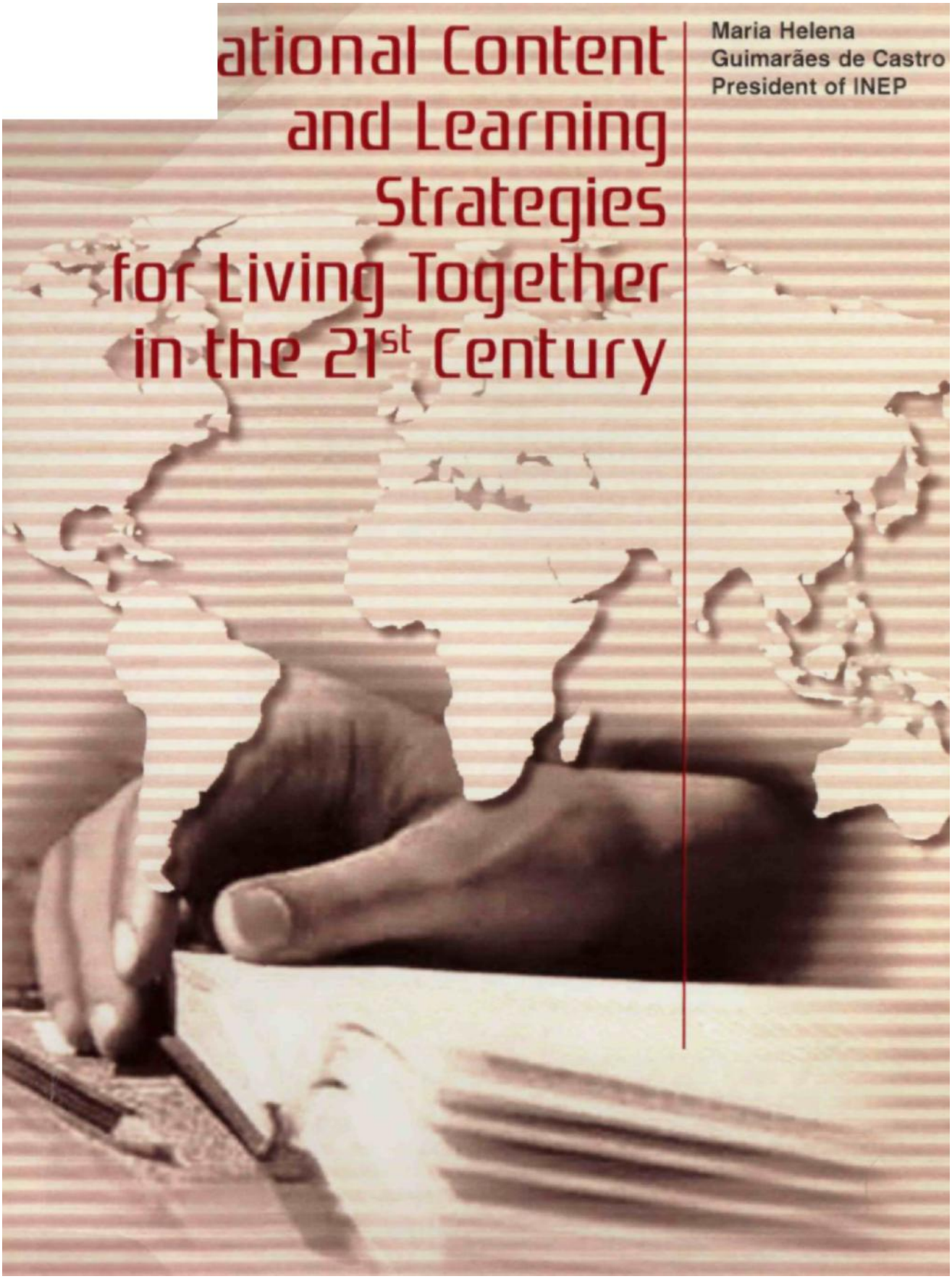

Forty-sixth Session of the International Conference on Education
Geneva - Switzerland, September 5th – 8th, 2001

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Content

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Part I

THE BRAZILIAN EDUCATION SYSTEM AT THE END OF THE 20™ CENTURY

1. Structure of the Brazilian Education System

The Brazilian Education System is mainly public, with the exception of higher and vocational education where private institutions have the majority of enrolments. The percentage of students enrolled in public institutions has grown continually in the last ten years in contrast to the private sector, where enrolments have fallen in all areas except higher education.

The growth in the scope of public education shows the effort the government has made in bringing low-income learners into the school system. In a developing country the presence of large numbers of pupils in the private sector tends to indicate the exclusion from school of children in lower-income groups who, in these countries, make up the majority of children and young people.

Table 1
Distribution of enrolment by level and type (1) of education and participation by the public sector - Brazil -1999

Levels/Types of Education	Total Enrolment	Public Sector	% Public Sector
Day-care centers	831,978	539,804	64.9
Pre-school	4,235,278	3,180,447	85.0
Literacy Classes	666,017	415,603	62.4
Primary Education 1st-4th grades	20,939,076	19,220,984	**91.8**
Primary Education 5th - 8th grades	15,120,666	13,561,411	89.7
Secondary Education	7,769,199	6,544,835	82.4
Special Education (2)	311,354	136,681	43.9
Adult Education	3,071,906	2,697,141	87.8
Vocational Education (3)	2,859,135	226,466	7.9
Higher Education	2,369,945	832,022	35.1
Total	58,174,554	47,355,394	**81.2**

Source: INEP/MEC.

(1) Enrolments in the sector of indigenous education were not separated, as they are included in the totals according to educational level. Distance education enrolments were not included.
(2) The number of pupils with special needs who receive specific care, either exclusively in special schools or in special classes in mainstream schools. The figures do not include special needs pupils integrated into mainstream education.
(3)Includes three levels: basic - the area of non-formal education of varying duration, aimed at providing the worker citizen with the knowledge that will allow him or her to become re-qualified, to become up-dated and qualified to carry out the functions required by the world of work; technical - directed towards young people and adults who are studying in or have finished secondary education but whose qualification presupposes completion of 11 years of basic education; technological - aimed at higher-level education, at both undergraduate and post-graduate levels.

From the point of view of its internal organisation, the present Brazilian education system is the result of significant modifications introduced in 1971, 1988 and 1996. Until the 1970s the system was composed of four basic levels and one higher level, which met the needs of different age groups, with education being compulsory only in the four years of primary school (Chart 1).

Chart 1
Structure of the Brazilian Education System before the 1971 Reform

Level	Duration	Age Range
Pre-school	3 years	4 - 6 years
Escola Primária (Primary)	4 years	7-10 years
Ginásio (Lower High School)	4 years	11-14 years
Ensino Médio (High School)	3 years	15-17 years
Higher Education	Variable	Over 17 years

Source: Law No. 4,024, 20th December, 1961 and Law No. 5,540, 28th November, 1968

After the 1970s the first major change occurred with Law No. 5692/71, when the primary school and ginásio were merged and called 1st level (1º grau) and high school was called 2nd level (2º grau). Compulsory education was thus extended to eight years although the new terminology adopted did not correspond to an integrated organisation of the eight grades. The first four were still taught by a single teacher who was not required to have studied at higher education degree level but only to have taken a teacher training secondary course. The four last grades of 1st level and 2nd level still had their curriculum divided into subjects taught by different teachers who were required, at least formally, to have a degree. The structure developed as follows:

Chart 2
Structure of the Brazilian Education System after the 1971 Reform

Level	Duration	Age Range
Pre-school	3 years	4 - 6 years
Compulsory 1st level (1º grau)	8 years	7-14 years
2nd level (2^9 grau)	3 years	15-17 years
Higher Education	Variable	Over 17 years

Source: Law No 5,540/68 and Law No. 5,692/71

With the declaration of the 1988 Constitution, the Brazilian education system went through a process of modification that led to the passing of the present National Education Guidelines and Framework Law - the LDB (Law No. 9,394/96). This law emphasises social relevant advances in different areas, levels and types of institution within the school system. In the area of early childhood education it seeks to break with the historical link between the nature of this level of schooling and the social services, by including day-care centers in the education systems. In the area of special education it challenges the segregationist tendency by emphasising teaching children with special needs within the conventional school system. Concerning indigenous education, it ensures the participation of these communities in defining what type of formal education they want, taking into account the need to offer specific, bilingual, individual and intercultural instruction. What also stands out is the creation of alternative forms of access to the different levels of education, the importance given to adult education and the need to compensate for the social debt

the state has acknowledged on the part of those who have not had access to or continuity in their schooling at the appropriate age.

The law has created mechanisms that are indispensable for improving the quality of teaching: it requires the curricula in primary and secondary education to have a common national basis; it increases the length and number of teaching days; it includes the evaluation of courses and institutions, which increases its scope beyond the evaluation of pupil performance and states that national procedures for assessment at primary, secondary and higher levels shall be guaranteed.

The LDB also provides for instruments and mechanisms that give value to the learning process such as: continuous and partial progression; the concepts of classification and re-classification that allow learners to go forward with their studies according to their level of achievement and evidence of learning; providing remedial classes in parallel to the school year for pupils who have unsatisfactory achievement results, and the chance to accelerate study for pupils who are behind in school. These mechanisms have expanded the possibilities for success at school and run counter to the 'culture of repetition' that is still predominant in Brazil.

The same legal structure also recognises the importance of distance education as a support for learning, for both pupils and teachers.

Law No. 9394/96 also changed the organisation of the school system, as well as its nomenclature (Chart 3). School from 0-3 years of age (day-care centers) and from 4-6 (pre-schools), are now called Early Childhood Education. The old 1° and 2° graus are now called primary education (Ensino Fundamental) and secondary education (Ensino Médio) respectively. The LDB reduces school education to two levels: basic education (comprising early childhood, primary and secondary education) and higher education. It allows vocational education to be integrated with these levels although it permits this area, in the form of skill training, to be introduced into secondary schools or in partnership with specialised technical colleges. Other types of education such as special education and indigenous education were also given their own identities within the new form of organisation.

Chart 3
Structure of the Brazilian Education System - Law 9,394/96

Levels and Subdivisions			Duration	Age Range
Basic Education	Early Childhood Education	Day-care	4 years	0 - 3 years
		Pre-school	3 years	4 - 6 years
	Primary Education (compulsory)		8 years	7-14 years
	Secondary Education		3 years	15-17 years
Higher Education	Courses by Subject Area		Variable	Over 17 years

Source: Law No. 9,394, 20th December, 1996

This structure has made it difficult to compare Brazilian performance indicators to those of other countries. The main differences are the long period of compulsory primary education - eight years - and starting it at the age of 7 instead of the more usual 6 years. In this report, in order to facilitate comparison of data as much as possible, primary education indicators have been sub-divided into the first four grades and the last four.[1]

It should also be noted that although primary education has become formally compulsory, the rate of finishing the eight grades was, to begin with, very low. Although it has increased substantially over time, it is difficult to compare this figure with that of countries that only require four, five or six years of universal schooling. On the other hand relative literacy figures, which include the over-six age group, do not reflect the real educational effort in Brazil because compulsory education only starts at 7.

Another peculiarity of the Brazilian education system is its extremely decentralised nature. In fact, in Brazil, day-care centers, pre-school education, compulsory primary education and secondary education have always been the responsibility of the states and municipalities. The role of central government at these different levels of teaching is normative - setting out the general directions of the system - re-distributive and supplementary - dealing with aid and subsidies to decrease regional and social differences.

With the 1988 Constitution the autonomy of the municipalities was increased to allow them to even organise their own teaching systems independent of state or federal supervision. Nevertheless, since responsibility for compulsory primary education was as much in the hands of the states as of the municipalities, it became very difficult to co-ordinate the system even to the point of there being no legal criteria for the sharing of responsibilities.

Constitutional Amendment No.14 (passed on September 12, 1996) defined responsibilities more clearly: provision of primary education continued to be divided but a new finance system was created to establish the contributions of each level of government to maintaining this level of schooling. In the same year, the National Education Guidelines and Framework Law handed over to the municipalities responsibility for early childhood education and primary education, and responsibility for secondary education to the states.

Although recent legislation has resolved the main difficulties arising from the extreme decentralisation of the education system, overall co-ordination is still very difficult. It is also difficult for the federal government to intervene directly, for it can only act together with other organs of the Executive and in a supplementary manner, to diminish regional inequalities.

[1] In this report, primary education corresponds to the 8 years of compulsory education (ensino fundamental), which, although understood as a single level, comprises two easily identifiable stages. Grades 1-4 can be identified as ISCED 1 (primary education, according to the UNESCO classification), as grades 5-8 are closer to ISCED 2 (lower secondary education). Whenever possible, data in this report will address grades 1-4 and 5-8 separately, but both stages will be dealt with as primary education.

The other characteristic of the school system associated with decentralisation is the great diversity in the regions. Development of the education system has not been uniform in all of Brazil's regions and problems of access, retention and educational success are much more serious in the poorer areas. General data therefore cover relevant differences. Thus, in this report, figures are given according to region. It is important to note also that regional inequality demands a very differentiated policy and makes the federal government's supplementary and re-distributive role an essential one in order to achieve the aims of Education for All.

2. Investments in Education

For various reasons it is impossible to calculate precisely the amount of investments in education in Brazil. Firstly because of its very decentralised nature - the country has 27 state systems and about 5,600 autonomous municipal systems. It has also been difficult to estimate overall education costs in the last ten years because until 1995 Brazil was experiencing a period of inflation so extreme that it almost nullified any calculation of real expenditure. This calculation is also made difficult by the nonexistence until now of a means of checking on private investments.

Brazil has, however, an excellent legal system to ensure a regular flow of public resources to education. The Federal Constitution has laid down that states and municipalities must devote to education at least 25% of their tax receipts, 60% of which must go to primary education. In the case of the federal government, the minimum percentage is 18% of receipts.

Primary education also relies on additional funds provided by corporations in the form of a compulsory social contribution called *Education Salary,* amounting to 2.5% of their payroll. One-third of these resources is allocated to a federal fund - the National Education Development Fund (FNDE) - and two-thirds constitute similar funds in the States where the contribution is collected

However, between 1997 and 1999 data indicate a fall in receipts from the social contribution of the Education-Salary tax. In the two-year period 1997-8 there was a decrease of 10.92%, while in 1998-9 the drop was 4.82%.

The tax reform the country is at present implementing will affect this system and reduce the resources destined for financing education, which has caused concern to the authorities in this area.

Table 2
Total Public Expenditure on education and percentage of GDP - Brazil - 1995-1997

Year	Total*	% of GDP
1995	37,629,798,304	4.6
1996	38,496,175,907	4.6
1997	44,443,132,240	5.1

Source: Nesur/Fecamp.
Values in 1997 R$.

Studies carried out in 1996 based on data from 1995, the year in which the Brazilian currency became stable, indicate that the total amount of public resources guaranteed by law was the equivalent of 4.6% of that year's GDP and would be sufficient to maintain an education system of much better quality and scope than that which in fact existed in Brazil. More recent estimates talk of resources closer to 6% of GDP[2].

Table 3
Public expenditure on education by programme and government level and by origin of funds as a percentage of GDP* - Brazil -1995

Title of Programme	Government Level			Govt/Overall
	Federal	State	Municipal	Aggregated
Administration	0.23	0.27	0.26	0.76
Education from 0 - 6 years	**0.01**	0.01	0.20	0.22
Primary Education	0.37	0.90	0.18	1.46
Secondary Education	0.07	0.17	0.12	0.37
Higher Education	0.62	0.32	0.02	0.96
Physical Education and Sports	0.01	0.01	0.12	0.14
Student Assistance	0.00	0.03	0.15	0.18
Special Education	0.00	0.01	0.04	0.05
Social Assistance and Welfare in Education	0.22	0.12	0.14	0.49
Overall Total	1.54	1.85	1.23	4.62

Source: Nesur/Fecamp. Value of GDP adjusted lo the 1997 R$ was equivalent to R$ 814,073,365,500

Table 4
Public expenditure on education by programmes and government level and as an expression of expenditure as a percentage of GDP* - Brazil -1995

Title of Programme	Government Level			Govt/Overall
	Federal	State	Municipal	Aggregated
Administration	0.05	0.39	0.31	0.76
Education from 0 to 6 years	0.01	0.01	0.20	0.22
Primary Education	0.13	1.11	0.22	1.46
Secondary Education	0.07	0.17	0.12	0.37
Higher Education	0.61	0.33	0.02	0.96
Physical Education and Sports	0.00	0.02	0.13	**0.14**
Student Assistance	0.00	0.03	0.15	0.18
Special Education	0.00	0.01	0.04	0.05
Social Assistance and Welfare in	0.22	0.12	0.14	0.49
Overall Total	1.10	2.19	1.33	4.62

Source: Nesur/Fecamp.
•Value of GDP adjusted to the 1997 R$ was equivalent to R$ 814,073,365,500

In spite of this, lack of funds remains a constant complaint at all stages and levels of the educational system. According to the research carried out in 1995, lack of

[2] Brazil's GDP today is about US$450 billion, due to the considerable devaluation of the currency that took place in January, 1999. In 1995 it was estimated to be about US$700 billion.

resources is primarily due to the innadequate distribution of the money available, together with its misapplication.

Until the 1996 Constitutional Amendment, which created the Fund for Primary Education Development and for Enhancing the Value of the Teaching Profession (FUNDEF), which became operational in 1998 - the division of tax receipts between states and municipalities bore no relation to the division of educational responsibilities between state and municipal education systems. This greatly aggravated regional inequalities. In the same way, before the LDB, also in 1996, there was not even a definition of what constituted educational costs - an omission that gave rise to all kinds of diversion of funds towards other ends.

The creation of FUNDEF helped to reduce the problems of sharing and applying resources. With the new definition of what could be included as educational costs, the money re-distributed by the Fund is deposited in a specific account, which greatly increases public control of the use of resources. Note also that the constitutional amendment that created FUNDEF also requires boards to be set up composed of representatives of the community, within the different levels of government, with the aim of controlling expenditure.

FUNDEF, an initiative of immense importance and a pattern for the new focus of public educational policies, is directed exclusively at compulsory primary education. In each state, the resources of this Fund are made up from 15% of taxes and redistributed between state and municipal governments. In 1999, FUNDEF funds amounted to about R$ 15.2 billion.

Based on the amount of the Fund in each state the pupil/year amount is calculated and the resources are passed to state and municipal education networks according to the number of enrolments registered. Purely local taxes are not included in FUNDEF but states and municipalities are obliged to spend 25% of their receipts on education, from which, 60% must go to primary education.

The amendment that created FUNDEF, as well as ensuring equality in the distribution of resources in each state, also aims at reducing regional inequalities based on a minimum value per pupil/year. In those states where pupil/year expenditure does not reach the set minimum the federal government guarantees to make up the resources (Table 5). In 1998 and 1999 the minimum value was R$ 315.00, increasing to R$ 350.00 in 2000.

Table 5
Financial Effects of FUNDEF in municipalities with a pupil/year value of less than R$ 350.00 - Brazil - 2000

Amount by pupil/year R$1.00 (*)	Municipalities		Pupils/1999		Amount by Pupil/year (RS)		Additional Gross Receipts (RS millions)	Variation	
	Nº	%	Nº	%	Without FUNDEF (A)	With FUNDEF (B)		Amount per Pupil (B-A)	% (B/A)
Up to 100	477	8.7	3,253,351	20.1	78.1	341.1	862.1	263.0	336.7
>100<= 150	680	12.4	2,793,728	17.2	123.7	350.2	644.8	226.5	183.1
>150<=200	445	8.1	2,147,289	13.3	173.0	376.9	618.5	203.9	117.9
>200<=250	330	6.0	1,212.123	7.5	223.4	401.8	243.2	178.4	79.9
>250<=350	632	**11.5**	2,059,099	12.7	301.6	442.7	324.6	**141.1**	46.8
Subtotal	2.564	46.6	11,465,590	70.8	180.0	382.5	2,693.3	202.6	112.6
Other municipalities	2,942	53.4	4,731,037	29.2					
Total	5,506	100.0	16,196.627	100.0					

Sources. Resources: MEC/Seade; Municipalities: IBGE; Pupils: School Census

* The minimum national amount per pupil/year in 1988 was R$ 315.00.
The participation of the municipalities in the total amount of resources in FUNDEF increased from 38% in 1998 to 45% in 2000.
In the first year of implementation 49% of Brazilian municipalities increased their receipts, while the proportion in 2000 was 62%.

The re-distributive impact of FUNDEF was strongly felt in municipalities in the North and Northeast, where most of the deficiencies in the educational area are concentrated. It was found also to be a significant contribution of resources in favour of a group of municipalities in eight metropolitan regions in the country, excluding state capitals, in which services offered by the respective state systems were more significant. This reform, therefore, brought substantial benefits to the poorest areas of the country which have the largest numbers of children not in school and which demonstrate the worst quality indicators in primary education.

FUNDEF's positive effect is also seen in the increase in primary enrolments. The criterion for re-distribution of the Fund's resources - based on numbers of pupils enrolled in state and municipal systems - has considerably encouraged the effort to enrol all children of school age. From 1997 to 1999 there was a 7.6% growth in the total of public primary school enrolments. The greatest expansion in enrolment in this period occurred in the Northeast (15.8%) and North (11.1%), precisely those areas showing the greatest deficits in the coverage of compulsory education.

FUNDEF has also stimulated the growing process of bringing primary education under the control of the municipalities. Between 1997 and 1999 enrolment in the municipal systems jumped by 30.2% while in the state systems they fell by 8%. The greatest rates of enrolment growth were registered in the North (51.7%) and the Northeast (29.4%).

2.1 FUNDEF and Teacher Salaries

The impact of FUNDEF has also resulted in better qualified and better paid teachers as a direct result of the obligation imposed on the states and municipalities to direct at least 60% of resources for teacher pay. Teachers' pay at the primary level in state and municipal public education systems increased on average by 29.6% between

December, 1997 and June, 2000, while inflation in the same period was 12%, according to the National Index of Consumer Prices (INPC).

The concession to allow resources to be used in training lay teachers[3] has also proved fruitful. The first year of FUNDEF's operations saw a reduction of 25% in unqualified teachers.

Since FUNDEF was started, state and municipal education systems have gained a means of developing a policy of progressively raising levels of teacher pay. The new system of financing primary education has established that within ten years, states and municipalities must direct at least 15% of their earnings, including those coming from inter-governmental transfers, for the maintenance and development of this level of education, "with the aim of ensuring universal coverage of its services and remuneration worthy of the teaching profession". Constitutional Amendment 14 also stipulated that a proportion not less than 60% of the resources distributed by FUNDEF should be directed to paying the salaries of primary teachers who were working at this level.

In 1997, data from a special survey, the Teacher Census, made possible for the first time a more objective and wide-ranging evaluation of salary levels. The data also provided a comparison between public and private sector salaries - the latter always having been considered to hold back higher pay levels.

A significant finding of the Teacher Census is that the salary differential between teachers in the state public sector and the private sector is far less than it was thought (Table 6). This conclusion is surprising since the research was done in the months of November and December, 1997, not taking into account, therefore, the impact of FUNDEF which came into effect only after the 1st January, 1998. In the light of this, it is to be hoped that the result of this policy, characterised by a significant pay rise in the public sector, will decrease even more the gap between pay levels in this sector and those in the private area.

Table 6
Primary education: average salary levels of teachers* from 1st - 4th grades (in R$) by administrative authority - Brazil and Regions - 1997

Regions	Total	Federal	State	Municipal j	Private
Brazil	425.60	1,257.32	517.84	303.51	587.74
North	360.77	1,308.34	462.67	226.53	499.54
Northeast	231.17	771.23	343.58	163.88	287.45
Southeast	613.97	1,380.75	618.34	537.27	774.61
South	460.12	962.80	512.94	397.98	678.57
Mid-West	447.55	1,135.90	550.97	300.85	541.11

Source: MEC/INEP/SEEC.

*The same teacher can work in more than one level or type of education and in more than one institution. The average salary in reais is given at the 1997 exchange rate when US$1.00 was, on average, equivalent to R$1.20.

Lay teachers are those who do not have the minimum qualification required to be teachers.

In fact, based on the salaries paid in August, 1998, which already reflected the impact of the reform, it was clear that, as a national average, taking into account all levels of qualification and work loads, public sector teacher pay had increased 12.9% relative to the previous year. Average salary gains were greatest for teachers in the municipal public systems (18.4%). But it was the Northeast region that saw the greatest variation in pay in the municipal systems: 49.2%.

However, in spite of this improvement, salary variations by administrative authority are still very marked within the public sector, a phenomenon that is aggravated by the profound differences between regions. In fact, the teachers who earn the highest salaries are those in the federal public network, who represent less than 1% of all primary teachers. This difference is explained by the fact that the majority of federal primary education operates in conjunction with universities, in experimental schools associated with education departments.

The lowest salaries were found in the municipal systems that, with state schools in between, were very close to average private sector salaries. From the regional point of view, the same inequality that exists in relation to the level of teacher qualification is found in teacher pay.

In national terms, the 1997 Teacher Census gives an average salary of R$ 425.60 for teachers of 1st - 4th grade in primary education. The teachers are equally divided between those earning R$400.00 or less and those earning more than this (48.6%). Analysing these figures by administrative authority, we find the following results: federal public sector teachers receive, on average, R$ 1,257.32 per month; those in the private sector R$ 587.74; those in the state public sector, R$ 517.84 and those in the municipal public system, R$ 303.51.

The variation in the salary scales of teachers of 5th - 8th grades in primary education, by administrative authority, follows a very similar pattern, although the average salary is very much higher (R$ 605.41) and shows less difference between average salaries in the state system (R$ 599.71) and those in the municipalities (R$502.06) according to the data in Table 7. Again the highest average salary is paid in the small network of the federal public sector (R$ 1,384.88) which is well above the average private sector salary (R$ 765.17).

Table 7

Primary education: average salary levels of teachers* fro >m 5th - grades (in R$) by administrative authority - Brazil and Regions - 19S 8th

Regions	Total	Federal	State	Municipal	Private
Brazil	605.41	1,384.88	599.71	502.06	765.62
North	586.37	1,294.16	592.12	412.72	740.95
Northeast	372.41	1,148.47	409.51	277.73	394.04
Southeast	738.54	1,486.88	694.50	718.08	949.86
South	594.44	1,532.53	589.05	492.90	772.86
Mid-West	584.20	1,133.11	583.72	421.64	735.17

Source: MEC/INEP/SEEC

"The same teacher can work in more than one level or type of education and in more than one institution.

The fact that average teacher salaries in the 5th - 8th grades are higher than those of teachers in the lower grades has traditionally been associated with the requirement for a higher level of qualification among teachers at those grades.

An analysis of the salary levels by region shows marked differences at the primary level, both in the case of 1st - 4th grade teachers and those in the 5th - 8th grades. The greatest differences between the two areas occurs in the Northeast, where average salaries are well below the national average, a situation that is repeated at all administrative levels. This picture contrasts with the salary profile of teachers in the regions of the Southeast and South, where average salaries are higher than the national average in the various education systems. The situation in the Mid-West is similar to that of the Northern region, being a little lower than the national average.

It should be noted however that the Mid-West averages are skewed upwards by the inclusion of the Federal District, which pays the highest salaries in Brazil, far above the state average, because its system is greatly subsidised by the Union.

This picture clearly suggests that salaries paid to teachers by the educational systems are related to the levels of economic development and the standard of living in the various regions of Brazil. The disparities found, on the other hand, are also directly associated to the level of teacher qualification, which also varies from region to region. In order to correct these inequalities we have to guarantee greater equality in the distribution of resources, which is now being done by means of FUNDEF.

In order to analyse the effects of FUNDEF and to identify the main changes and advances that have benefited primary education in the period since its implementation (January, 1998) until June, 2000, the Ministry of Education (MEC) commissioned a new study[4] which found a growth in the number of teachers, together with a marked improvement in teachers' pay. The results of the research contain the most recent data available on the subject but only deal with state and municipal education systems. Thus it does not allow to make comparisons with the private sector.

The numbers of primary teachers with diplomas obtained in secondary school teaching courses and degrees obtained in higher education courses (with a licenciatura graduate teaching qualification) were about 49% and 35% respectively, showing almost the same rates of growth (11.5%) in relation to the figures of December, 1997.

The figures show that the levels of teacher qualification in the Mid-West, North and Northeast regions are gradually tending to approach those of teachers in the South and Southeast, which in the past have always been higher. In June, 2000, of all Brazilian teachers with secondary teaching diplomas, approximately 42% were in the Northeast. Among teachers with tertiary degrees, 57% were in the Southeast region. In 1997 these proportions were, respectively 39% in the Northeast and 60% in the Southeast.

[4] A research was carried out in 300 primary school networks, comprising all the state systems and those of the Federal District, the municipal networks of the 26 state capitals and 273 networks in various municipalities chosen from all states and making up a representative sample of all the primary school networks in the country.

This tendency towards levelling out differentials is even more evident in the case of graduate teachers with teaching qualifications. In 1997 the Mid-West, North and Northeast regions together had 23% of teachers with this level of qualification compared to 76% in the South and Southeast regions. In 2000 these proportions were 28% and 72% respectively.

One of FUNDEF's priorities, eliminating the category of unqualified lay teachers, with the consequent improvement in quality of the teaching body, is being rapidly achieved all over the country. If we compare the 1997 figures with those of 2000, it will be seen that the number of lay teachers whose own education went only to primary level, decreased from 6.3% to 3.1% in the whole of the Brazilian public system. The North and Northeast, which had the largest numbers of lay teachers, showed a decrease of about 51% and 45% respectively.

Using part of the 60% from FUNDEF (linked to teacher pay) in order to train lay teachers is a sign of the efforts being made in this area. The effort in the Southeast region is notable, where education systems with teacher training activities increased from 4% to 91%, and also in the Northeast, which went from 20% to 82% between 1997 and 2000.

The effects of FUNDEF may also be seen in the growth of average teaching salaries in the public schools, a marked increase in the order of 29.5% from December, 1997 to June, 2000. Teachers with secondary school diplomas and those with tertiary degrees (who together make up almost 84% of all teachers in primary education) received pay rises of about 23% and 27% respectively. In cash terms, average national salaries for teachers with teaching diplomas went from R$ 587 (December, 1997) to R$ 710 (June, 2000). Average salaries of graduate teachers with higher education went from R$ 1,005 to R$ 1,278 in the same period for the same number of hours worked.

The greatest per cent rise in teacher pay occurred in the Northeast, with an average increase of 59.7%; about 54% for secondary diploma teachers and 36% for those with tertiary degrees. Pay for diploma teachers rose from an average of R$ 344 (for a 40-hour week) to R$ 528 in December, 1997 and June, 2000 respectively. The average earnings for graduates with higher education degrees rose from R$ 560 to R$ 763.

Although one of FUNDEF's priorities was to eradicate the category of non-qualified teachers, it is notable that the greatest beneficiaries of the process of raising pay levels were those whose education ended at primary level. This is because the salaries of these teachers, before FUNDEF, was frequently lower than the required minimum. In these cases, the rise in pay was about 50-60%, with the Northeast and North showing dramatic rises of 95% and 63% respectively.

2.2 Expenditure by Government Level

Investment of public resources in education has been shared between the three levels of government. Since the setting up of FUNDEF, some alterations can already be seen in the context of educational finance.

Unfortunately, the relationship between enrolment percentages (Table 1) and expenditure (Tables 8 and 9) is unfavourable to primary education. Considering that the cost of early childhood education is usually higher than that of primary education (not only in Brazil, but in almost all other countries), the imbalance in Brazil's case is basically due to the cost of higher education.

Table 8
Public expenditure on education by programmes, government level and origin of resources (in %) - Brazil -1996

Programmes	Government Level			Govt./Overall
	Federal	State	Municipal	Aggregated
Administration	20.06	17.71	3.65	14.71
Education from 0 - 6 years	0.15	0.36	15.89	4.48
Primary Education	22.63	40.43	66.76	41.52
Secondary Education	4.15	8.52	0.63	4.92
Higher Education	32.67	20.75	0.01	19.18
Physical Education and Sports	0.42	1.05	3.52	1.50
Student Assistance	**0.18**	1.63	1.09	1.00
Special Education	0.29	0.56	**1.19**	0.64
Social Assistance and Welfare in Education	19.45	8.98	7.26 100.00	12.05
Overall Total	100.00	100.00		100.00

Source: Nesur/Fecamp.

Table 9
Public expenditure on education by programmes and government level of spending (in %) - Brazil -1996

Programmes	Government Level			Govt./Overall
	Federal	State	Municipal	Aggregated
Administration	16.36	18.69	7.10	14.71
Education from 0 to 6 years	**0.18**	0.30	14.67	4.48
Primary Education	8.81	44.54	65.17	41.52
Secondary Education	5.52	7.38	0.58	4.92
Higher Education	42.32	18.61	0.02	19.18
Physical Education and Sports	0.31	0.96	3.37	1.50
Student Assistance	0.24	1.24	1.28	1.00
Special Education	0.37	0.50	1.10	0.64
Social Assistance and Welfare in Education	25.89	7.78	6.69	12.05
Overall Total	100.00	100.00	100.00	100.00

Source: Nesur/Fecamp.

In the case of higher education the government does not plan to reduce expenditure since the proportion of students in the 20-24 age range studying at this level is very low, both in comparison with levels in developed countries and with those in Latin America. In 1998 the overall rate of enrolments reached 15.8% with about 50% of those enrolled in higher education being over the age of 20. The net rate, therefore, is only 7.6%. Official policy has been aimed at increasing enrolments while

maintaining the same level of cost, principally through creating night courses for young working people.

2.3 External Resources

In terms of technical assistance and financing studies and social projects international co-operation has also been very important in Brazil. UNICEF and UNDP have been especially active, as has the UNESCO representation. Foreign loans, both from the Inter-American Development Bank (IADB) and the World Bank (IBRD), have been important sources of finance for projects whose central aim is improving the quality of teaching and increasing equality in the education system.

The main initiative in receipt of foreign resources was the Northeast Project, working in the poorest areas of Brazil and involving the application of about US$ 740 million between national funds and those coming from the World Bank. The Northeast Project was followed by the Fundescola programme, which was also aimed at primary education in the poorest areas in the country, with domestic and international (World Bank) investments totalling US$ 1.3 billion. No less important are the Vocational Expansion Training Programme (Proep) and the Young School project, aimed at supporting the effort to broaden and reform secondary education. These programmes and projects are described in detail in the section referring to the strategies that have been adopted.

3. Priorities and Action Plan for Basic Education

The recently approved National Education Plan is the main reference point for Education for All in the next ten years. Resulting from the joint effort of the Ministry of Education and state and municipal education secretariats, and from discussions with organisations in the civil society, the plan sets down concrete aims to be achieved in the next ten years and is a move towards meeting the main aims agreed in the international meetings and conferences in which Brazil takes part.

Based on the recently approved National Education Plan, the states, the Federal District and the municipalities must develop corresponding 10-year plans, supported by the respective long-term financial planning programmes.

In brief, the Plan has as its objectives:

- an overall rise in the population's level of education ;
- improving quality of education at all levels;
- reducing social and regional inequalities with respect to access to and staying in basic education ;
- democratising the management of public education.

The new National Education Plan also establishes a clear order in educational priorities:

- a guarantee of eight years of compulsory primary education for all children aged from 7-14, ensuring their admission to and remaining in this level of education until the end of it;
- a guarantee of primary education to all those who did not have access to it at the appropriate age or who did not finish it;
- broadening the scope of the other levels of education - early childhood education, secondary education and higher education;
- acknowledging the value of teachers;
- development of information and evaluation systems at all levels and types of education, as vital instruments for the management of the education system and for the improvement of teaching.

During the next ten years the main quantitative aims for basic education are:

- Aims for Early Childhood Education:
  - Increasing the availability of early childhood education in order to reach 50% of children from 0-3 years and 80% of 4- and 5-year-olds by the end of the decade;
  - Ensuring that, in two years, all municipalities have defined their policies for early childhood education based on national guidelines, on complementary state norms and on the suggestions of national curriculum recommendations.

- Aims for Primary Education:
  - Providing universal access to all who need primary education within five years, guaranteeing access and permanence to all children in school;
  - Increasing to nine years the length of compulsory primary education, starting at 6 years of age, once attendance of the 7-14 age group is universal;
  - Correcting the school flow, reducing repetition and drop-out rates by 50% in five years;
  - Ensuring that, within three years, the weekly timetable of daytime courses should comprise at least 20 hours per week of actual school work;
  - Gradually increasing the school day with a view to expanding the numbers of full-time schools that cover a period of at least seven hours per day.

- Aims for Secondary Education
  - Ensuring that within two years secondary schools will be able to accept all primary school concluders and to include pupils over the normal age limits and those who have special educational needs;
  - Offering sufficient numbers of openings that will, within five years, satisfy 50% and in ten years, 100% of the demand for secondary education;
  - Reducing by 5% per year, repetition and drop-out in order to reduce to four years the average time needed to finish this level of schooling;
  - Installing and reinforcing the new conception of the curriculum set out by the National Education Council, within a period of five years.

- Aims for Adult Education

- Teaching 10 million young people and adults to read and write within five years and, by the end of the decade, eradicating illiteracy;
- Ensuring that within five years, adult education equivalent to the four first grades of primary education will be available to 50% of the population of 15 and over who have not reached this level of schooling;
- Ensuring that by the end of the decade courses equivalent to the four final grades of primary education will be available to all 15-year-olds and above who have finished the four first grades;
- Doubling within five years and quadrupling in ten years, the availability of secondary level courses for young people and adults.

- Aims for Distance Education and Educational Technologies
  - Establishing within a year norms for accrediting institutions that offer distance education courses;
  - Increasing the availability of distance training programmes for adult education;
  - Encouraging, through the collaboration of the Union and the states and in partnership with higher education institutions, the production of distance education programmes at secondary level;
  - Establishing availability of higher education distance courses, especially in the area of primary level teacher training;
  - Training at least 500,000 teachers to make full use of the School TV and other educational programme networks, within five years;
  - Installing, within ten years, 2,000 education technology bases to function as advisory centres for schools and educational administration bodies, with regard to access to computerised programmes and to educational videos.

- Aims for Technological Education and Vocational Training
  - Establishing within two years an integrated information system in partnership with government agencies and private institutions, to direct educational policy and satisfy the needs for initial and in-service training of the workforce;
  - Establishing partnerships between federal, state and municipal systems and the private sector to broaden and stimulate the supply of vocational education;
  - Mobilising, articulating and increasing the capacity built into the network of vocational education institutions in order to triple every five years the supply of basic courses, linked to basic education, aimed at those who are excluded from the labour market, as well as the supply of technical courses to pupils enrolled in or leaving secondary education and the supply of in-service vocational education.

- Aims for Special Education
  - Ensuring the provision for special educational needs in the teaching programmes of all schools, defining the resources available and offering in-service training to teachers in the area;
  - Including in teacher training' curricula, at secondary and tertiary levels, content and subjects specific to preparing teachers to care for pupils with special needs.

- Aims for Indigenous Education
  - Achieving the general adoption of guidelines regarding the national policy of indigenous school education and the curricular parameters established by the National Council for Education and by the Ministry of Education;
  - Making universal within ten years the offer to indigenous communities of education programmes equivalent to the first four grades of primary education, which respect indigenous ways of life, views of the world and specific socio-linguistic conditions;
  - Gradually increasing the offer of 5th - 8th grade education to the indigenous population, both in indigenous schools and in nearby schools where pupils are integrated in regular classes, while offering the additional help necessary for their adaptation in order to guarantee access to full primary education.

- Aims for Teaching Staff
  - Putting into immediate practice plans concerning the careers and payment of teaching staff at all levels of primary education;
  - Admitting to the profession only teachers who have the minimum qualifications demanded by law: secondary teaching diploma for early childhood education and the first four grades of primary education and a tertiary degree with full teaching qualification for teachers of 5th grade and higher;
  - Ensuring that within five years all early childhood teachers and those in the first four grades of primary, have at least a secondary teaching diploma;
  - Guaranteeing that within ten years, 70% of early childhood and primary teachers will have specialised training at tertiary degree level, with full teaching qualifications;
  - Establishing within a year an emergency secondary teacher training programme, especially in the areas of sciences and mathematics;
  - Guaranteeing that within ten years all secondary teachers will have specialised training at tertiary degree level in the subjects they teach;
  - Broadening in-service training programmes to give all teachers the chance to obtain the minimum required qualification;
  - Developing distance education programmes that can also be used as modular semi-presential courses;
  - Defining guidelines and establishing national patterns to direct the accreditation processes of training institutions, as well as certification, development of professional competencies and evaluation of initial and continuing training of teachers.

- Aims for Defining Minimum National Standards of Infrastructure
  - Developing minimum national infrastructure standards for schools in all levels, compatible with regional conditions, and ensuring that within five years all schools will meet these standards.

- Aims for Democracy in School Management
  - Increasing the numbers of school governing boards in which teachers and parents take part;

- Ensuring school autonomy both with regard to the teaching programme and in terms of managing the minimum amount of resources needed for daily upkeep of the school.

- Aims for Finance and Management
  - Installing means of inspection and control to ensure compliance with the clause in the Constitution that applies to education 18% of federal government tax receipts and 25% of receipts in states and municipalities, including those coming from inter-governmental transfers;
  - Encouraging the creation of Municipal Education Councils;
  - Consolidating and improving the National System for Evaluation of Basic Education (SAEB) and the School Census as tools to support more efficient school management;
  - Gradually computerising state and municipal secretariats of education and connecting them to the Integrated Education Information System (SIEd) and to the administrative offices of schools with over 100 pupils;
  - Increasing the offer of training courses in School Administration in public higher education institutions.

4. Strategies for Achieving the Aims Proposed for Basic Education

The National Education Plan exists as a fundamental strategic instrument for arriving at the objectives of Education for All and to achieving the educational aims and priorities that have been laid down for the immediate future, since it has the strength of the law behind it and can oblige the various organs of public authority, with the cooperation of social organisations, to comply with the agreed aims.

The strengthening and improvement of the national system for evaluating different levels of education, under the responsibility of the National Institute for Educational Studies and Research (INEP), is also an important strategic mechanism since it produces data about what is actually happening in education and the problems that exist, and helps to indicate future directions in educational policies, as well as showing where federal resources and the Union's additional activities should be aimed. Each year INEP carries out the School Census and the Higher Education Census. It also carries out occasional statistical studies such as the Vocational Education Census, the Indigenous Education Census, the Special Education Census, the Early Childhood Census, etc. In addition, INEP carries out evaluations of the quality of basic and higher education, such as:

- the National System for Evaluation of Basic Education (SAEB), with performance tests carried out every two years on a sample of pupils in the 4th and 8th grades of primary school and the 3rd grade of secondary;
- the National Secondary Education Examination (ENEM), which consists of a voluntary examination to measure the competencies and abilities developed by the end of basic education;
- the National Course Examination ('Provão' or 'big exam'), an exit examination given to students finishing the main undergraduate courses in the country.

Another strategy that has been adopted is in relation to the re-structuring of the finance system through the institution of FUNDEF.

Led by these three basic strategies, federal government actions are carried by means of permanent programmes, specific projects and national campaigns. In addition, in recent years the government has been developing a wide-ranging curricular reform.

In 1995 the Ministry of Education began a broad reform of the curriculum at all levels of education. After wide consultation and debates that involved directors of the education system, teachers in general and specialists in educational issues, the curriculum of the four first grades of primary school was modified, along with the institution of a large-scale training programme for teachers in order to apply it. The second stage involved creating new parameters for a complete reform of the whole system of teacher training. Currently, the primary sector, early childhood, secondary and adult education all have national curricular guidelines laid down by resolutions of the National Education Council. In the case of indigenous education only the basic guidelines for a curriculum were established.

With regard to national campaigns, the Brazilian government has promoted three large-scale campaigns in the last ten years. The first, in 1993 and 1994, mobilised teachers, schools, Secretariats of Education and non-governmental organisations connected to teaching. Its main motive was to communicate the objectives of Education for All and to involve the various agents in formulating the 1994 Ten-Year Education Plan.

In 1995, soon after the change of government, a campaign of wide-ranging social mobilisation was launched. Called "Wake up Brazil - It's Time for School", this campaign made use of all the means of communication and reached the whole country, becoming a permanent programme for mobilising society.

Two years later, a third campaign called "All Children in School" mobilised the press, state and municipal secretariats of education and the widest possible variety of civil organisations with a view to sending to school all children from 7-14 years of age. This campaign produced a substantial rise in school attendance.

The federal government generates permanent programmes to support the objectives of Education for All, covering not only those set up before the 1990s, which have been consolidated and broadened in the last ten years, but also the new ones that have been introduced since 1995.

Among these consolidated and broadened federal programmes are:

- **The National School Meal Programme**

This programme uses federal resources to fund the offer of at least one meal per day to all children enrolled in primary school and pre-school, in public and philanthropic institutions. It is possibly the most wide-ranging and effective food aid programme for the poor the country has ever seen. The programme often receives complementary help from states and municipalities.

At the moment the programme is under the responsibility of the municipalities, which has helped to reduce costs and waste in dealing with local dietary characteristics and needs. About 36 million meals are distributed daily to all public primary schools in the 5,506 Brazilian municipalities.

- **The Programme for the construction, reform and equipping of school buildings**

This programme provides, by means of agreements, resources for these ends to the states and the municipalities.

- **The National Textbook Programme**

This programme distributes free of charge textbooks to all children enrolled in public primary schools. As well as being expanded in recent years, the programme has been substantially amended. Once restricted to providing books to pupils in the first stage of primary education, the programme has been expanded to all eight grades at this level. The books on offer have also been previously evaluated by committees of teachers, which has contributed significantly to an improvement in the quality of the material.

In 2000 almost 110 million textbooks were distributed for use in the 2001 school year, benefiting about 32 million pupils in 170,000 Brazilian public schools. The latest innovation in the programme is the distribution of Portuguese Language dictionaries to pupils in the first grades of primary school, in addition to teaching material already distributed by MEC.

Delivery of 100% of textbooks to schools all over the country was guaranteed by means of a partnership with the Post Office so that all books arrived before the start of the school year.

Among recent programmes started since 1995, as well as those that benefit from external resources (Fundescola, Young School Project and the Vocational Education Expansion Programme - PROEP) we can highlight the following:

- **Money in School Programme**

This consists of the distribution of federal resources directly to school establishments to meet autonomously and without bureaucracy, daily needs and emergencies. Resources differ according to school size but they are greater in the poorer regions. In addition, schools serving children with special needs are given extra funding.

The programme also contributes dramatically towards democratising the system by means of community participation in school management since it demands the setting up of a parent-teacher association or a school board, to administer the funds received.

As a result of this initiative the number of public schools that have some kind of organisation involving the community, the so-called Executive Units, has leaped from about 11,000 in 1995 to 74,000 in 2000.

In the year 2000 the programme benefited, to the tune of R$295 million, about 32 million pupils in 140,000 public schools and non-governmental organisations.

- **School TV Programme**

Aimed at improving the quality of teaching, this programme gave a kit consisting of a television set, videocassette player and parabolic antenna, to all primary schools with more than 100 pupils. More than 56,000 schools now have this equipment. With it

the schools are able to receive directly, or to record for later use, educational programmes whose basic aims are: to enrich the learning process and to promote the continuing training of teachers and administrators as well as to improve remedial activities and 'catch-up' programmes and other activities that each school's teaching plan has established.

Based on evaluations that have been carried out, the School TV Programme has been augmented by means of printed material - a magazine, television programme guide, support notes to television productions, and a Study Series. In the period 1998-9 more than 14 million of these printed items were sent out. From October, 1999, School TV began also to broadcast secondary level programmes, guiding teachers, administrators and pupils with regard to the parameters and guidelines of the reform of this level of teaching.

- **The National Information Technology Programme in Education (PROINFO)**

The basic aims of this programme are to democratise access to information technology, to educate learners in the exercise of citizenship in the modern world and to make it possible for educators and learners in public schools to use modern information and communication technologies. The training of 'multiplier' teachers[5] was carried out by means of specialisation courses and in universities. Now the training of teachers is done in the Educational Technology Centres (Núcleos de Tecnologia Educacional - NTE). These centres are decentralised institutions that offer technical-pedagogical support and work as real centres of excellence in the training of teachers, technical support and the maintenance of hardware and software in schools.

The heart of PROINFO is the Educational Technology Experimentation Centre (CETE), based in MEC and aimed at facilitating and making viable the harmonious development of all of PROINFO's activities. The numbers involved in the programme up to the year 2000, are impressive: 244 NTEs set up over the whole of Brazil; 31,870 computers, 25,030 of them destined for 2,477 schools and 6,840 for the NTEs; 1,419 'multiplier' teachers; 21,977 teachers trained; 2.5 million pupils have benefited from the programme.

- **In-Service Teacher Training Programme (Proformação)**

This programme consists of a secondary school teacher training course aimed at teachers who will work in the first four grades of primary school, pre-school and literacy classes. It lasts for two years and uses distance learning techniques. The target audience are public school teachers in the North, Northeast and Mid-West regions who have completed primary education but are not trained teachers. A pilot project is training 1,500 teachers. By 2002 95,000 teachers will have been trained in 18 states of the three regions.

The School TV, PROINFO and Proformação programmes are the responsibility of the Distance Education Secretariat (SEED), set up in May, 1966. The creation of this secretariat shows the clear intention of the present government to invest in this area, which is of fundamental importance for widening access to higher levels of schooling and for generating more democratic access and equality in Brazilian education.

[5] Teachers trained to train other teachers.

Further details on these programmes may be found in the section on Distance Education.

- **The Northeast Project**

This project was carried out between 1993 and 1999 and involved spending about US$740 million of national and foreign resources (from World Bank loans) aimed at improving primary education in the region. It sprang from the recognition of the extremely inadequate state of education in the region as shown in educational indicators well below the Brazilian average. It consisted in developing state and municipal reform programmes, expanding, building and equipping schools, training teachers, technicians and directors of education and the provision, by the Ministry of Education, of textbooks and additional reading material. The project also included resources to carry out studies to analyse the complexity of the relationship between economic, social, cultural and educational characteristics of the region. These studies will contribute to the development of effective strategies to overcome educational shortcomings.

- **The Fundescola Programme (School Empowerment Fund)**

Fundescola began to be set up in 1998 based on the research started in the Northeast Project. It is also partly financed by World Bank funds and was started in the North and Mid-West regions of Brazil, which showed a considerable educational deficit. Since 2000, it has included the Northeast, giving a continuity to federal government investments estimated at US$ 1.3 billion, in the least privileged areas of the country.

- **Young School Project**

The Young School Project is one of the Ministry of Education's strategies to encourage the implementation of secondary education reform in the whole country. By means of this project, the Ministry will give technical and financial support to the states in their policies for improving services and increasing the offer of openings in secondary education. At the same time it will stimulate planning processes in the states and the Federal District secretariats of education. The Young School Project is based on two sub-programmes: one aimed at financing policies to improve services and increase openings in secondary education in the states and the Federal District, by means of investment projects that will receive technical and financial support; and another sub-programme of national policies and programmes whose aim is to guarantee to the Secretariat for Secondary and Technological Education (SEMTEC), the branch of the Ministry of Education responsible for secondary and vocational education in the country, the appropriate conditions to encourage and support implementation of reform in the education systems of the constituent parts of the Federation.

Resources for the first stage of the programme come from a federal loan from the Inter-American Development Bank (IDB), to the value of US$250 million, balanced by a Brazilian share of US$250 million made up of US$25 million from the National Treasury and US$225 million from the states.

- **Vocational Education Expansion Programme (PROEP)**

The Vocational Education Expansion Programme - PROEP is an initiative of the Ministry of Education which aims to develop educational activities integrated with

work, science and technology, so as to set up a new model of vocational education with a wider offer of openings, diversification of courses offered and improved definition of courses.

It began in December, 1997 when the Brazilian Government signed a financial agreement with the IADB to the value of US$250 million, to which an equivalent Brazilian contribution was made, 50% from MEC and 50% from the Workers' Support Fund (FAT), making a total of US$500 million.

PROEP aims to bring about the reform of vocational education especially with regard to the innovations introduced by the LDB, which embrace not only the improvement of technical-pedagogical areas, but also the expansion of the system by means of partnerships with the states and with community institutions.

Within PROEP's spheres of activity is the re-shaping of vocational education, which involves matters such as updating curricula and making them more relevant, offering courses based on labour market studies and providing resources for the construction, expansion and improvement of infrastructure, acquisition of equipment and material and training of staff.

Between 1998 and 2000, 173 projects for the construction or expansion of schools were approved in the whole country, which benefit 230,000 students taking technical vocational courses and 745,000 on basic vocational courses, with a budget of R$ 331 million. MEC has invested in the development of vocational education plans and labour market studies, in an effort to combine the supply of courses with the demand of the production sector of the economy. The forecast is that, by 2002, another 88 agreements and about R$200 million in investments will have been made, making possible the offer of 200,000 new openings.

OTHER PROGRAMMES

- **Accelerated Learning Programme**

This programme was established in 1998 with the aim of helping the public state and municipal education systems serving the first stage of primary school to overcome problems related to the teaching and learning process.

The programme helps educational systems to give priority to overcoming repetition and drop-out by setting up 'catch-up' classes for pupils who are more than two years too old for the expected age for their grade. To implement the programme, MEC has made agreements to put at the disposition of states and municipalities the resources for reproducing special teaching materials and for training teachers.

In 1997 112 institutions joined the programme and in 1998 this number rose to 719, at a cost of R$ 29,673,083.

MEC also made available, in partnership with the non-governmental organisation Ayrton Senna Insitute (IAS), the sum of more than R$ 1,500,000 to train teachers and produce teaching materials for the 'catch-up' classes being set up with the

supervision and support of the IAS all over Brazil, under the umbrella of the "Speed up Brazil" project (Acelera, Brasil).

The financial control of the Accelerated Learning Programme is being supervised both by MEC and by external evaluations carried out by specialised researchers and institutions.

A recent study carried out by the Carlos Chagas Foundation, aimed at measuring the effect on pupils and staff who took part in the "Speed up, Brazil" project in 1997, in each municipality involved with the Accelerated Learning programme, shows that 'the programme certainly revealed a potentially effective way for pupils above the expected age for their grade to re-start their schooling on a regular basis.... A considerable number of pupils, about 45%, could be taken into the 5th grade of regular schooling'.

Data from the 1999 School Census show that the programme assisted 1,200,000 pupils. More than half (50.5%) of pupils who took the 'catch-up' classes are from the Northeast, followed by the Southeast (35.2%), South (7.6%), North (3.5%) and Mid-West (3.2%).

- **The School Grant Programme**

Since economic factors contribute decisively to keeping poor children away from school, this programme gives a grant to poor families who make sure that their children and teenagers attend school. This initiative has not only had a great impact in the area of education but also in the fight against poverty and social exclusion.

The National Minimum Income-School Grant Programme was sanctioned in December, 1997 and extended in February, 2001. In 2001 the programme includes a number of changes brought about as a result of the critical survey of the Minimum Income Programme of the last two years and inspired by the expected budgetary increase on the part of the Union. This programme is part of the Alvorada Project, an intersectoral initiative designed to reduce regional inequalities by improving living conditions in the poorest areas of the country[6].

The funds for the Ministry of Education's new National Minimum Income Programme - School Grant have been increased. The Ministry will receive R$ 1.7 billion in 2001, from the Fight Against Poverty Fund which was set up last year on the initiative of the National Congress and supported by the Federal Government.

With the increase in resources, all Brazilian municipalities will be able to take part in the programme from the start of 2001. As of now it is possible to include the more

The basic principles of the Alvorada Project are: intensive management; focusing of projects; prioritising municipalities; commitment to results. These were defined taking into account the determination to improve effectively and in the shortest possible time the living conditions of the poorest members of the population. In the first stage of the project the targets were the 14 states with levels of human development (HDI) lower than the national average. The second stage includes the 57 micro-regions and 389 municipalities with low HDI but located in states with levels above the average. The Fight Against Poverty Fund, created by a constitutional amendment proposed by the National Congress, will give substantial assistance towards the costs of the project. The Alvorada Project involves programmes in various areas of society. In the sphere of education it includes the Literacy Solidarity Programme, The Support for Adult Education Programme, as well as the School Grant Progamme.

than 3,000 municipalities in 14 states in Brazil that have the lowest Human Development Index - HDI and which are targets of the Alvorada Project.

The School Grant's area of activity was defined on the basis of Brazil having today about ten million families living on an income of up to half a minimum salary per month *per capita.* All together, these families contain about eleven million children aged from 6-15 years.

The increased funds will allow the programme to reach almost all these children in 2001: 10.7 million children and teenagers from 6-15 in 5.9 million families are expected to be reached.

5. Partnerships with Society

As well as the projects described above, the Ministry of Education is developing others, including offering teaching materials and funds for training literacy instructors in private companies and non-governmental organisations.

As Unesco clearly recognises, good quality education for all is not an objective that can be reached purely by means of Federal Government actions. It depends on the co-operation and performance of the different areas of public authority and civil society at large and especially on non-governmental organisations and the business community.

- **Literacy Solidarity**

The best example of this in Brazil is the initiative called Literacy Solidarity, an innovative project within the Solidarity Community programme that is directly linked to the Presidency of the Republic. By means of campaigns like "Adopt a Pupil" the project sets up partnerships with the community, recruits university students and obtain resources with private enterprise to fight illiteracy among 12- to 18-year-olds. As illiteracy is a problem that is concentrated in the poorest municipalities in Brazil, the programme is mainly aimed at these areas.

Literacy Solidarity, was started in January, 1997 and by December, 1999 was serving 866 municipalities, most of them in the North and Northeast regions. Classes were provided for 800,000 learners, involving 167 higher education institutions and about 65 companies, not to mention the 15,000 instructors. By 2002 the aim is to reach more than a million learners. Evaluation of the results, which is built into the initiative, has shown it to be especially effective because the project forms part of a wider sphere of social action developed by Solidarity Community.

- **Non-Governmental Organisations**

As in other countries, NGOs in Brazil such as trades unions, lay and religious organisations, philanthropic and community institutions, have become extremely important in education. Also, private companies have recently begun to support important initiatives with a view to increasing the educational qualifications of their employees and to become more involved in partnerships with public sector schools.

The activities of the NGOs tend to be concentrated on areas in which their contribution is of inestimable value since they have greater flexibility to act jointly with specific groups requiring unconventional learning projects. Areas that stand out in this respect are: adult education, services to children and teenagers on the margins of society and who are subject to violence, helping those with special needs, and the education of indigenous peoples and other minorities who are victims of discrimination.

The main limitation on the work of NGOs in Brazil is their great dependence on the flow of public resources, at federal, state and municipal levels. To compensate for this problem, the contribution of international organisations, including churches, is increasing.

6. Main Results of the Last Ten Years

6.1 Education of the Population as a Whole

6.1.1 Illiteracy

Eliminating illiteracy is the basis for ensuring the minimum conditions for social equality and access to full citizenship. However, illiteracy is not an isolated problem that can be attacked and resolved independently of acting upon the conditions that produce it. Poverty, isolation, exclusion from the labour market, lack of schools and written materials are all inseparable from illiteracy.

Isolated mass literacy campaigns that do not take into account the social conditions that create the problem have had little success. Indeed it is impossible to eliminate illiteracy if society does not at least come close to attending the need of providing universal access to primary education, in other words, if it does not stem the flow of new illiterates.

Although the Brazilian government continues to be severely criticised for still not having managed to eradicate illiteracy, the problem has been continuously decreasing during recent years.

As will be seen in Table 10, the number of illiterates has fallen by almost half in 30 years (from about 40% in 1960 to a little over 20% in 1991), along with increased access to primary education, the building of roads, the decreased isolation of rural settlements and the increased rate of urbanisation.
The pace has certainly been slow: on average 0.63% per year. Nevertheless, in the 1990s illiteracy has been on the retreat at a far greater rate, falling by an annual average of 1.08%. In 1996, as well as a reduction to 14.7% of the proportion of illiterates aged 15 or more, a decrease in the overall number of illiterates was recorded, and in 1999 the proportion had decreased to 13.3%.

It must be recognised however, that if the increased decline in the number of illiterates is a positive factor, the figure of 13.3% is still very high, representing in absolute terms more than 15 million people.

A policy of more rapid reduction of illiteracy needs to take into account the fact that the phenomenon does not affect the population uniformly. Positive results depend on a differentiated policy focused on specific situations and problems.

Table 10
Number of Illiterates in the age group 15 and over - Brazil -1920-1999

Year	Overall Number	%
1920	11,401,715	64.9
1940	13,269,381	56.0
1950	15,272,632	50.5
1960	15,964,852	39.6
1970	18,146,977	33.6
1980	18,651,762	25.4
1991	19,233,239	20.1
1996	15,560,260	14.7
1999	15,073,055	13.3

Source: IBGE Demographic Censuses: 1920,1940, 1950, 1960, 1970, 1980, 1991. PNAD (IBGE) 1996 and 1999 and Population Count, 1996.

One important difference exists in respect of the age groups of illiterates. As it is **a** phenomenon associated with lack of access to primary education, illiteracy is concentrated today in the over-40s, exactly that group that has not benefited from the expansion of the education system (Table 11)

Table 11
Illiteracy rate in the 15-and-over age range by age groups - Brazil -1970-1999

Year	Illiteracy Rate (%)						
	15 or over	15-19	20-24	25-29	30-39	40-49	50 or over
1970	33.6	24.3	26.5	29.9	32.9	38.5	48.4
1980	25.4	16.5	15.6	18.0	24.0	30.8	43.9
1991	20.1	12.1	12.2	12.7	15.3	23.8	38.3
1995	15.6	6.8	7.5	9.3	11.0	16.7	32.7
1996	**14.7**	6.0	7.1	8.1	10.2	15.5	31.5
1999	13.3	4.0	5.9	7.2	9.6	13.0	29.6

Source: IBGE - PNAD 1996 and 1999.

Note: Figures do not include the rural populations of Rondônia, Acre, Amazonas, Roraima, Pará and Amapá in 1995. 1996 and 1999.

The data referring to illiteracy in Brazil show a high concentration in the over-40 age group and especially in the over-50s. Although there has been a considerable reduction in illiteracy rates in all age groups, illiteracy rates increase relative to the rise in age of the population.

Thus the percentage of illiterates among 15- to 19-year-olds fell from 16.5% in 1980 to only 4% in 1999. The drop was significant as well in the 20-24 age group, falling from 15.6% to 5.9% in the same period. The illiteracy rate is also below two figures in the 25-29 age group (7.2%) and the 30-39 group (9.6%). Groups aged over 40, on the other hand, show much higher rates, especially among the over-50s, where a 29.6% illiteracy rate is found.

The illiteracy rate is lowest among those living in urban areas. In 1991, the year of the last nation-wide available census results, 14.25% of the urban population aged 15 or over was illiterate, and this proportion rose to 40.5% in rural areas. The situation is most serious among the older generation: 63% of the rural population above 50 years-old cannot read or write. In urban areas, illiteracy among 50-year-olds and over, although high, is about half the rural level, at 30.8%. Even among the younger age groups rural illiteracy goes into two figures: among 15- to 19-year-olds living in the country the proportion is 27.3% and among those between 20 and 24, 28.8%. In the towns these rates were, respectively, 6.8% and 7.3%.

Although the percentage of illiterates is lower among younger people living in urban areas, there is a clear need to concentrate efforts on eradicating illiteracy in the 15-29 age group. This is a guideline of public policy whose implementation cannot be postponed if we are to include in society these young people who are excluded from autonomous participation in democratic life and the labour market. It is possible to foresee that, by the end of the next ten years, illiteracy among the young will have been overcome as a result of the educational policies that are now being put into practice.

As illiteracy is concentrated in population groups who are difficult to reach by means of conventional education programmes, because of socio-economic and cultural circumstances, specific and effective programmes must be adopted in respect of this target group.

6.1.1.1 Regional Inequalities

As well as taking on an increasingly age-related aspect, Brazil's illiteracy profile has a strong regional bias that reflects and reproduces the inter-regional socio-economic inequalities in the country. Although the tendency for illiteracy to fall is found all over Brazil, it is not progressing at the same rate in the nation's different geographic regions.

When the situation in the North is contrasted with illiteracy figures in the South and Southeast, it is seen that in the 1990s there was an increase in the inequalities found in the 1980s.

Actually, it must be emphasised that this phenomenon is associated with progress towards universal primary education. The latter process has produced a temporary situation in which different regions of the country are out of step with each other. Because of this, the fall in illiteracy has been slower in areas where increase in access to primary education is still under way.

In 1980 the Northeast had an illiteracy rate of 45.5%, a percentage 2.8 times that of the Southern region, which had 16.3% (see Table 12). In 1999 the illiteracy rate in the Northeast had dropped to 26.6% while that of the South had fallen to 7.8%, increasing the difference 3.4 times. It should be emphasised that all regions showed a fall in illiteracy between 1980 and 1999: the Southeast went from 16.8% to 7.8%, the Mid-West from 25.3% to 10.8% and the North from 29.3% to 12.3%. Note that in the Northern region the 1999 illiteracy rate does not include the rural population, with the exception of the state of Tocantins.

Table 12
Illiteracy rate in the 15-and-over age range by age groups - Brazil and regions-1999

Brazil and Regions	15 or over	15-19	20-24	25-29	30-39	40-49	50 or over
Brazil	13.3	**4.0**	**5.9**	**7.2**	**9.6**	13.0	29.6
North	12.3	**3.4**	**4.6**	**6.9**	**9.6**	14.8	32.5
Northeast	26.6	**9.4**	**13.9**	17.4	22.8	30.1	51.9
Southeast	**7.8**	1.3	**2.3**	**2.8**	**4.4**	**6.6**	19.8
South	**7.8**	1.3	**2.4**	**2.9**	**4.5**	**7.3**	19.7
Mid-West	10.8	**1.5**	**3.0**	**4.5**	**7.1**	11.4	31.0

Source: IBGE - PNAD 1999.

Note: These figures do not include the rural populatiations of Rondônia, Acre, Amazonas, Roraima, Pará and Amapá.

Regional inequality is not restricted to illiteracy; it occurs in all levels and types of education and therefore demands a specific policy.

In the 1990s the Northeast Project and the Fundescola programmes used internal and external resources in an attempt to decrease these inequalities by means of actions focused on the least developed regions. In the same way FUNDEF, by fixing a minimum pupil/year value and by supplementing funds where this amount was not reached, also formed part of a strategy to reduce this inequality.

The effort to overcome regional disparities and eradicate illiteracy is also being carried forward by means of adult education programmes such as Literacy Solidarity and other similar initiatives developed by state and municipal governments, in partnership with companies, religious and non-governmental organisations, as will be found in the corresponding section of this report.

6.1.1.2 Gender Equity, Racial Disparities

If the regional question is very worrying, the data do indicate a situation of greater equality, at least in relation to the gender variable. The most dramatic change is with regard to the speed with which illiteracy has declined among younger women. Indeed, when gender-related figures are taken into account, it is found that the proportion of illiterates is now significantly lower among women than among men in all age groups up to 39 years (Table 13).

Table 13
Illiteracy rate of the 15-and-over age range by sex - Brazil -1980-1999

Sex/Age Range	Illiteracy Rate			
	1980	**1991**	1996*	**1999***
Total	25.4	20.1	14.7	13.3
Men	23.6	19.8	14.5	13.3
Women	27.1	20.3	14.8	13.3
15-19	16.5	12.1	6.0	4.0
Men	18.8	15.1	7.9	5.3
Women	14.2	9.0	4.0	**2.7**
20-24	15.6	12.2	7.1	5.9
Men	15.9	13.9	8.7	**7.4**
Women	15.4	10.5	5.5	4.3
25-29	18.0	12.7	8.1	**7.2**
Men	17.1	14.0	10.0	**7.4**
Women	18.8	11.5	6.4	4.3
30-39	24.0	15.3	10.2	9.6
Men	23.6	19.8	14.5	11.0
Women	26.1	15.3	9.4	8.2
40-49	30.8	23.8	15.5	13.0
Men	26.9	22.3	15.1	13.0
Women	34.6	25.2	15.9	13.0
50 and over	43.9	38.3	31.5	29.6
Men	33.1	34.5	28.1	26.9
Women	49.4	41.6	34.4	31.9

Source: IBGE. Demographic Censuses 1980.1991/PNAD 1996 and 1999.

Note: " These figures do not include the rural populations of Rondônia, Acre, Amazonas, Roraima, Pará and Amapá.

An analysis of the racial variable shows that, although the difference between the different ethnic groups has markedly decreased, Brazil still has a long way to go with regard to the black and mulatto[7] population groups, who present much higher illiteracy rates than the white population.

In 1991, year of the most recent nation-wide data, only 11.9% of the white population was illiterate, compared to 27.8% of mulattos and 31.5% of blacks (see Table 14). There is, however a positive tendency: the noticeable drop in illiteracy among blacks and mulattos between 1991 and 1997, at a faster rate than the decrease found among whites.

Among the population of Asian origin, for the most part of Japanese, Chinese and Korean descent, illiteracy was already quite low, just 5.4% in 1991.

Data on the indigenous peoples deserve a separate comment, because of the particular history of this section of the population, their reduced numbers in the overall population and because of the specific area known since the 1988 Constitution as 'Indigenous Education'. They consist of groups that are difficult to reach on account of their dispersal over large areas of the country. For this reason, they are the focus of a bilingual education project with new curricular aims and an attempt at forging better co-operation between federal, state and municipal governments.

[7] In the terminology of population censuses, mulatto includes people with mixed race (white and indian, white and black, black and indian).

The strengthening of black and indigenous movements in Brazil and the firm intention of the government to enter into dialogue with them, encourages a hope for important changes in public policies directed towards these sectors of the population.

Table 14
Illiteracy rate of the 15-year-old and over population by racial origin - Brazil - 1991

Race	Illiteracy Rate - -1991
Total	19.4
White	11.9
Black	31.5
Mulatto	**27.8**
Asian	**5.4**
Indigenous	50.8
No data	18.7

Source: IBGE Demographic Census, 1991

6.1.2 Evolution in the average schooling

The progress Brazil has made in the area of education can best be measured by analysing a period that exceeds 10 years, the average number of years the population spends in school.

Although progress was slow until 1980, it has speeded up since then. In the last twenty years there has also been a notable increase in female education which, between 1990 and 1995, overtook the male rate - a tendency that has already been seen in the literacy figures. In 1999 the average time spent in school by females was 6.1 years and for males was 5.8 (Table 15).

Table 15
Average number of years of schooling of those aged 10 and over by sex and location - Brazil -1992-1999

Year	Total			Urban			Rural		
	Overall	Male	**Female**	Overall	**Male**	Female	Overall	Male	Female
1992	5.0	5.0	5.1	5.7	5.7	5.7	2.7	2.6	2.8
1999	5.9	5.8	6.1	6.5	6.4	6.6	3.5	3.3	3.7

Source: IBGE/PNAD.

Note: Figures do not include the rural population of the Northern Region (except for Tocantins).

Among the socio-economic and cultural factors that explain this surprising phenomenon, the most important is unquestionably the entry of women into the labour market. The increasing professionalization of the female population has been a great stimulus for Brazilian women to try to improve their level of education if only as a means of compensating for gender-related discrimination in pay scales which still exists, as recent studies have shown.

On the other hand, and paradoxically, what must also be contributing to improved rates of education among women is the early and perverse entry into the labour market of children of poor families, with a consequent rise in drop-out. In fact, the strong link between poverty and child labour cruelly emphasises this gender

differentiation in detriment to male children and young adults, who are more and more often called upon to help to maintain the family by performing laborious tasks incompatible with school life. Although child labour also exists among girls of low-income families, they usually take care of daily activities at home that do not necessarily prevent them from attending school.

Alongside these positive and negative points, data show two other extremely worrying aspects: one of these is the regional disparity found not only in illiteracy but also in the average number of years of schooling.

Table 16 shows that figures vary from an average of 6.6 years at school in the Southeast to 4.4 years in the Northeast.

Although no region achieves an average of the compulsory eight years of school, it must be taken into account that the deficits are heavily concentrated in the groups over 30 years of age. Data already shown on the spread of illiteracy rates by age groups of 15 years and over are conclusive in this respect. Thus the progress achieved so far does not show clearly the effort that has been put in and which has had its best results among the younger age groups.

Table 16
Average number of years in school according to sex, colour and region - Brazil -1960 -1996

	1960	1970	1980	1990	1995	1996
Sex						
Male	**2.4**	**2.6**	3.9	**5.1**	**5.4**	**5.7**
Female	**1.9**	**2.2**	3.5	**4.9**	**5.7**	**6.0**
Colour						
White	**2.7**	-	4.5	**5.9**	-	-
Black	**0.9**	-	2.1	**3.3**	-	-
Mulatto	**1.1**	-	2.4	**3.6**	-	-
Asian	**2.9**	-	6.4	**8.6**	-	-
Regions						
North/Mid-West	**2.7**	-	4.0	-	**5.6**	**5.9**
Mid-West	-	-	-	-	**5.7**	**6.0**
North	-	-	-	-	**5.5**	**5.8**
Northeast	**1.1**	**1.3**	**2.2**	**3.3**	**4.1**	**4.4**
Southeast	**2.7**	**3.2**	**4.4**	**5.7**	**6.2**	**6.6**
South	**2.4**	**2.7**	**3.9**	**5.1**	**6.0**	**6.3**

Source: Report on Human Development in Brazil, 1996; UNDP/IPEA, 1996.

Note: Data from 1995 and 1996 calculated by INEP based on PNAD from 1995 and 1996.
Figures do not include the rural population of the Northern Region (except Tocantins).

The other worrying aspect is the ethnic difference, which has also been shown already in the analysis of illiteracy, where the rate is higher among Afro-Brazilians. The same occurs in relation to levels of schooling of blacks and mulattos, which are lower than those of whites.

The data indicate a difference of two and a half years in the levels of schooling between whites and black although there is no legal or formal obstacle that keeps these children out of public schools. By contrast, the population of Asian origin, has more years of school than whites and this difference is tending to increase. In the same way, illiteracy rates are extremely low among Brazilians of Asian origin. The explanation for this seems to lie in a particular cultural characteristic of these ethnic groups: the great value they attribute to education.

When we analyse the data relevant to the length of time the population spends in school according to age groups, the situation of younger people still gives cause for concern. Between the ages of 10-14, the proportion of children with no education or with less than one year of school, is 10.11%, twice that among young people from 15-19: 5.36%. In this latter age group however, 21.65% of young people have not finished the equivalent of the four first grades of primary education and 66.55% have not finished the eight years of compulsory primary education. Rates for the 20-24 year-old group are better, confirming the phenomenon of late schooling and the delay caused by repetition: 20.12% did not complete the four first grades and 55.90% have not had the eight years of primary education (Table 17).

Table 17
Distribution of those aged 10 years and over by years of schooling completed, according to age group - Brazil -1996

Age Groups	"Groups by years of schooling (%							
	No schooling and less than one year	1-3 years	4 years	5-7 years	8 years	8-11 years	12 years and more	No Data
Total	13.61	21.55	16.84	18.32	8.25	14.68	5.88	0.87
10 to 14	10.11	42.99	18.66	26.37	0.85	0.07	0.00	0.96
years	5.36	16.29	12.75	32.15	12.46	19.20	0.76	1.03
15to19								
20 to 24	5.75	14.37	13.05	22.73	10.80	25.70	6.81	0.79
25 to 29	7.03	14.86	14.80	19.87	11.18	23.10	8.44	0.71
30 to 39	9.10	16.61	17.59	15.39	10.29	19.87	10.08	1.08
40 to 49	15.46	20.61	19.85	11.20	8.72	13.51	10.04	0.60
50 to 59	25.53	24.17	20.59	8.00	6.32	8.34	6.53	0.51
60 or over	40.99	22.01	17.81	5.84	4.35	5.10	3.41	0.47
Age unknown	22.81	20.08	11.14	11.36	5.27	8.50	3.02	17.83

Source: IBGE 1996 Population Count.

6.1.3 Expansion of the Basic Education System as a Whole

The increase in the number of years of schooling reflects the continual growth in the number of enrolments at almost all levels of education (Table 18). Only higher education stood still in the 1980s and there was a slight fall in early childhood education between 1997 and 1999, which will be looked at later.

Table 18
Rate of increase in enrolments and growth rate by level of education**
Brazil-1970-1999

Year	Indicator of increase in enrolments by level of education (1970=100%)				
	Total	Early Childhood Education*	Primary	Secondary	Higher
1970	100.0	100.0	100.0	100.0	100.0
1980	157.9	357.0	142.2	251.9	324.0
1985	177.6	663.6	155.8	269.5	321.9
1991	223.5	1412.8	183.7	336.9	368.2
1997	271.1	1529.1	215.3	572.4	457.9
1998	279.6	1314.7	225.2	622.8	500.2
1999	287.8	1354.8	226.9	694.3	557.6
Growth rate 70/99	187.8	1254.8	126.9	594.3	457.6

Source: MEC/INEP/SEEC.

•Includes children enrolled in pre-school education and in literacy classes
"Figures do not include enrolments in special education or youth and adult education
Enrolments in 1970: Total = 17,814,000; Early childhood education = 374,000; Primary Education ■ 5.895,000; Secondary Education = 1,119,000; Higher Education = 425,000.

Total enrolments in Brazil reach 51 million students, and, if we include special education pupils and adult education students, it rises to 54.6 million - about one third of the Brazilian population.

Between 1991 and 1997 there was a veritable explosion of growth in pre-school and primary education. More recently the great expansion in enrolments has been in secondary education and is a result of the progress in primary school enrolment.

Provision by age group also shows very positive results which may be seen when we examine the figures referring to net rates of schooling (Table 19).

Table 19
Rates of school attendance by age range - Brazil -1970-1999

Year	4 - 6	7 - 14	15-17
1970	9.3	67.1	51.4
1975	12.2	75.0	
1980	19.1	81.1	56.3
1985	28.6	81.8	59.2
1991	41.2	91.6	69.2
1998	46.5	95.8	81.1
1999	51.2	97.0	84.5

Source: MEC/INEP/SEEC.

These figures do not directly reflect the level of schooling of the Brazilian population. This is because, as a result of high rates of repetition, a large segment of pupils in the 15-17 age group have not arrived at secondary education but are enrolled in primary school. As a result, although provision for this group has already reached 84.5%, only about 33.4% of learners, still a very low number, attend secondary school.

The fact that there have been undeniable advances in Brazilian education does not preclude a critical analysis of the challenges the country still has to overcome if it is to offer a satisfactory level of schooling to all children and young people up the age of 17.

The challenges are concentrated in the questions of quality, efficiency and equity. The best evidence of this combination of problems is the high rate of repetition, which is common in both primary and secondary education. Only dealing with these deficiencies and correcting the school flow will allow the high rates of educational provision to the 7-17 group, which are already seen, to be translated into a substantial increase in the average schooling of the population, bringing it up to levels comparable to those of developed countries. Today this is the main challenge for Brazilian educational policy.

6.1.3.1 The Demographic Question

It is still necessary to note that since the 1990s, Brazil is in a better position to reach this aim because of the fall in the birth rate by almost half in a little less than 20 years. Until the 1980s Brazil was under pressure from two sides: on the one hand, the need to bring into the school system those who had been traditionally excluded from it; on the other, the need to absorb the large numbers of children who were the result of a very high birth rate. This pressure created an unavoidable concentration of resources in creating the offer of school openings. Until the end of the 1960s the birth rate was over 6% per year. This began to drop during the following decade: in 1980 it was already about 4% and in 1990 it did not reach 3% (Table 20).

Table 20
Average annual population growth - Brazil and Regions -1950-2010

Brazil and Regions	Average annual population growth (%)					
	1950-60	1960-70	1970-80	1980-91	1991-96	2005-10*
Brazil	3.04	2.89	2.48	1.93	1.38	1.24
North	3.40	3.47	4.86	3.85	2.44	2.23
Northeast	2.12	2.40	2.16	1.83	1.06	1.08
Southeast	**3.11**	2.67	2.64	1.77	1.35	1.16
South	**4.14**	3.45	1.44	1.38	1.24	0.99
Mid-West	5.45	5.60	4.09	3.01	2.22	1.75

Source: IBGE. Demographic Census from 1940 to 1991 e 1996 Count Population.
'Estimate

The demographic transition process at present under way will cause great changes to the age structure of the Brazilian population. The start of the millennium comes at the same time as a deep curve in the demographic progression of the country as a result of which a slow fall in the relative participation of population groups of school age may be seen, a trend that was foreshadowed in the 1990s.

6.2 Early Childhood Education

6.2.1 Day-care centers

Until recently in Brazil, day-care centers provided for children in the age group 0-3 years were the responsibility of various sectors of society, among them the Social Services. It was only with the National Education Guidelines and Framework Law in 1996 that integration into the national education system, which had already been included as a requirement in the 1988 Constitution, began to be put into practice in a more systematic manner. For this reason the school censuses, the main source of data on the Brazilian education system, began to include day-care centers in their studies only in 1998.

It should be noted that the initial data are very patchy because they were only recently included in the school census and because day-care centers and the institutions that provide classes for children under four years of age, are still being registered and accredited by the secretariats of education. After the LDB, which set December, 1999 as the final date for the inclusion of day-care centers in the education system, states and municipalities have organised themselves to draw up resolutions to provide the legal instruments for opening and accrediting institutions according to nationally accepted criteria. These criteria have been discussed by organs representing national education: the National Council of Secretaries of Education (CONSED), the National Union of Municipal Directors of Education (UNDIME), the Forum of State Councils of Education and the National Union of Municipal Councils of Education, which produced, together with MEC, the document entitled "Assistance for opening and accrediting Early Childhood Education institutions" (MEC, 1998). This document has served as a guide in the various states and municipalities which have used it to stimulate the inclusion of those institutions in the School Census.

In accordance with the LDB, early childhood education should be provided in daycare centers or equivalent institutions, for children from 0 to 3 years of age. Although it is not compulsory, it is a public right whose expansion of provision is the responsibility of the municipality with the help of federal and state authorities.

The data of Table 21, from the 1999 School Census, show a total of 831,978 children enrolled in these establishments. Although they are not complete, the data show that provision for this age group is very low, considering that there are more than 13 million children in the age group entitled to day-care services (0-3 years). It is clear also that day-care centers serve a large number of children who should be attending pre-school. This is due to the fact that the institution of the public policy for early childhood education is still being developed, with the education systems in a transitional phase both in relation to incorporating day-care centers into the education system and in regard to defining the identity of this stage of basic education.

Table 21
Enrolment in day-care centers and distribution
by age range - Brazil and Regions -1999

Brasil **and** Regions	Enrolment by Age Range		
	Total	% Younger than 4	% 4 or older
Brazil	831,978	58.9	41.1
North	44,837	51.8	48.2
Northeast	224,766	48.7	51.3
Southeast	370,712	64.4	35.6
South	140,548	63.0	37.0
Mid-West	51,115	58.7	41.3

Source: MEC/INEP/SEEC

Notes: the School Census does not include institutions offering only day-care centers.
Ages were obtained according to the year of birth given to the School Census, that is, they were taken as the pupil's age in 1999.

It should also be explained that the integration of early childhood education in the education networks, in terms of accreditation, supervision and teacher training, does not preclude other authorities from participating in the formulation of public social policies at municipal and state levels, especially considering the age of the pupils, who require health care and supplementary nutrition, evidence of the role of social services, health care, family and society all taking responsibility for the education of children.

Only about 10% of the group served by day-care centers live in rural areas, which is explained by the dispersal of the population and the consequent need to travel to get to schools - a factor aggravated by the difficulty of providing transportation for such small children - and also because families make their own arrangements for child care, a practice that is more frequent in these areas (Table 22).

Table 22
Enrolment in day-care centers and distribution
by location - Brazil and Regions -1999

Brazil and Regions	Enrolment by location		
	Total	% **Urban**	**% Rural**
Brazil	831,978	90.3	9.7
North	44,837	84.1	15.9
Northeast	224,766	72.7	27.3
Southeast	370,712	97.9	**2.1**
South	140,548	96.8	3.2
Mid-West	51,115	98.9	1.1

Source: MEC/INEP/SEEC.

Note: the School Census does not include institutions offering only day-care centers.

In all the institutions included in the census enrolments were strongly concentrated in municipality-run institutions: 10,031 in all, serving 522,703 children (see Table 23). In second place were private institutions, 8,297 in all, with 292,174 children.

Table 23
Enrolment in day-care centers and distribution by type of administrative authority - Brazil and Regions -1999

Brazil and Regions	Enrolment by type of controlling authority				
	Total	Federal %	State%	Municipal[0]/©	Private%
Brazil	831,978	0.1	2.0	62.8	35.1
North	44,837	0.3	6.5	72.3	20.9
Northeast	224,766	0	3.8	73.1	23.1
Southeast	370,712	0.1	0.2	54.5	45.2
South	140,548	0.1	1.0	68.8	30.1
Mid-West	51,115	0.1	5.5	53.1	41.3

Source: MEC/ INEP/SEEC.

Note: the School Census does not include institutions offering only day-care centers.

Data from the national bureau for statistics (IBGE) for 1996 indicate that of the 13 million children aged 0 to 3 years, little more than 900,000 were going to day-care centers. This is more than were registered in the 1999 School Census. These data indicate the need for a large-scale national campaign to register and accredit all institutions, whether maintained by the public or private sectors. They also indicate the need for a more detailed register of day-care centers involving a reliable collection of data concerning rates of provision in Brazil. Only with this information will it be possible, in the short and longer terms, to observe and evaluate the type of provision that is being offered and to make a real analysis of costs and demand for investments. And it was with this aim in mind that, in the second half of 2000, the first Census of Early Childhood Education was carried out by MEC.

Even taking into account the much higher number of children revealed by the IBGE figures, there is no doubt that the availability of day-care centers is still very low. On the other hand transferring day-care centers to the area of education without absorbing the costs that were invested by the public social services system, could make the required expansion of provision more difficult.

6.2.2 Pre-school

In a country of such profound economic and cultural inequalities, pre-school, attending to the needs of 4-6 year-old children, is **a** valuable instrument in the provision of satisfactory basic education. It is especially important for children whose parents have had no education and who are therefore not ¡familiar with a literate and numerate way of life, which includes a large section of those who have entered primary education in recent years. A great effort has been made in this area, as is shown by the figures in Table 24, on enrolment growth in Brazil and its regions.

In the case of pre-school, the figures show **a** better distribution of enrolments between the rural and urban areas than in other levels of education. In fact, although the percentage of enrolments in rural areas is much lower that in the towns and has fallen since 1996, we have to bear in mind that during this period there has been a continuous decline in the rural population. Between 1991 and 1996, relative participation of the rural population fell from 24.4% to 21.65%. In the same period

however, enrolment in the countryside rose by 25.6%, a greater rate of growth that among urban children, which was 16.4% (Table 25).

Table 24
Rate of increase in enrolment and growth rate of initial enrolment in pre-school institutions - Brazil and Regions -1987-1999

Year	Indicator of growth in initial enrolment in pre-school institutions (1987=100%)					
	Brazil	North	Northeast	Southeast	South	Mid-West
1987	100.0	100.0	100	100.0	100.0	100.0
1988	102.4	99.6	106.3	98.7	107.5	100.5
1991	110.1	120.1	121.7	103.6	109.3	87.43
1993	127.3	230.7	140.1	112.5	112.7	103.1
1996	129.6	182.8	137.3	120.9	121.9	118.9
1997	130.2	182.8	131.4	128.6	119.1	112.1
1998	124.7	168	119.8	127.2	119.1	106.2
1999	128.5	167.4	118.5	132.6	130.4	114.5
Growth Rate 87/99 (%)	28.5	67.4	18.5	32.6	30.4	14.5

Source: MEC/INEP/SEEC

Enrolments in 1987: Total = 3,296.010; North = 177,996; Northeast = 1,070,943; Southeast = 1,431,219; South a 414,055; Mid-West = 201,797.

Table 25
Initial pre-school enrolment and distribution by location - Brazil -1987-1999

Year	Total	Locality	
		% Urban	% Rural
1987*	3,296,010	88.6	11.4
1988	3,375,834	87.2	12.8
1991	3,628,285	85.8	14.2
1993	4,196,419	82.3	17.7
1996	4,270,376	84.8	15.2
1997	4,292,208	84.4	15.6
1998	4,111,120	85.8	14.2
1999	4,235,278	87.1	12.9

Source: MEC/INEP/SEEC..

* Including 2,156 enrolments not differentiated by administrative authority.

If there was a fall in the number of pre-school enrolments in 1998 in relation to the previous year, the 1999 figures show a turn for the better. These data must be analysed in the light of changes that have been happening in primary education and, more specifically, in the light of the correction of transition rates that has been achieved since the implementation of FUNDEF and the discussions stimulated by the National Curriculum Parameters (PCN).

On the one hand, allocation of resources by FUNDEF has stimulated states and municipalities to enrol pupils over the age of 7 in primary school. On the other hand, the new ideas about learning proposed in the PCNs also contributed to closing

literacy classes, since they suggested that the process of learning to read and write starts long before the age of 7 and continues right through schooling.

The difficulty in offering regular pre-school education to all children has led many states and municipalities to create literacy classes to precede and facilitate entry to compulsory primary education. Nevertheless the literacy classes have held back entry to primary education because they have tended to admit and hold back many children aged 7 and over. In addition to this, these classes have employed inadequately qualified staff with little ability to teach children to read and write properly.

Thus, the reduction in the percentages of pre-school provision between 1997 and 1998 resulted from the growth in primary education, which permitted the inclusion of pupils older than the average age of the grades they should have been in. The overall increase in enrolments in the following period (1999) shows a real rise in early childhood provision especially in the municipal public sector.

These efforts to increase provision are a response to a growth in demand which, in its turn, comes from a growing understanding among the poorest sectors of society, of the importance of good-quality education during the child's early years and a demystification of the custodial, health-care and compensatory concepts that have characterised the tradition of this provision in Brazil.

In addition, in spite of a slight preponderance of male children in pre-school, gender equity is almost total in all parts of the country (Table 26).

Table 26
Pre-school enrolment and distribution
by sex - Brazil and regions -1999

Brazil and Regions	Enrolment by sex		
	Total	% Male	% Female
Brazil	4,235,278	**50.7**	49.3
North	297,943	50.2	**49.8**
Northeast	1,268,816	50.4	49.6
Southeast	1,897,533	**50.8**	49.2
South	539,921	50.9	49.1
Mid-West	231,065	50.8	49.2

Source: MEC/INEP/SEEC

In terms of education authority, the figures of Tables 27 and 28 show that pre-school is basically provided by the municipalities. Between 1988 and 1999 municipal participation increased from 41.89% to 66.10%. Involvement of the states, on the other hand, fell from 26.42% to 8.97%. This growing municipal influence, as in the case of day-care centers and literacy classes, results from legislation giving municipalities responsibility for early childhood education. In this area, as in primary education, the participation of the Union is minimal, due to the decentralised structure of the education system.

Table 27
Initial enrolment in pre-school institutions and distribution by administrative authority - Brazil -1987-1999

Year	Total	Education Authority			
		Federal %	State %	**Municipal** %	Private %
1987*	3,296,010	0.88	25.87	39.15	34.03
1988	3,375,834	0.84	26.42	41.89	30.85
1991	3,628,285	0.42	24.05	47.16	28.37
1993	4,196,419	0.17	23.05	52.51	24.27
1996	4,270,376	0.06	17.78	58.29	23.87
1997	4,292,208	0.05	14.14	62.81	23.01
1998	4,111,120	0.03	9.64	66.30	24.02
1999	4,235,278	0.03	8.97	66.10	24.90

Source: MEC/INEP/SEEC.

"Including 2,147 enrolments not differentiated by education authority

In 1998 there was an important federal initiative creating the curricular requirements for early childhood education. The requirements were planned to give guidelines for consideration on a national basis with regard to aims, content and teaching guidance for instructors working directly with children from 0 to six years, taking into account their teaching styles and the cultural differences within Brazil. This was the result of a wide-ranging national debate involving teachers and members of other professions who deal directly with children.

Table 28
Pre-school enrolment and distribution
by administrative authority - Brazil and regions - 1997/1999

Year	Brazil and Regions	Education Authority				
		Total	Federal %	State%	Municipal%	Private%
1997	Brazil	4,292,208	0.05	14.14	62.81	23.01
	North	325,400	0.16	39.08	44.49	16.26
	Northeast	1,407,013	0.05	14.94	58.33	26.69
	Southeast	1,840,383	0.01	**4.72**	74.91	20.36
	South	493,218	0.12	21.24	56.07	22.56
	Mid-West	226,194	0.02	34.43	33.26	32.29
1998	Brazil	4,111,120	0.03	9.64	66.30	24.02
	North	299,009	0.18	29.34	54.06	16.42
	Northeast	1,283,513	0.02	9.31	61.51	29.16
	Southeast	1,821,062	0.01	2.86	76.32	20.82
	South	493,268	0.07	16.94	60.08	22.91
	Mid-West	214,268	-	25.00	41.30	33.70
1999	Brazil	4,235,278	0.03	8.97	66.10	24.91
	North	297,943	0.13	25.39	55.51	18.96
	Northeast	1,268,816	0.02	8.37	61.79	29.82
	Southeast	1,897,533	0.02	2.55	75.41	22.02
	South	539,921	0.04	17.23	59.83	22.9
	Mid-West	231,065	0.02	24.41	41.62	33.96

Source: MEC/INEP/SEEC.

6.3 Primary Education

Among all educational levels, primary school has seen the most constant and continuous progress, shown in greatly increased numbers of enrolments. In only eight years, from 1991 to 1999, there was an increase of 6,800,000 (23.5%) in pupil enrolments (Table 29).

Table 29
Growth, Number and Growth Rate of Enrolments in Primary Education - Brazil -1970-1999

Year	Number of Enrolments (in thousands)	Growth Rate 1970=100
1970	15,892	100.0
1980	22,598	142.2
1991	29,204	183.8
1999	36,060	226.9
Growth rate (%)		
1970/1999	126.9	
1991/1999	23.5	

Source: MEC/INEP/SEEC

The policies of universal provision of primary education adopted in concert with all three levels of government have produced very positive results in the last ten years. From 1991 to 1999 the net rate of schooling of the 7-14 age group leaped from 86% to 95%. This result anticipated the target set down by the Education for All Ten-year Plan that aimed to raise coverage of the school-age population by at least 94% by 2003.

It should be noted that net schooling rates are lower than attendance rates in the 7-14 group because there are still many children aged 7 and over enrolled in preschool and literacy classes (Tables 30 and 31).

The permanent monitoring of the education system carried out by the annual School Census, has shown that the educational networks' capacity to provide services is now sufficient to guarantee a place to every child from 7-14 and to accommodate the great majority of the 15-17 age group. The present problem in primary education is not in terms of access but above all in the extra- and intra-school factors that make it difficult for pupils to stay in school and to progress through school. This is corroborated by the quality control of information in the School Census.

Table 30
Primary Education : Gross and net rates of schooling - Brazil -1970-1999

Year	Rate of Schooling	
	Gross (%)	Net (%)
1970	81	**67**
1980	98	80
1991	106	86
1994	114	89
1996	116	**91**
1997	119	**93**
1998	**128**	**95**
1999	130	**95**

Source: MEC/INEP/SEEC.

Table 31
Net schooling rate in Primary Education - Brazil and Regions -1996-1999

Brazil and Regions	*Net* Schooling rate		
	1996	1997	1999
Brazil	90.5	93.0	**95.4**
North	**86.1**	89.3	93.2
Northeast	84.3	89.1	92.8
Southeast	**94.7**	95.9	**97.6**
South	94.7	96.1	96.6
Mid-West	**94.6**	94.4	95.6

Source: MEC/I]nep/SEEC IBGE -
Population Count - 1996

Note: Data calculated by Carlos Américo Pacheco (Nesur/IE/Unicamp) and José Marcos Cunha Nepo/Unicamp).

In fact, analysis of figures based on the School Censuses allows us to diagnose the main problems to be faced: repetition, from which results mis-match between age and grade, over-enrolment and drop-out; regional differences and inadequate teacher training. These questions are closely linked but will be dealt with separately.

The gross rate of schooling and its analysis by region quickly reveal the seriousness of two of the three problems identified. The present level of 130.5% shows that a significant proportion of pupils have a marked mis-match between their age and the grade they are studying in; that is to say, their chronological age is greater than that of the cohort in each grade. This phenomenon arises from two main causes: the first is the previously mentioned late entry, after 7 years of age, which occurs more often in rural populations; the second, and more important, is that of repetition, which causes the drop-out and over-enrolment found today in primary school. Repetition shows the continuing inefficiency of the Brazilian education system, since pupils take, on average, about 10 years to finish the eight grads of compulsory schooling.

The age-grade gap caused by repetition has at least two other very serious results: the first of these has to do with the impact on teaching systems, whose costs are raised; the second falls directly on the pupils who are behind in their school careers, affecting their self-esteem and their performance, which has been proved by the results of the most recent evaluations carried out by INEP. The tests of the National Basic Education Evaluation System (SAEB) and the National Secondary Education

Examination (ENEM) have shown that pupil performance tends to deteriorate in relation to the increase in age-grade gap.

Table 32, referring to enrolments in primary education by age, shows the large number of pupils over 14 years of age who are still studying at this level.

Table 32
Enrolment in Primary Primary Education and Distribution by Age Range - Brazil and Regions -1999

Area of the Country	Enrolment by age group				
	Overall Nº	Younger than 7	7 - 14	15-19	Over 19
		%	%	%	%
Brazil	36,059,742	**1.6**	74.9	19.1	4.4
North	3,293,266	**1.5**	73.7	20.2	4.6
Northeast	12,492,156	**1.9**	67.5	23.7	6.9
Southeast	13,187,969	**0.9**	79.7	16.7	2.7
South	4,472,374	**2.7**	84.2	**11.8**	1.3
Mid-West	2,613,977	**1.8**	71.9	20.2	6.1

Source: MEC/INEP/SEEC

In terms of the age/grade relationship the surprising revelation is that the percentage of pupils over 14 years of age enrolled in primary education increased substantially between 1991 and 1999. This percentage, which had been stable at about 15.5%, reached 16.3% in 1991 and 23.5% in 1999. There is an apparent contradiction here with regard to tendencies seen in previous analyses. The probable answer is that there has been a process of re-entry of pupils who had been absent during the conventional period of schooling. In this case, the increase in numbers of pupils over 14 is an encouraging sign, showing the interest of these pupils in going back to school to finish their compulsory education.

However, in spite of the continuing gravity of the problem, there has been quite a positive development in the rates of flow, with the age-grade mis-match falling from 64.1% in 1991 to 44% in 1999. The reduction has been greatest in the earliest grades, a trend that is definitely associated with the efforts of many education systems to implement the basic cycle, thus doing away with the problem of pupils failing end-of-year examinations. This policy has not yet had an effect on the final grades, which still show their traditionally high rates of mis-match, especially in the 5th grade (52.3%).

The high repetition rates in 5th grade arise also from another characteristic of Brazilian education. The creation of an 8-grade primary school did not come about by integration but by the juxtaposition of two previous levels of education, which were and continue to be, quite different: the old primary school, with single teacher classes, and the old *ginásio* which was divided into subjects taught by different teachers. This variation in pedagogical and curricular organisation between the two levels of primary education created difficulties in adaptation in the 5th grade which are reflected in the increase in repetition rates.

From the regional point of view, Table 33 shows, the most serious problems in age-grade distortion are concentrated in the North and Northeast regions, which show the worst rates, of 61.9% and 58.3% respectively. The contrast is more pronounced when these rates are compared with the age-grade distortion in the South, which is the lowest in the country (23.2%).

Table 33
Primary Education : Rate of mis-match
of age to school grade - Brazil and Regions -1982-1999

Region/Year	Total	Grades (%) 1st grade	2nd grade	3rd grade	4th grade	5th grade	6th grade	7th grade
Brazil								
1982	76.2	71.9	76.5	77.2	76.6	80.4	80.2	79.8
1991	64.1	59.5	62.6	63.3	62.7	70.2	68.6	67.4
1996	47.0	40.0	44.1	46.4	46.6	55.6	53.2	49.2
1999	44.0	32.0	40.6	44.5	42.7	52.3	49.7	50.6
North								
1982	84.4	78.2	87.3	88.3	87.9	90.2	90.0	90.0
1991	79.0	72.5	81.0	81.6	81.4	84.3	83.1	81.8
1996	62.3	54.7	63.1	65.0	64.9	69.1	67.5	60.7
1999	58.3	44.6	57.9	62.6	62.7	68.2	66.3	64.7
Northeast								
1982	85.1	80.9	87.0	87.8	87.6	89.7	89.2	88.9
1991	80.6	75.7	82.9	82.6	81.6	84.5	82.9	82.6
1996	65.7	58.4	66.9	68.0	67.3	72.8	70.2	67.1
1999	61.9	47.2	60.4	67.1	64.6	71.8	68.5	69.4
Southeast								
1982	69.8	61.0	68.9	70.7	70.5	76.2	76.2	75.7
1991	54.7	39.6	49.0	53.8	54.1	64.5	63.5	61.6
1996	34.8	16.7	26.5	32.1	34.4	47.4	46.1	42.9
1999	30.6	12.6	19.4	23.5	27.8	39.4	39.3	42.4
South								
1982	70.5	64.3	70.1	71.1	71.7	74.2	74.8	74.3
1991	43.8	33.3	38.1	40.0	44.3	52.5	53.0	52.6
1996	27.2	12.8	20.0	23.8	26.7	38.2	38.1	34.7
1999	23.2	9.2	14.8	19.0	21.3	32.3	30.9	29.3
Mid-West								
1982	80.8	73.7	80.8	82.9	83.0	86.6	86.0	86.3
1991	65.9	55.0	63.1	65.0	65.5	73.9	72.9	72.1
1996	47.1	30.0	40.0	44.9	47.4	60.6	58.9	55.6
1999	43.7	20.6	31.7	38.4	41.4	56.2	56.5	56.9

Source: MEC/INEP/SEEC.

Note: Account should be taken of the age recommended for each grade/level of teaching, that is, age 7 for the first grade of primary education, age 8 for the 2nd grade and so on.

Along with the positive aspect of the decline in the age-grade gap rates, we find an equally positive development in the main indicators of transition through school. Obviously, these gains in terms of school flow will have to be expanded by reinforcing policies for improving quality and increasing efficiency in teaching systems (Table 34).

Table 34
Primary Education: Aggregated rates of transition - Brazil -1981-1998

Year	Aggregated rates of transition		
	Progression (%)	Repetition (%)	Drop-out (%)
1981	58	36	6
1985	58	36	6
1990	60	34	6
1995	65	30	5
1997	73	23	4
1998	74	21	5

Source: MEC/INEP/SEEC...

The accelerated learning programmes being set up in the various regions are working to this end. They consist of creating special classes with specialised teaching staff, for pupils whose age does not match their grade by two years or more, in order to enable them to complete quickly the instruction necessary to be taken into more advanced classes suitable to their age.

Table 35
Enrolment in 'Catch-up' classes in primary education and percentage of enrolments in rural areas - Brazil and Regions -1999

Brazil and Regions	**Enrolment in 'Catch- up' classes**	
	Total	% **Rural**
Brazil	1,207,593	**8.9**
North	41,924	10.7
Northeast	610,245	14.0
Southeast	425,213	**2.9**
South	91,657	**4.4**
Mid-West	38,554	**5.1**

Source: MEC/INEP/SEEC.

Unfortunately the 'catch-up' classes programme is hard to set up in rural areas where schools often have only one teacher, cover only the first grades, operate in very small buildings and have few pupils. For these children another programme was created in 1998, called Active School, under the umbrella of the Fundescola.

The positive trend in rates of transition, supported by the systematic fall in rates of repetition and drop-out and the growth in end-of-year pass rates, has created a considerable increase in the number of pupils finishing primary education. These numbers have grown by 34.4% in the last four years, while enrolments increased only 12.2% in the same period. This trend will have to be kept up in the next few years, encouraging demand and consequently the growth in enrolments in secondary education, which is already happening.

The improvement in the performance of primary education can also be measured by the increase in the expected rate of finishing this level of schooling. In 1995 only 52% of pupils enrolled in primary school could expect to finish it, a figure that rose to 60% in 1998. At the same time there has been a drop in the average length of time

taken to complete the eight grades which, as we have seen, is about ten years. It is clear, therefore, that there have been gains in efficiency in the teaching systems although deep regional inequalities persist.

The recent development of primary education shows another positive indicator: the increased rate of enrolment from 5 - 8th grades, in which there was the highest dropout figures, reflects the increased scale of pass-rates in the early grades, as seen in Table 36. This phenomenon is associated both with the fall in repetition and with the demographic factors discussed earlier.

Table 36
Development of Enrolments in Primary Education and distribution by grade groups - Brazil -**1995-1999**

Year	Enrolments		
	Total (in 1,000)	1st-4th grades (%)	5th - 8th grades (%)
1995	32,669	61.4	38.6
1996	33,131	60.4	39.6
1998	35,792	59.6	40.4
1999	36,060	58.1	**41.9**

Source: MEC/INEP/SEEC.

Another observation that must be made is that the situation of educational supply also shows marked regional differences in terms of the physical infrastructure of schools, access to teaching materials and support equipment. This shortfall is greatest in the North and Northeast regions. It must, however, be pointed out that inadequate infrastructure is found most often in rural schools, which are numerous in these regions - 81% of teaching establishments in the North and 73% in the Northeast. They account for only 30% of enrolments in the North and 31% in the Northeast. The problem has to be dealt with by means of policies for creating nuclei and with focused actions that take into account the geographic and socio-demographic characteristics of each part of the Federation of Brazil.

Another favourable aspect for the development of primary education is the teacher-pupil ratio, which tends to be low.

The ratio has hovered around 22 pupils per teacher between 1975-1999, with a minimum of 21.8 in 1975, and a maximum of 25.6 in 1980. The most recent average, in 1999, is 24.2 pupils per teacher. The variation between urban and rural schools is small, with the urban average a little higher, which is normal in a country with a dispersed rural population.

To achieve better performance from the system and allow higher wages for teachers, the government is encouraging states and municipalities to increase this ratio to a minimum of 27 pupils per teacher, with average class size varying between 25-30 pupils for the first grades and between 30-35 pupils in the final grades.

We may conclude from these data that the main problems in primary education, although serious, are being successfully dealt with. Recent education policy has shown itself, therefore, to be very successful.

Table 37
Evolution of average numbers of pupils per teacher in Primary Education by location - Brazil -1975-1999

Year	Average Number of pupils per teacher in Primary Education		
	Total	Urban	**Rural**
1975	21.8	-	-
1980	**25.6**	-	-
1985	23.8	24.0	**23.3**
1987	23.0	23.5	21.5
1989	22.9	23.6	**20.6**
1991	22.5	23.4	19.4
1996	**23.9**	24.7	20.4
1997	24.2	24.8	**21.7**
1998	24.9	25.9	24.0
1999	24.2	24.4	23.5

Source: MEC/INEP/SEEC.

6.4 Basic Adult Education

Until recently adult education took second place in the overall framework of education policies in Brazil. It was seen as a compensatory policy offering a 'second chance', as a shortened form of schooling, to those who had not been able to attend school at the appropriate age. Although adult education plays an undeniably remedial role, it should also be seen as a definite opportunity to place young people and adults in school and as a viable alternative given the socio-economic realities of the lives of these groups. In other words it was necessary to give this area of education a specific identity.

At the end of the 1980s and the start of the 1990s, various studies indicated the need for adult education to develop a specifically considered and planned policy with regard to the world of the young and adult worker. The first of these was to include in the 1988 Constitution a guarantee of compulsory, free primary education for all, including those who had not had access to it at the appropriate age. This constitutional initiative was later modified to eliminate the compulsory nature of adult education while still maintaining the duty of the State to provide it free of charge.

In **1996** the LDB included new ideas concerning adult education, based on a recognition that it should meet the needs and interests of people who already had some experience of life, who participate in the world of work and therefore have a background quite different from that of the children and adolescents for whom regular primary education is planned. Adult education therefore came to take a front seat in what has come to be called 'continuous and permanent education'.

Government interest in adult education was consolidated in 1997 with the production of three crucially important publications: "A Curriculum Proposal for Adult Education", "Foundations for a Diagnostic Evaluation of Levels and Content of Adult Literacy" and "A Guidance Manual for Implementing the Adult Primary Education Programme". Produced in partnership with community organisations, state and municipal

education secretariats and universities, these publications form part of a collection of teaching and support materials for students and teachers in adult education.

Brazil has made a great effort to serve this sector of 15-year-olds and over who have not had an appropriate matching of age to school year in their educational careers and no chance to carry on with their studies. Re-entry into the education system of those who have suffered a forced interruption either through repetition or drop-out, be it as a result of unequal opportunities for staying in school or other adverse conditions, presents a great challenge. The 1999 School Census shows the size of this effort even though it takes into account only the presential programmes with their in-built evaluation, and therefore under-estimates the number of learners provided for. A very large number of programmes have been offered without evaluation, especially by the NGOs and these figures are not included in the census.

There are in total 3,071,906 Brazilians enrolled in these classroom-based courses, the great majority finishing primary education (see Table 38). Enrolment in the final grades is greater than in the first grades, which is a positive sign since it shows that students have already completed the latter stage. The number of students in secondary education, who were also included in this section, is about 21.40% of the total and shows the effort people are making to obtain a higher level of instruction.

Table 38
Number of enrolments in classroom-based courses with
in-built evaluation, by level of education/course - Brazil and Regions -1999

Brazil and Regions	Total	Lit-eracy	Primary			Secondary	Secondary VocationalCourses	Apprentice-ship Courses
			Total	1st - 4th	5th - 8th			
Brazil (in absolute figures)	3,071,906	161,791	2,112,214	817,081	1,295,133	656,572	107,654	39,675
North %	12.4	10.1	15.5	15.1	15.8	5.2	2.7	0.7
Northeast %	21.2	44.7	23.3	37.5	14.4	8.7	26.9	4.8
Southeast %	41.0	15.1	38.4	25.1	46.8	55.6	39.3	34.7
South %	18.7	24.7	16.0	15.3	16.5	18.8	24.3	55.1
Mid-West%	6.7	5.4	6.8	7.0	6.5	11.7	6.8	4.7

Source: MEC/INEP/SEEC.

It should be noted that the training courses (figures shown in the last two columns of Table 38), are the result of a process of transition in which adult education enrolments in the area of vocational training are registered. With the reform of secondary education and the setting up of vocational education as a separate system, these enrolments will diminish considerably.

Table 39
Number of enrolments in classroom-based courses with in-built evaluation, and distribution by age group - Brazil -1999

Region	Age Group			
	Total (Absolute figures)	Younger than 15(%)	15-19(%)	Over 19(%)
Brazil	3,071,906	3.2	**29.0**	**67.8**
North	381,079	5.0	40.2	54.8
Northeast	651,030	6.1	32.9	**61.0**
Southeast	1,258,704	1.6	25.2	73.4
South	547,912	**2.8**	**26.2**	**71.0**
Mid-West	253,181	2.1	26.7	71.2

Source: MEC/INEP/SEEC

Note: Ages were obtained based on year of birth given to the School Census, that is, the student's age in 1999.

Another positive aspect of these figures is that the provision of primary education is far greater than that of the literacy classes, which are being replaced by more wide-ranging programmes. Figures by age group support the efforts to compensate, albeit late, for inadequate schooling: more than two thirds of the learners enrolled in these courses are over the age of 18. Table 40 shows also that evaluated classroom courses are mainly in the public sector. Private provision, which includes courses offered by NGOs, is no higher than 12,2% of enrolments.

Table 40
Number of enrolments in classroom-based courses with in-built evaluation, and distribution by administrative authority - Brazil -1999

Brazil and Regions	Administrative Authority				
	Total (Absolute figures)	Federai (%)	State (%)	Municipal (%)	Private (%)
Brazil	3,071,906	0.1	60.9	26.8	12.2
North	381,079	0.2	68.4	27.9	3.5
Northeast	651,030	**0.1**	52.6	41.8	5.5
Southeast	1,258,704	0.0	56.4	26.9	16.7
South	547,912	0.0	73	11.4	15.6
Mid-West	233,181	0.1	67.8	18.7	13.4

Source: MEC/INEP/SEEC.

In spite of the significant progress achieved in the last ten years, the great difficulty with adult education policies in Brazil remains that of inadequate provision, which still does not meet the potential demand. The fact that this type of education is basically turning into the education of young people, is one more reason for federal government to increase investment in the area to guarantee access to education to citizens who have a great contribution to make to the country in economic, social and cultural terms.

In an attempt to meet this need, the Adult Education Support Programme was created. It was inserted into the Alvorada Project, which co-ordinates a series of ministerial programmes and anti-poverty measures.
The Adult Education Support Programme aims to give young people and adults who have not finished primary education at the proper time, a chance to finish their schooling. The programme aims to provide a minimum sum per student as a means of reducing regional and inter-state imbalances. Funds will be distributed according to the number of students taught in each education system and will have to be spent on paying teaching staff, increasing the numbers of teachers, further training, purchase of teaching materials and supplementary nutrition programmes. Provision will be made for 700,000 new students from 1st - 8th grades in 2001 and the goal is to eradicate illiteracy in young people by 2002.

For the next ten years, meanwhile, adult education policies still have great challenges to face: expansion of provision, with a consequent increase in available resources, continuous training and qualification of teachers, with special attention paid to needs related to the world of work and strengthening citizenship training, integration with cultural and sporting activities, and promotion of access to information and new technologies.

6.5 Special Education

The first two years of the 1990s were especially difficult for special education at all three levels of government. In March 1990 the Special Education Secretariat was dissolved as a separate entity in order to form part of the National Secretariat for Basic Education. This administrative measure, changed special education into a compensatory activity of lesser importance. This administrative downgrading and consequent political weakening of the sector affected the collection of statistical data that would show the provision of special education in Brazil, and led to the discontinuity of education proposals under development as well as the interruption of various projects that had been carried out with resources from international organisations.

It was only in November, 1992 that a new policy to strengthen the sector was initiated, with the re-creation of the Secretariat for Special Education, within the structure of the Ministry of Education. This process of progressive recognition of the importance and specific nature of the education of pupils with special needs has brought about an increase in financial resources and an improvement in the quality of Brazilian special education.

One of the first measures was to define a programme for the period 1993-1994. A list of priorities was established with a view to expanding, improving and diversifying provision for children, young people and adults with special needs of all kinds, behaviour problems and gifted children, with the intention of integrating them in the various levels of school, measuring in specific areas such as learning difficulties, the level of finishing education that was compatible with the pupil's capabilities. Vocational education for disabled learners was especially emphasised.

After broad, nation-wide discussions, the National Special Education Policy - the first in Brazil's history - was instituted in 1994 and it has guided government actions since then. The following year, the Ministry of Education directed its efforts towards putting this policy into practice in the whole country, wherever possible within conventional school systems. The new concepts and patterns concerning this type of education and pupils with special needs were incorporated into the 1996 LDB. Thus special educational services were guaranteed at all levels and other types of teaching, to those who needed them.

These documents ensured the consolidation of political action on the part of the State in the area of special education while also working to expand it. From that point, the government pledged to extend special education with the aim of providing this service in at least 1,500 municipalities. As well as announcing the integration of disabled people within the conventional educational system, the Ministry of Education decided that the National Curriculum Parameters should serve as a reference point for all pupils enrolled in education systems, including those with special educational needs, always taking into account their different rates of progress and abilities.

At this time other advisory documents that were profoundly important in the organisation of educational services in the various areas of disability and giftedness were written. These publications form part of a collection of teaching and support materials for schools, pupils and teachers. The School TV and PROINFO programmes have given attention to pupils with special needs and their teachers. Videos are being produced and transmitted, in addition to offers of special computer training applied to special education.

Taking the re-structuring of the area as a point of departure, the federal government has promoted within the conventional school system, the National Campaign for Integrating the Disabled Pupil, initially aimed at 1,500 municipalities. This target was passed, with 2,739 municipalities actually covered, representing almost half the municipalities in Brazil.

In 1998 government activity concentrated on improving teaching practice in special education. The result was the production of the document entitled Curriculum Modifications, defining strategies for the education pupils with special needs and guiding the teaching system in the process of creating "Education in Diversity". This was also the year in which the government (re-)started its programmes for training the educational community as well as increasing its activities in partnership with higher education institutions, in a quest to bring about, with regard to questions of disability, greater involvement of professionals in the training process. Having thus overcome the difficulties of the first two years of the decade, it will be seen that the decisions the government took in relation to special education in the last seven years have shown an interesting and promising shift in the direction of respecting the rights of disabled citizens within Brazilian education.

One aspect that should be highlighted before passing on to an analysis of the provision that has been achieved, is that of the basic guideline that directs activities in this area: integration of those with special needs to receive their education,

preferably within the conventional education system. In some cases this process has met with much resistance. This integration is still not possible, or at least is very difficult, in some cases. Recent policies in the area have shown the following situations in the organisation of provision: full integration, with or without the support of resource rooms, special classes, and specialised schools. This latter is the type of school aimed at meeting the needs of cases in which integrated education is not viable, either because of the pupil's condition or those of the teaching system.

Even though international health organisations state that between 7% and 10% of the population of any developing country is made up of people with disabilities, handicaps or other disadvantages, the available statistics on the subject in Brazil are the object of controversy, since they are based on different operational concepts and definitions.

The most recent information available on the national level was obtained through the 1991 Demographic Census which looked into the numbers of those who were blind, deaf, paralysed, lacking limbs or parts of limbs, and suffered mental disability, in a sample of about 10% of households in the country. When the results were examined, the number of those classified as disabled was calculated at 1.5% of the Brazilian population, that is, well below the estimates of international health organisations. The Demographic Census of the year 2000 will provide, according to first indications, data that will make it possible to describe disability according to graduated levels of impairment.

Be that as it may, provision in school establishments has been found to be well below what is needed. In 1998 there were about 337,000 pupils enrolled, whose disabilities were distributed in the following way: 53.8% with mental disabilities; 12.6% with multiple disabilities; 12.6% with hearing difficulties; 4.9% with physical disabilities; 4.6% with visual handicap; 2.7% with typical behavioural problems. Only 0.4% were highly able/gifted and 8.5% had other types of handicap.

In the 5,507 municipalities in Brazil, 2,739 (49.1%) were already providing special education in 1998. Regional differences are great. In the Northeast only 21.7% of municipalities provided this kind of education. In the Southern region 58.1% of municipalities provided special education. In the Southeast this percentage drops to 48.6% and in the North and Mid-west it is 42.5% and 42.8% respectively.

Among the administrative authorities, in 1999, 43.9% of special education establishments were run by states, 29.3% by the municipalities, 26.7% were private and 0.1% were federal.

Enrolments are distributed accordingly, although there is one variation: 56.1% are in the private sector, 28.1% in individual state institutions, 15.5% municipal and 0.3% federal (Table 41).

In this context it is worth pointing out that the rate of 56.1% provision on the part of private schools is mainly due to the low government involvement in this area for many years.

in 1999, provision by level of teaching showed the following pattern: 91,136 children in early childhood education; 142,702 in primary education; 1,142 in secondary education; 9,178 in adult education. Provision for 67,196 learners is classified as 'other'.

These figures indicate that between 1988 and 1999 there was a growth in enrolments of pupils with special needs. The greatest growth took place in municipal and private schools. In 1988 the municipal system had about 11,000 pupils; in 1999 it enrolled almost 49,000 - an increase of 325%. In the private sector the increase was 151%. Individual state systems showed a growth far lower than the national average.

Table 41
Enrolments in Special Education by administrative authority - Brazil - 1988-1999

Administrative Authority	1988		1996		1999		Growth 88/99 (in %)
	Enrolments	%	Enrolments I	%	Enrolments	%	
Total	166,290	100.0	201,142	100.0	311,354	100.0	87.2
Municipality	11,388	6.8	29,591	14.7	48,422	15.5	325.2
State	82,770	49.8	90,688	45.1	87,427	28.1	5.6
Federal	2,605	1.6	938	0.5	832	0.3	-68.1
Private	69,527	41.8	79.925	39.7	174.673	56.1	151.2

Source: MEC/INEP/SEEC

In spite of not having met the actual needs of the country, the set of initiatives developed by the government in recent years has given an impressive boost to special education, that has been translated into the increase in access of disabled learners to school. Also, the investment in provision for gifted children has had satisfactory results. According to the School Census, 46% of pupils with special needs are enrolled in primary school, the other 54% being distributed between early childhood education, secondary education, adult education and other levels and types of institution.

An analysis of the evolution of special education in Brazil in recent years shows that there has been a steady, though laborious, effort to overcome the pattern and practice of institutionalisation and segregation in favour of an education that includes pupils in conventional schools. In these schools, attention to the differences of pupils - including those who have special educational needs - is one of the axes of pedagogical practice and a sign of a quality education for all.

In an attempt to aid the educational planning and policies aimed at pupils with special needs, the Ministry of Education has carried out a special study with more detailed information on this type of provision, including policies of educational provision

practised by schools and the implementation of initiatives recommended by the LDB. The results of this study will be available by the and of 2001.

6.6 Secondary Education

The main characteristic of Brazilian education in the 1990s has been the rapid rate of expansion at secondary level, which replicates at a slightly slower pace the change seen in the 1970s and 80s in primary education. For this reason we can state without fear of exaggeration that the 1990s can be called the decade of démocratisation of entry into secondary school.

In fact, in the years 1990-1999 enrolments at this level more than doubled, rising from 3,500,000 to more than 7,800,000. The number of those completing secondary school also more than doubled, going from 658,000 in 1990 to 1,500,000 in 1998. This increase has put strong pressure on the demand for openings in higher education and also in post-secondary vocational courses.

There are signs, however, that secondary education may expand even more in the future, considering that only about 32% of those in the 15-17 age group are presently enrolled. This figure puts Brazil well below developed countries such as France and Britain, where more than 80% of this age group attend secondary school. Brazil is also in an unfavourable situation when we compare the country's rate of completing secondary education of those aged 17, the theoretical completion age, to that of countries in the Organisation for Economic Co-operation and Development (OECD) or even with our South American neighbours such as Argentina and Chile (Table 42).

Table 42
Rate of completing secondary education in relation to the 17-year-old population (the theoretical age of completion) - 1998

Countries	Total	Male	Female
Brazil	**38**	**32**	**44**
Canada	**72**	**67**	**78**
Mexico	**30**	**-**	**-**
France	**87**	**85**	**88**
Greece	**83**	**78**	**88**
Portugal	**56**	**50**	**62**
Spain	**67**	**61**	**73**
Sweden	**79**	**76**	**82**
Turkey	**46**	**53**	**39**
OECD Average	**79**	**80**	**84**

Source: Brazil: INEP; OECD countries: Education at a Glance/2000

It must be emphasised, however, that 85% of those aged 15-17 are provided for in the school system, but that the high rates of repetition and drop-out, followed by later re-entry, hold back a large proportion of young people aged 14 and over in primary school.
It is also in secondary school that we see the greatest distortion in terms of gender, with a large concentration of female enrolments - evidence of the need in Brazil today to develop a policy to stimulate male schooling beyond primary level. By regulating rates of transition through school and with greater male participation, demand for openings in secondary education will continue to increase more quickly in the next ten years, probably levelling out only after 2008, when the system will have to cope, according to INEP estimates, with 10,400,000 enrolments.

Ensuring that this expansion will take place and at the same time working for the improvement in quality of teaching represents a great challenge for federal, state and municipal governments. The fact is that the growth in enrolment numbers at this level is being directed into the public sector, mainly to the schools maintained by the states, while the private sector is showing clear signs of stagnation and even falling numbers.

The public system already provides 84.2% of secondary enrolments, absorbing the impact of the growth that took place in the 1990s. The private sector, on the other hand, has been reducing its relative participation in the offer of enrolments at this level. This phenomenon has been especially marked in the last twenty years. As a result, the proportion of secondary pupils attending private schools fell from 46.5% in 1980 to 15.8% in 1999. There has also been a reduction in absolute terms since the private sector, with 1,310,921 pupils enrolled at secondary level in 1980, accounted for 1,224,364 enrolments in 1999.

As secondary education has today become less elitist than in the 1980s, it may be supposed that the demand for new openings will continue to be mainly concentrated in the state public system. In this changing picture, however, there will be an increasingly urgent need to create post-secondary vocational courses, since the main expectation of a large number of those finishing this level of teaching will be to enter or continue to participate in, the labour market.

Another important characteristic of Brazilian secondary education is that the offer of places in the public system is concentrated in night-school courses. Although this concentration has its positive aspects, since it allows young workers to enter education and keep studying, there are signs that this situation is excessive. In fact, the opportunity of studying at secondary level in the evenings is often a result of the need to use school buildings that are occupied during the day by primary schools.

Table 43
Secondary Education - initial enrolment by period - Brazil and Regions -1989-1999

Region/Year	Total	% Daytime	% Night Classes
Brazil			
1989	3,477,859	41.98	58.02
1996*	5,739,077	43.92	56.08
1997*	6,405,057	44.10	55.90
1998*	6,968,531	45.22	54.78
1999*	7,769,199	45.48	54.52
North			
1989	181,840	40.18	59.82
1996*	371,454	39.13	60.87
1997*	435,160	40.77	59.23
1998*	450,787	39.15	60.85
1999*	527,754	39.54	60.46
Northeast			
1989	784,469	45.25	54.75
1996*	1,202,573	45.77	54.23
1997*	1,353,691	46.34	53.66
1998*	1,515,169	47.10	52.90
1999*	1,732,569	47.18	52.82
Southeast			
1989	1,730,911	40.88	59.12
1996*	2,815,026	40.54	59.46
1997*	3,140,823	41.87	58.13
1998*	3,385,659	43.53	56.47
1999*	3,755,718	44.22	55.78
South			
1989	546,057	42.53	57.47
1996*	937,937	53.98	46.02
1997*	1,018,324	49.24	50.76
1998*	1,115,919	50.05	49.95
1999*	1,205,622	48.76	51.24
Mid-West			
1989	234,582	39.20	60.80
1996*	412,087	42.98	57.02
1997*	457,059	44.44	55.56
1998*	500,997	45.63	54.37
1999*	547,536	47.28	52.72

Source: MEC/INEP/SEEC.
(*) Periods starting after 5pm (inclusive) were categorised as night classes

The situation of rapid expansion of secondary education is associated with the country's socio-economic strength and indicates a process of great educational mobility. But there are also intra-systemic factors which are definitely contributing to encourage growth in secondary education, such as the improvement in primary

education, which has produced a significant rise in the numbers of those completing 8th grade.

We can state with assurance that the priority given to primary education in recent years has been the main lever in the expansion of enrolments at secondary level. It is worth adding, however, that this phenomenon reflects the profound changes in working practices, brought about by technological innovations and by the dramatic re-structuring of the production sector.

At the end of the 20th century the labour market has become more selective, demanding completion of secondary school as a minimum educational level for job-seekers, whatever job they hope to do, which has encouraged the demand for openings in secondary schools. This explains the trend noted in recent years, of the number of enrolments in 1st grade of secondary school being greater than the numbers of those finishing 8th grade of primary school in the previous year: there is a remarkable number of people returning to the system to complete their basic education. For this reason there will have to be heavy investments in new school buildings.

If secondary education has achieved, from the point of view of enrolment growth, an impressive performance in the 1990s, the same cannot be said in relation to the indicators of efficiency, which still leave much to be desired (Table 44). Provision for a more heterogeneous target population increases the problem. However, thanks to the priority being given to secondary education, it is possible to reverse this situation by means of adopting more efficacious policies to promote better quality in teaching, following the example of what has been done in primary education in the last four years.

Table 44
Secondary Education - aggregated rates of transition - Brazil -1981-1998

Year	Progression (%)	Repetition (%)	Drop-out (%)
1981	**67**	**25**	**8**
1985	**60**	**31**	9
1990	**60**	**32**	8
1995	**65**	**27**	8
1996	**72**	**23**	5
1997	**75**	**19**	6
1998	**77**	**17**	**6**

Source: MEC/INEP/SEEC.

In the view of the Ministry of Education, this objective cannot be achieved just by increasing enrolments, but demands a profound reform of secondary education and an increase in opportunities for vocational training. For this reason the government has developed and is implementing, with the indispensable help of the states, **a** profound curricular and organisational reform at this level of teaching.

The redistribution of openings between daytime and night-school groups, the implementation of secondary school reform, as well as the formulation of these policies, must take into account the profile of learners studying at this level.

Research undertaken by INEP in November, 1997, involving a sample of about 430,000 secondary school concluders in nine states, made a significant contribution to the identification of this target group. The first relevant aspect is monthly family income, one of the pieces of information that made possible the definition of socioeconomic levels. It appeared that 53% of pupils who managed to finish the 11 years of basic education come from families whose monthly income is less than six minimum wages.

There was also found to be a concentration of pupils from the highest income groups - above ten minimum wages, in the daytime academic courses, while 66% of pupils in the night-school vocational courses have a family income of less than 6 minimum wages. The difference of socio-economic levels among pupils in the day and night-school groups was found in all the states studied, to a greater or lesser extent.

With regard to age, it is hoped that the pupil completes secondary education at the age of 17 or 18. However, it is the case that over half of those finishing this level (50.36%) showed an age-grade gap, with a large proportion of learners (25.24%) aged over 21. From this point of view secondary education replicates a very similar situation in primary school, as described earlier. Evaluation of those completing secondary school has shown that learner performance declines in relation to the severity of age-grade distortion.

Analysis of parental education showed a picture of marked educational mobility in the group of pupils finishing secondary school in 1997, since 9.02% of fathers and 7.19% of mothers had levels of schooling above those of their children. About 50% of young people are children of parents who did not finish primary school; about 11% of parents completed secondary education and only 5% completed higher education.

The 1997 research also showed that the majority of secondary school concluders combined work and study during their schooling (60%), a proportion that rose to 72% among night-school students. Of these, 19.26% entered paid employment before the age of 14 and 34.47% between 14 and 16, a proportion that fell to 16.26% among the daytime pupils. Finally, it was found that 13% of pupils said they were unemployed, a percentage rising to 31.7% in the vocational night-school courses.

This confirms not only the already known fact that the young person enrolled in secondary level night-school is the working student, but it shows more importantly the urgent need to review and discuss the current form of provision for these learners, both in terms of curricular structure and of methodology, teaching techniques and learning materials.

Those finishing secondary education have quite varied expectations. For 31.5% of young people the main expectation was to carry on with their studies by going into higher education. The other firm expectation created by secondary education is related to work since, with the exception of some students in daytime academic courses, secondary school is seen as a mechanism to provide them with entry to, or an improvement in their position in, the labour market.

In fact, 20.5% expect to finish secondary education and get a better job, while for another 13% it is the route to improving their position in **the** labour market.

Secondary education reform envisages the possibility of offering this type of training in its conventional courses.

In a labour market where the level of employment is growing at a rate less than that which is necessary to accommodate the population willing to work, length of schooling and previous work experience are the points that differentiate applicants in the fierce competition for a job. Responding to the desire of young people for a more stable work environment requires the formulation of qualification programmes for specific activities within the workplace. There is a strong but unanswered demand for computer courses, for example. Even those who undertook no extra-curricular activities showed an interest in this area.

Responding to **this** demand, the federal government is carrying out, alongside secondary education reform, another reform in the area of vocational education, offered in separate institutions. This reform creates the chance for learners to attend secondary school and a vocational course at the same time. This is viable in the Brazilian situation because secondary schools operate a half day of 4 to 5 hours in school and there are large numbers of night-school courses on offer. The reform also enables the learner to enter vocational courses after finishing secondary school.

6.7 Vocational Education

Vocational education has performed different functions in Brazil's educational history. Throughout the 20th century, vocational education presented the following characteristics, as a result of different social, economic and cultural contexts:

- In the early 20th century, vocational education had a social welfare aspect. It was directed towards the socially deprived, "for orphans and the unfortunate" (CNE **Report** 16/99);
- The 1930s: organisation of commercial vocational education; vocational areas were organised in groups; vocational and pre-vocational schools were started as a **duty** of the State towards the deprived, to be fulfilled in collaboration with employers organisations and trade unions.
- The 1940s: creation of national apprenticeship systems, turning the old trade schools into federal technical schools and creation of institutional laws **for** industrial and commercial education. A landmark of the consolidation of vocational education in Brazil;
- The 1950s: permission granted for equivalence between academic and vocational education, by means of specific examinations;
- The 1960s: passage of the first **LDB** (Law 4,024/61) giving vocational education equivalence with academic education, formally ending the division between "education for the elite" and that for "the deprived" (CNE Report 16/99);
- The 1970s: passage of Law No. 5,592/71 which broadened the vocational aspect of secondary education, then called 2º grau, creating "a false image of vocational training as a solution to employment problems, allowing the setting up of many courses more by legal imposition and political-electoral motives than because of real demand from the public" (CNE Report 16/99);

• The 1990s: passage of the new LDB (Law 9,394/96) which gives vocational education a specific and modern function, committed to the context in which it exists.

The New Vocational Education

Until the passage of the present LDB, vocational education was attached to the 2-grau programme (today's secondary school). Since then, it took on its own identity whose most important aspect is its capacity to integrate itself "into the different types of education, work, science and technology" (Law No. 9,394/96), in order to guide the learner towards a permanent development of skills to lead a productive life.

In a country like Brazil, with a marked physical, socio-cultural and economic diversity, the model adopted for vocational education has had to be flexible. The new curricula have been designed both with the national market in mind, and taking into account the characteristics of Brazil's different regions, as well as being adapted to the demands of the production sectors.

Target group

The aim is to design courses that: guarantee work perspectives for young people and enable them to gain easier access to the labour market; meet the needs of workers who are already employed but who feel the need to improve their qualifications in order to perform their jobs; function as effective instruments for re-locating workers excluded from the labour market.

Training

Vocational training does not end with the granting of a certificate or diploma. The new policy sets out the idea of continuing, permanent education as a way of keeping up to date, specialising and training young people and adults in the area of their technological knowledge.

Current legislation establishes three levels concerning vocational education in Brazil: Basic: non-formal education of variable length designed to provide the worker with knowledge leading to qualification, re-qualification and up-dating in order to perform the functions required by the world of work. It is is compatible with the technological complexities of the activities, the individual's level of technical knowledge and schooling, and is not subject of curricular regulations;

Technical: designed for young people and adults who are taking or have completed secondary education. Its certificate assumes the completion of the 11 years of basic education;

Technological: aimed at higher education, both at undergraduate and post-graduate levels, of young people and adults.

Highlights of the concepts underlying the new vocational education

- Curricula based on work required abilities;
- Connection and complementation between vocational and secondary education;
- Offer of courses according to the demands of the market, individuals and society;
- Diversification and expansion of provision of technical and technological courses as well as basic level courses for the qualification and re-qualification of workers;
- Permanent links between the world of work and social activities;
- Flexible, modular curricula providing the possibility of diversified learning paths, intermediate access and exit, and permanent up-dating;
- Learning in context, overcoming the separation between theory and practice;
- Professional practices that comprise and organise curricular development;
- Professional skills acquired out of school are recognised in order to provide continuity of learning, based on evaluations carried out by the training institution.

Main Areas of Progress

After the passage of the present LDB, MEC began a wide series of discussion with those interested in the present topic in order to regulate the requirements set out in the law. Representatives of technical training institutions, national apprenticeship services, companies, workers' organisations, educators and specialists, took part in these discussions.

The result of this social involvement in the construction of a new educational model for vocational training may be seen in a series of points that have now come into being:

a) in the legal area
   - regulation of the articles of the LDB concerning vocational education;
   - institution of the National Curricular Guidelines for Vocational Education at the technical level;
   - institution of the national educational technology system.

b) in the political/institutional area
   - establishment of strategic methods for encouraging, teaching, researching into and developing vocational education by means of federal centres of technological educational and schools belonging to the federal education network;
   - implementation of the reform programme for vocational education.

c) in the teaching area
   - publication of national curricular guidelines for the technical level of vocational education

d) in the financial area
   - obtaining financial resources to complement national expenditure to expand and improve vocational education, supporting the various public and private teaching systems in Brazil in technical and pedagogical areas, and also stimulating initiatives in the community sector.

In an endeavour to evaluate the new educational model for vocational education, the first Vocational Education Census was carried out in 1999. Information was given to the census by schools and institutions offering basic, technical and technological courses, including therefore federal, state and municipal vocational schools and private teaching establishments. Because of the spontaneous nature and mainly the lack of up-to-date registration of the providing institutions, figures from the private sector especially (business, union, community and philanthropic institutions) may be under-estimates.

Information was given to the census by 3,948 institutions offering vocational education in accordance with Law No. 9,394/96 and Decree No. 2,208/99. The majority of the institutions were private (67%) and among the public bodies, most were state-run (20%). The municipal system was responsible for 9%, and 4% were federal.

In these vocational education courses, 2,800,000 students were enrolled, with the majority of these (71.5%) concentrated at the basic level. The technical and technological levels accounted for 25.1% and 3.4% of enrolments respectively.

By sector of activity, it was found that courses in the service sector have the greatest number of enrolments. About a third of enrolments were concentrated in Information Technology and business courses.

In 1999, according to IBGE data, 43.1% of workers were connected to the service sector. This and the commercial sector showed the greatest growth in terms of new jobs created. In the period 1992-1999 the service sector showed a growth of 20.5% of all jobs.

Agriculture accounts for 24.1% of all jobs, followed by industry and commerce, which had, respectively, 19.3% and 13.4% of all jobs in Brazil in 1999.

In some sectors, such as agriculture, the number of enrolments in vocational education is not directly linked to the numbers of those employed. This may be connected to the fact that courses in the service area, like those in Information Technology and Business Administration, provide qualifications that are more widely applicable.

Table 45
Technical Education - Distribution of enrolment by course areas - Brazil -1999

Areas	Levels			
	Total	Basic	Technical	Technological
Total	100.0	100.0	100.0	100.0
Agriculture and Fishing	4.1	2.9	7.8	0.6
Industry	24.1	23.7	24.9	27.5
Commerce	3.0	4.1	0.5	0.0
Services	68.8	69.3	66.8	71.9

Source: MEC/INEP/SEEC

Table 46
Technical Education - Main Courses by Number of Enrolments - Brazil -1999

Areas	Levels			
	Total	Basic	Technical	Technological
Total	100.0	100.0	100.0	100.0
Computing	22.4	22.6	16.8	59.2
Administration and	10.5	10.9		
Business Languages	9.0	12.6		
Mechanical Engineering	7.5	8.3	10.6	2.4
and Metalworking	5.8			
	5.2			
Electrical Engineering	4.2			9.6
and Electronics	3.8	3.7	11.2	
Accounting	3.4			
Health Care Agriculture	3.2	1.8	11.4	1.9
and Animal Husbandry		2.6	7.6	0.6
Civil Engineering		3.4	3.3	5.8
Personal Services		4.4	0.1	

Source: MEC/INEP/SEEC.

Private institutions accounted for the majority of enrolments, 87% at basic level, 44% at technical level and 60% at the technological level. At the technical level, public sector participation is greater on account of the greater presence of the state and federal systems.

Table 47
Technical Education - Distribution of Enrolments according to Administrative Authority - Brazil -1999

Administrative Authority	Levels			
	Total	Basic	Technical	Technological
Total	100,0	100,0	100,0	100,0
Public	25,0	13,4	56,4	39,1
Federal	6,4	3,6	14,1	**10,7**
State	14,5	5,9	37,2	27,3
Municipal	4,1	3,9	5,2	**1,0**
Private	75,0	86,6	43,6	60,9

Source: MEC/INEP/SEEC

In contrast to the findings in basic education, there are more men than women in the vocational area of education. This imbalance is due to participation in courses such as mechanical engineering, electronics and transport in which, male participation is traditionally greater. Women predominate in courses such as health care, accounting and tourism.

Census data for the technical level show that there is a concentration of 57.2% of enrolments in the under-20 age group. The following group, those aged from 20-24, account for 24.4% of enrolments, so that more than 80% of those enrolled are under 24. This situation suggests that technical level courses are taken mainly by students enrolled in or who have just left, secondary education.

At the basic level, there are two strata of concentration of enrolments related to age. People under 20 account for 33.4% of enrolments and those from 25-39 make up 36.1% of the total. These data show that we are dealing with two distinct phases: the first is that of vocational qualification, for the younger age group; the other is mainly vocational re-qualification for a section of the population that is already active in the workplace.

At the technological level there are more students between 20 and 39, making up 78.2% of total enrolments.

6.8 Distance Education

In order to carry out its normative, re-distributive, supplementary and co-ordinating functions in educational institutions, the Ministry of Education, by means of the Distance Education Secretariat (SEED), works together with other organs of MEC, state and municipal Secretariats of Education, as well as with universities, research centres, educational television and radio and other institutions that use distance education methodology. Distance education planning is organised in three blocks:

- Development of strategic projects;
- Institutionalising distance education in Brazil;
- Connecting the institutional area with society at large.

The main Distance Education Secretariat programmes are shown below:

School TV

School TV is a satellite television channel, launched nationally in March, 1996 and aimed exclusively at education.

Its main objectives are the training and improvement of the performance of teachers in the public primary and secondary education systems, as well as the enrichment of the teaching-learning process.

The starting point of the programme was to send the following equipment to public schools with more than 100 pupils: television set, videocassette player, parabolic antenna, satellite receiver and a set of ten VHS tapes to start recording with.

According to the 1999 school census, there are 60,955 schools with more than 100 pupils. In these schools, 28,965,896 pupils study and 1,091,661 teachers are working. School TV already reaches 56,760 schools, which represents 93% of the public system network.

School TV broadcasts daily 12 hours of programmes, with repeats, so that schools have many schedule options to record the videos. On Saturdays and Sundays the "Open School" is broadcast, a special selection of programmes that aims to reach families and the general public as well.

One of the working principles of SEED is that the integration of different types of media enriches the process of teaching and learning and increases a programme's potential usefulness. Thus, the School TV is complemented by printed materials: magazines, notebooks, programme guides, posters and a list of programme dates and times.

The School TV programmes include the "Jump into the Future Programme" which has been specially produced for the further training of teachers. In some states and municipalities "Jump into the Future" is used as support material in training courses for teachers of the first grades and participation in a certain number of series counts for points in career progression. The programme uses printed materials, radio, television, fax and telephone and contains interactive periods that allow the teachers, gathered in telecentres, to have live contact with specialists in the area being studied. At the moment more than 800 telecentres have been registered.

Main School TV numbers in 1999:

- Dedicated production of 10,215 minutes of educational videos, representing 38.95% of total broadcast hours;
- 234 days of transmissions, a total of 3,399 hours of educational programmes;
- Acquisition of broadcasting rights for 323 hours of videotapes;
- Production of 5,234,300 support materials for SEED programmes;
- Training of about 20,000 programme 'multipliers'.
- Carrying out two studies on the use of the Programme to inform, evaluate and support future decisions;
- Signing partnership agreements with various television channels for exchange of television pictures and materials;
- Signing an agreement with the Ministry of Culture to broadcast Brazilian films as part of the "Rediscovering our national pictures" project.

PROINFO

The National Information Technology Programme in Education (PROINFO) has been developed in partnership with state and municipal governments.

Its main aim is the introduction of New Technologies of Information and Communication (NTIC) in public schools in order to be a tool to aid the teaching-learning process.

PROINFO is guided by three basic documents:
- PROINFO Guidelines, laid down by MEC and the National Council of State Secretaries of Education (CONSED) in July, 1997;
- The State Plan for Information Technology in Education, which set out objectives for introducing NTIC into the public teaching system, in accordance with the general educational planning in each state;

- The State Project for Selecting and Training Human Resources for PROINFO, which presents the norms for selecting and training human resources for the programme (teachers and technicians).

The programme's guidelines state that computers and the relevant peripherals will only be given to schools that have a project for the pedagogic use of the NTIC approved by the State Council for Information Technology in Education, and have also: (a) staff trained to implement that project; (b) suitable buildings to install equipment (secure rooms, reliable electricity supply and adequately comfortable conditions for pupils and teachers).

PROINFO checks schools before sending the equipment: there is a computerised system to track the process of installing equipment in schools and NTEs. At the moment a computerised system (WEB technology) to evaluate the programme is being developed, with the aim of ascertaining how introducing computing into the public school system is influencing pupils' education and school quality.

The equipment is guaranteed to work for five years, with the exception, naturally, of theft, fire or deliberate breakage.

PROINFO considers staff training - of teachers especially - to be the main condition for success. Teachers are trained at two levels: 'multiplier' and school levels. A programme for training support technicians is also being developed and this should be completed at the end of next year.

A 'multiplier teacher' is a specialist in training teachers to use computers in the classroom: the programme has included therefore, the principle of teachers training teachers. The 'multiplier' is trained by means of post-graduate courses (specialist extension courses) offered by Brazilian universities (public or private, selected according to their excellence in the use of educational technology).

Multipliers train school teachers in centres of excellence called Educational Technology Nuclei (NTE).

An NTE has a set structure for the whole of Brazil and is a strategy for decentralising PROINFO. Its main functions are: (a) on-going training of teachers and support technicians; (b) pedagogic and technical support for schools (development of projects for using computers in teaching, support for teachers and technicians etc.); (c) research.

The definition of the number of schools to be provided for and the number of NTEs per state was established in accordance with the number of pupils and schools in each state's public teaching system.

The Educational Technology Experimentation Centre (CETE) was set up as an important part of the strategy to consolidate PROINFO. It was conceived in order to support the process of bringing information technology into schools and to be a network centre for diffusion and discussion of experiences and knowledge about new technologies that are applicable to education. The CETE is also the means by which

Brazil maintains contact with international initiatives linked to educational technology and distance education.

Main statistics for the first stage of PROINFO

- 31,870 computers; 25,030 planned for selected public schools and 6,840 for the Educational Technology Nuclei (NTEs);
- 244 Educational Technology Nuclei
- 1,419 'multiplier' teachers trained in extension post-graduate courses carried out in partnership with universities;
- 2,477 primary schools already provided for;
- 21,977 teachers trained to work with computer resources in the classroom;
- about 2.5 million pupils reached up to now;
- investments in the order of R$113,220,530, distributed between staff training, setting up infrastructure, and buying hardware/software

Proformação - In-service Teacher Training Programme

In the North, Northeast and Mid-West of Brazil there are about 50,000 teachers working in the first four grades of primary education without the training required by the LDB.

With a view to giving qualifications to these teachers, the Distance Education Secretariat launched the In-Service Teacher Training Programme - Proformação.

Proformação is a secondary-level course that uses distance education resources, bearing in mind the characteristics of the target population: working teachers who have difficulty in attending classroom-based courses.

In February, 1999 the programme was launched on an experimental basis in the states of Mato Grosso and Mato Grosso do Sul. Enrolment was 1,246 teachers.

When the pilot project was evaluated in 2000, Proformação began to be implemented in 13 states.

Proformação was developed as four modules lasting 3,200 hours, spread over four semesters. Each semester has 800 hours, distributed in 19- week courses. Each module is sub-divided into eight units - one per two weeks of the course.

Composition of the Modules

1. **Presential phase**
- A period of 96 hours of class taught by teacher trainers at the start of each school semester, in agencies accredited to offer the course.
- Saturday meetings for research and presentations, supported by teaching materials, texts and videos, every two weeks, with a view to creating social and interactive learning situations. These meetings are led by a tutor.

2. **Distance phase**
- Spread over the semester.

- Involves individual study activities supported by self-instruction teaching material.
- Involves directed teaching practice to allow the teacher in training to work with the course content in the context of normal teaching activity.

Proformação offers 3,200 hours of courses divided into four modules of 800 hours each, spread over 20 weeks. It combines material from the national common base for secondary education, knowledge from primary education teaching areas, teacher training and teaching practice in the classroom where the teacher in training works.

Lesson content is developed during the classroom sessions of the course, individual research activities and group activities led by tutors, every two weeks (on Saturdays).

The main support materials for the courses are: the General Guide, Study Guide and test booklets for the students; Guidance Manual, Answer Keys and videos for the tutors. The Training Agencies - which function as centres of initial and in-service training for teachers - receive all the course material.

Implementation of the Course

Implementation of Proformação is decentralised with a three-level organisational structure:
1. Municipal, involving Municipal Secretariats of Education and tutors;
2. State, including State Secretariats of Education, Training Agencies (public schools for training teachers) and other relevant educational institutions;
3. National, which co-ordinates the programme over the whole country and includes the National Co-ordination for Implementation, along with representatives of the Secretariat for Distance Education and the School Empowerment Fund (Fundescola). The National Teacher Training Forum and an external institution specialising in evaluation also form part of the national component.

6.9 Teachers' Qualification

The LDB states that training of teachers to work in basic education should be done in higher education courses, but accepts secondary level training as a minimum requirement for teaching in early childhood education and in the first grades of primary school. Nevertheless, by the end of the Decade of Education (1997-2006), only teachers who have been trained in higher education or participated in in-service training will be allowed to teach in basic education.

Reaching this goal and the consequently eradicating the category of lay teachers will not be an easy task and will only be viable if the efforts of public authorities and the universities can be integrated in order to re-think the question of teacher qualification, defining an overall training policy and creating opportunities for teachers to gain qualifications at the various levels and types of education.

The data on teacher qualification presented below do not distinguish between specific teacher training and general secondary or higher education, but they help to observe the gradual achievement of the aims of the educational legislation.

Early Childhood Education

With regard to pre-school teacher training, Table 49 shows that in 1999, about 67% of teachers had completed secondary education and 22.1% had a higher education degree.

Table 48
Pre-school: teaching staff* by level of qualification - Brazil 1991-1999

Year	Level of Qualification				
	Incomplete Primary	Complete Primary	Complete Secondary	Complete Higher	Total
1991	5.8	13.1	**64**	17.1	166,920
1996	7.4	**8.7**	65.7	18.2	219,517
1998	6.1	**7.3**	66.6	**20**	219,593
1999	4.3 -	6.6	**67**	22.1	214,123
Growth % 91/99	6.1	**-35.1**	34.2	**66.4**	28.3

Source: MEC/INEP/SEEC

"The same teacher may work in more than one level/type of teaching and in more than one institution.

To provide the minimum level of qualification in secondary education it will be necessary to provide in-service training for, orto replace, 23,309 teachers -10.9% of the teaching force. To meet the demands of the LDB by the end of the Decade of Education it will be necessary to re-qualify 78% of pre-school teachers, which is practically impossible in such a short time. In several municipalities from the north of Brazil to the south, by the actions of UNDIME, there are initiatives to improve the education and training of teachers, through the provision of distance education projects in primary and secondary education, as well as by means of agreements with universities.

Primary Education

The data previously analysed in respect of primary education indicate serious problems arising from the quality of teaching. The inadequate qualifications of teachers is the main factor affecting teaching quality.

We find quite a diverse situation within the level of training of teachers in the first and final grades, especially because the minimum training requirements are still different: for the first grades (1-4) the minimum is teacher training in secondary school, while for the final grades (5-8) training at higher level is required (Tables 50 and 51).

Both in the first and the final grades, levels of teacher qualification are much lower in the North and the Northeast, a fact that is consonant with all the other indicators and which reinforces the importance of taking into account the regional question when formulating educational policy, as is already being done.

Table 49
Primary education: 1st - 4th grades - teaching staff* by level of qualification and location - Brazil and Regions -1999

Brazil and Regions	Locality	Level of Qualification				
		Total		Incomplete or complete primary education	Complete secondary education	Complete higher education
		Absolute figures	(%)	(%)	(%)	(%)
Brazil	Total	807,053	100.0	9.6	67.1	23.3
	Rural	227,120	100.0	28.5	66.2	5.3
North	Total	76,670	100.0	22.4	73.7	3.9
	Rural	32,231	100.0	48.0	51.5	0.5
Northeast	Total	294,185	100.0	17.0	74.1	8.9
	Rural	125,771	100.0	33.8	64.4	1.8
Southeast	Total	267,795	100.0	1.4	62.4	36.2
	Rural	36,200	100.0	5.9	80.6	13.5
South	Total	113,185	100.0	2.2	59.3	38.5
	Rural	24,284	100.0	7.4	75.9	16.7
Mid-west	Total	55,218	100.0	6.8	60.2	33.0
	Rural	8,634	100.0	31.6	60.4	8.0

Source: MEC/INEP/SEEC.
"The same teacher may work in more than one level/type of teaching and in more than one institution.

Table 50
Primary education: 5th - 8th grades - teaching staff* by level of qualification and location - Brazil and Regions -1999

Brazil and Regions	Locality	Level of Qualification				
		Total		Incomplete or complete primary education **	Complete secondary education	Complete Higher education
		Absolute figures	(%)	(%)	(%)	(%)
Brazil	Total	703,214	100.0	0.7	25.3	74.0
	Rural	59,350	100.0	2.1	53.4	44.5
North	Total	44,019	100.0	1.2	51.1	47.7
	Rural	7,095	100.0	3.6	70.4	26.0
Northeast	Total	174,427	100.0	1.1	45.8	53.1
	Rural	20,896	100.0	2.1	73.4	24.5
Southeast	Total	307,519	100.0	0.4	13.1	86.5
	Rural	12,545	100.0	0.7	40.0	59.3
South	Total	118,804	100.0	0.3	13.4	86.3
	Rural	14,744	100.0	1.5	26.6	71.9
Mid-west	Total	58,445	100.0	0.9	33.6	65.5
	Rural	4,070	100.0	5.4	59.0	35.6

Source: MEC/INEP/SEEC.
"The same teacher may work in more than one level/type of teaching and in more than one institution.
"The same primary school teacher may teach from 1st-4th and from 5th-8th grades.

In the first grades the most serious and urgent problem is that of the 9.6% of staff who have at most completed primary school and who total 77,170 teachers. In this case too, the percentage of staff in this situation is concentrated in the North and Northeast, where it comes to, respectively, 22.4% and 17% of the teaching force. In spite of this high number, it is comforting to observe the percentage growth in graduate teachers - 23.3% in all - which shows a tendency for qualifications to be increasing. In the South and Southeast regions this proportion has already reached, respectively, 38.5% and 36.2% of all teachers in the first grades of primary school (1^{st}-4^{th} grades).

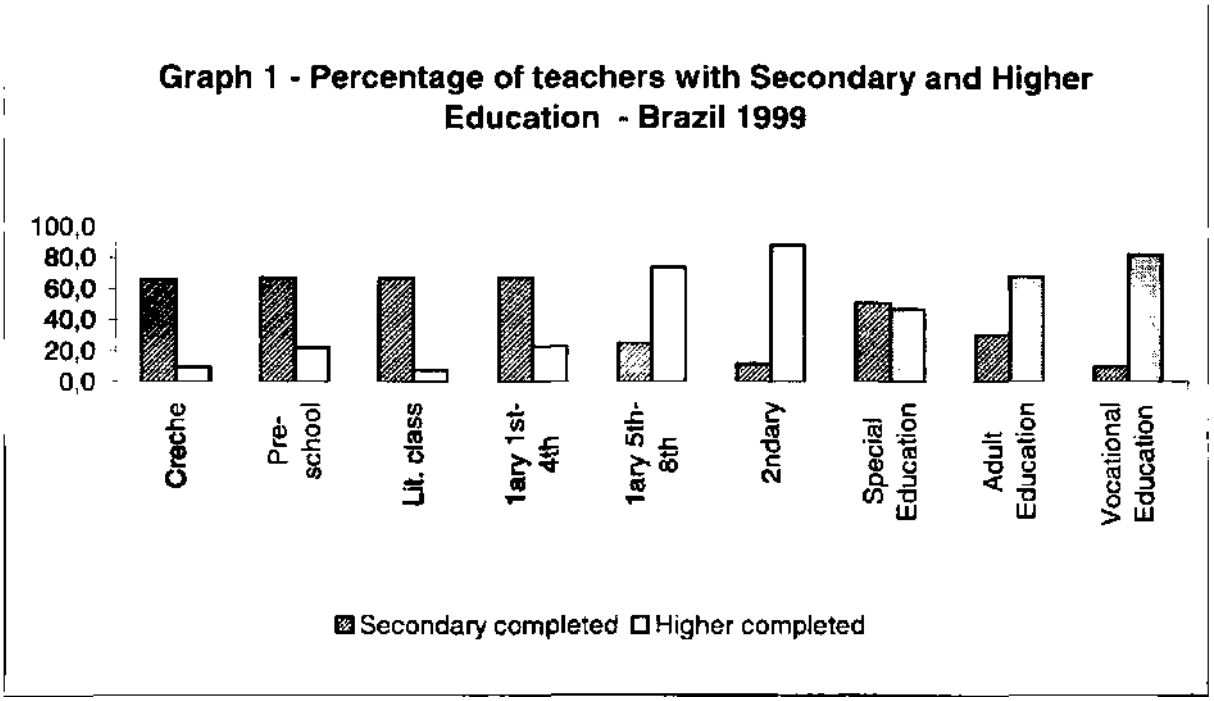
Carrying out the requirements of the LDB that, by 2007, all initial grade teachers should have tertiary-level training means, in relation to today's figures, the re-qualification of 78.4% of teachers in the initial areas of primary education, a figure which reaches 97% in the North and 91.6% in the Northeast. This aim was incorporated into the National Education Plan approved by the National Congress in January, 2001.

In the case of the final grades, the situation is different. As tertiary-level training was always a legal requirement, the percentage of teachers with this level of education is much higher, at 74%. Nevertheless, the situation is again especially serious in the North and Northeast, where the percentage of teachers who have completed at least primary school is 51.1% and 45.8% respectively. In this case the present legal requirement coincides with the provisions of the LDB and it is essential to train teachers to reach the level of training stipulated by the year 2007. This means in-service qualification or replacing 182,600 teachers. The target is demanding enough for Brazil's most developed regions, but will demand even greater efforts to be reached in the rest of the country.

With regard to primary education as a whole, we may conclude that Brazil still does not have enough tertiary-level teachers to fulfil the duties being carried out today by teaching staff who do not have this level of qualification. In addition, even if there were sufficient qualified human resources to enter teaching, current employment legislation guarantees the right of stability and permanence for present teaching staff. Therefore, a specific teacher training policy must be formulated taking into account in-service training, for which co-operation between the universities and education systems is essential. Even so, it will be difficult to achieve the full provision of the new profile of teacher qualification laid down by the LDB within the time-scale mentioned above.

This effort, however, is taking place within a wider-ranging policy of re-evaluation of the teaching profession which encompasses, naturally, higher pay and recuperating the profession's social prestige. These conditions are indispensable if teaching is to once again be an attractive option for those leaving university.

The following graph shows the distribution of teachers according to completion of secondary or higher education.



Source: INEP/MEC

Note. The same teacher may work in more than one level/type of teaching and in more than one institution

7. The Main Challenges

As a result of the strategies implemented by the federal government to improve the Brazilian Education System, some results are already being seen:

> increase in gross and net rates of enrolment in primary education and the resulting fall in illiteracy;
> reduction of repetition and drop-out, with the gradual improvement in overall rates of school flow and reduction in age/grade gap;
> reform of the primary education finance system, promoted by FUNDEF;
> development and consolidation of educational statistical and evaluation systems and their use in monitoring public policies.

It is clear, however, that in spite of the progress achieved, much still has to be done to ensure the provision of high quality education for all.

Most prominent are the problems arising from decentralising the education system, which has impeded efficient co-ordination and the proper interaction between policies being implemented at the various levels of government. In addition to this, discontinuity in policy on the part of different administrations as a result of abandonment or replacement of projects, shows the need to overcome barriers at the level of political consciousness.

Managerial inefficiency in the education networks and the exaggerated bureaucracy, rooted in the paternalistic tradition of patronage is also affecting the performance of

the system, requiring reforms in terms of more computerised procedures and changes in concepts of public management.

There is no doubt that one of the main problems is in regard to public resources given to education. Involved in the financing of education are questions concerning: the growing costs of the pension scheme, which is an increasing burden on the system; the still unresolved inefficiency in the management of public resources, together with embezzlement and loss of funds, which greatly decreases the resources that actually reach educational objectives; the instability of the educational budget caused by stagnation in the economic system and by the changes expected as a result of tax reform that lead to uncertainty about the future of educational finance.

We believe that all these problems may be most quickly overcome by the contribution of all sectors of society and not only by those directly involved in educational questions.

It is in this way that the general involvement of the media in publicising the activities that are being implemented is of the greatest importance in mobilising public opinion with regard to the importance of education in confronting the challenges of the modern world. The business community, equally aware of the role of education, is involving itself in various educational projects and programmes.

The activities of NGOs in the educational area deserves special mention because of the work they have been developing in provision for marginalised groups, for the very poor and dispossessed or those who have problems in joining the conventional education system: street children, children who lack sufficient family support or who have special needs, indigenous groups and young people who are illiterate or who have little schooling, among others. In addition to this, NGOs work to spread teaching practices that are more efficient and more respectful of children's values and needs. However, excessive dependence of public money on the part of the NGOs and lack of objective evaluations of the results they achieve, are problems that must be overcome.

Finally, it should be emphasised that the solution of the country's educational problems will only be possible if we take as a starting point an integrated view of the system and a joint collaborative effort on the part of the different levels of government and society.

Part II

EDUCATIONAL CONTENT AND LEARNING STRATEGIES FOR THE 21ST CENTURY

8. Primary Education - Teaching programmes - principles and hypotheses

8.1 The Decision-making Process

Historically, defining Brazil's teaching programmes has been a duty of the states. In recent years these programmes have taken the form of curricular proposals that were not compulsory but were designed with the aim of helping schools to organise their teaching programmes. Until 1995 there was no national frame of reference in Brazil to guide the curriculum proposals of the 27 State Secretariats of Education and the Education Systems of the roughly 5,600 municipalities that comprise the Federation.

After a long process of national debate, Federal Law No. 9,394 - the National Education Guidelines and Framework Law (LDB) was passed on the 20th December, 1996 - the ultimate legal provision for Brazilian education. It emphasises the fact that the aim of basic education (made up of early childhood, primary and secondary education) is the development of the learner, through the provision of the necessary education for the active exercise of citzenship as well as the means for progressing at work and in later learning.

Among its proposals, the LDB states that the Union must establish, in collaboration with the states, the Federal District and municipalities, guidelines to direct curricula in such a way as to ensure a common basic education.

This task is not an easy one, considering that, among the inequalities of Brazilian situation, there are large differences in access to knowledge production centres (both in curricular and pedagogical areas). This is reflected in the training of teachers and in school curricula, which does not encourage a balance between economically and culturally distant sectors of society.

Thus it was necessary to build a national set of references to encourage changes in the process of teaching so as to confront long-seated educational problems in Brazil, and new challenges stemming both from the international context and from the new characteristics of Brazilian society, such as growing urbanisation.

This frame of references had therefore to contain aspects of the educational process that were common to all regions in the country, while at the same time respecting regional, cultural and political differences.

Thus, in the period 1995-1998, one of the Ministry of Education's priorities was to generate reference points for the primary school curriculum, organising ideas that were already being used in curriculum reforms of the states and municipalities.

In elaborating these documents, procedures were followed that sought to guarantee the democratic and participatory spirit that should be characteristic of Brazil's basic education. Teams of educators (university teachers, researchers and experienced classroom teachers) wrote preliminary papers. They carried out studies of the curricula of other countries (such as England, France, Spain and the United States), analysed proposals from the Brazilian states and from some of the municipalities, taking into account data on education in Brazil (such as drop-out and repetition rates, performance of pupils in systemic evaluations) and studied contemporary theoretical patterns concerning the curriculum, teaching, learning and evaluation. Preliminary papers were sent for appraisal by university lecturers and classroom teachers, researchers and experts working in the pedagogical teams of Secretariats of Education, who provided their criticisms and suggestions.

The basic premise of this curricular frame of reference is that of training for citizenship, looking on the child not just as a future citizen but as already being a citizen. An innovation coming from this initiative is what might be called the "citizen-school" - the manifestation of an educational policy strongly committed to the task of creating new links between teaching and society.

For each area and theme proposed, a special document was written which, starting from an analysis of the teaching in this area or theme, and of its importance in the primary school child's learning, presents a proposal set out in terms of objectives, content, evaluation and teaching guidelines. These items are developed by cycles, each corresponding to two years of primary schooling.

In order to provide for the demands of the different sectors and types of basic education in Brazil, the following elements were designed:

- National Curriculum Parameters (PCN) for Primary Education - which include, in addition to traditional areas of the curriculum (Portuguese language, mathematics, science, history, geography, art, physical education and foreign languages), topics concerning Brazilian society such as ethics, the environment, sex education, multiculturalism, work and consumption or other relevant themes.
- National Curricular Guidelines for Early Childhood Education - this proposal emphasises the building of identity and autonomy on the part of the child and his or her knowledge of the world, taking into account the singularities of the 0 to 6 years age group.
- National Curricular Guidelines for Adult Education - the focus of the curriculum areas of Portuguese language, mathematics and social and natural studies is to link teaching with the living and working conditions of young people. (There is still, although it is decreasing, a group of about three million young people and adults who have not had access to Primary Education at the appropriate age, to whom the special programme of adult education aims to give adequate educational opportunities.)
- National Curriculum Guidelines for Indigenous Education - as well as areas of knowledge, these include themes chosen by a wide group of indian teachers, such as: self-sustainability, indigenous ethics, multiculturalism, rights, struggles and movements, land and the preservation of bio-diversity and preventive health education. (The Brazilian Constitution guarantees to indigenous communities the right to use their mother tongues and their own learning methods, which justifies

the existence of indigenous schools that today are serving about 80,000 indian pupils.)

8.1.1 Introducing the teaching programmes

For a view of the decision-making process concerning teaching programmes, it is worth analysing the concept of levels of curriculum application as expressed in the National Curriculum Parameters.

- The first level of curriculum application is the creation of a national frame of reference for primary education: the PCNs/Guidelines, which lay down an educational target on which MEC's policy actions must converge, such as projects linked to initial and continuing training of teachers, production of books and other teaching materials, national evaluation, etc. Their function is to help the development or revision of curricula in the states and municipalities, linking with proposals and experiences already in existence, encouraging internal discussion in schools about teaching, developing teaching projects and serving as thought-provoking material for teacher practices.
- The second level of application concerns curriculum proposals from the states and municipalities. The PCNs/Guidelines are used as resources for adaptations or developments to curricula carried out by Secretariats of Education in a procedure defined and co-ordinated by those responsible in each location.
- The third level of curriculum application is related to the development of each school's curriculum proposal, in the context of its own educational plan. 'Educational plan' is understood as the expression of each school's identity in a dynamic process of continuous discussion, reflection and development. That process must involve participation of the whole teaching team, seeking a commitment on the part of everyone to the work being done, to the proposals discussed and to the adaptation of the plan in terms of the social and cultural situation in which the school is operating. It is within the orbit of the educational plan that teachers and the technical team discuss and organise the objectives, content, methodological approaches and criteria of evaluation for each level of education.

  The PCNs and the proposals of the Secretariats of Education should be seen as materials to help the school to build its more general educational plan in a communicative process, where values and proposals are shared and explained in order to guide the teaching tasks that will be developed and the establishment of a curriculum capable of attending to the real needs of the pupils.

  It is worth noting that the LDB emphasises the importance of the role of the school in the educational process and gives it much organisational autonomy. Thus, the school may organise itself in annual grades, semester periods, cycles, regular alternation of periods of study or non-graded groups formed according to age, ability and other criteria, as long as these structures advance the learning process. School calendars may also be set up so as to fit in with local characteristics.

- The fourth level of curriculum application is when the planning of teaching and learning activities are put into action in the classroom. This happens when the teacher, in accordance with the targets set in the previous phase of application, sets out the teaching programme adapted to the needs of that particular group of

pupils. The programme should ensure the planned distribution of classes, organisation of content according to a fixed timetable, definition of important educational guidance, selection of material to be used, planning and execution of projects. Although responsibility for these tasks is primarily that of each teacher, it is important that they be shared with the school team by means of the shared responsibility approach set out in the educational plan.

The implementation of curriculum change in school is the responsibility of state and municipal secretariats of education which usually develop procedures of discussion and guidance together with teachers. Generally this procedure is slow and complicated. Some of the factors that contribute to this are:

> lack of a culture of tracking and evaluating results obtained in the process of setting up curricular and didactic innovation. Few secretariats of education yet have access to qualitative evaluations regarding this matter.
> the difficulty in identifying patterns for evaluation thanks to the considerable autonomy that schools and teachers have to incorporate this guidance or not.
> the problem of teacher qualification: lay teachers (underqualified teachers) and even teachers trained in low-quality training courses usually show little ability to properly implement curriculum innovation.

With regard to evaluation, MEC uses the National Basic Education Evaluation System (SAEB), initiated in 1990 and carried out by INEP with the support of state and municipal secretariats of education. SAEB is today one of the most important instruments used to evaluate primary education in the whole of the country.

8.2 Planning and Conception of the Teaching Programme

As was shown in the previous section, curriculum guidelines in Brazil do not form a teaching programme in the sense of a list of items that must be developed at each level of schooling; instead, planning and conception are carried out at different levels of the education system. In addition, while there are common principles and bases to direct planning and conception of curriculum guidelines, there are also specific elements that differentiate different sectors and types of basic education.

8.2.1 Common aspects of the curriculum guidelines

Basic Hypotheses

The curriculum guidelines for the various sectors/types of primary education in Brazil were designed on the basis of common hypotheses. Among those, it is emphasised that the guidelines should:

- point out the need to unite the efforts of the different levels of government and society towards supporting the school in the complex task of educating;
- show the importance of linking school and community so that learning acquired may create a greater understanding, integration and entry into the world; school activities committed to school-community inter-dependence makes the pupil a participant in society - a citizen - from the first day of attending school;

- oppose the idea that it is necessary to study certain subjects because one day they may be useful; the meaning and significance of learning must be revealed throughout the whole of the educational process to stimulate pupils' commitment and responsibility in their own learning;
- explain the need to overcome what is preventing children and young people in the country from developing their abilities - which the school can and should strengthen - emphasising that acquiring knowledge constructed by society is the basis of building citizenship and that everyone is capable of learning.
- point out the fundamental importance of every school having a clear idea of its teaching programme so that it can really become an autonomous unit and so that all who belong to it may be committed to achieving the targets it has set;
- consider that school learning is the result of all the interactions that happen in school, widening the view of content beyond concepts, by including procedures, attitudes and values as being knowledge that is as valuable as the concepts that have been traditionally taught;
- show the need to deal with urgent social themes - called "Cross-curricular themes" - within the various curriculum areas and in daily school life;
- indicate the need to develop projects involving the use of communication technology so that everyone - pupils and teachers - may use and participate in them, both critically and in taking advantage of them;
- value the work of the teacher as a producer, articulator and planner of teaching practice, and also the diversity of pupils and their previous knowledge, as a source of social co-existence and specific content learning;
- show that the school should provide for all pupils an environment for building their knowledge and developing their intelligence by means of their many abilities.

Basic Theories

As well as creating new instruments for analysis, planning and management of pedagogic activity in school, the search for an explanatory framework that will permit this re-thinking is today, according to the majority of educational experts, within the sphere of constructivism.

The constructivist perspective in education is formed by a series of complementary principles explaining human development and learning that make up a set of ideas aimed at analysing, understanding and explaining the processes of teaching and learning in school.

The composition of the constructivist framework that explains the processes of school education comes from, among other influences, genetic psychology, socio-interactionist theory and explanations of significant activity. Several authors have used these ideas as a starting point to develop and conceptualise the various dimensions involved in school education and have made undeniable contributions to educational theory and practice.

The central gathering-point of all these contributions is the recognition of the importance of constructive mental activity in the processes of acquiring knowledge. Hence the term 'constructivism' was derived to describe this convergence of ideas. From this perspective, knowledge is not seen as something situated outside the individual, to be acquired by means of copying reality, nor as something the

individual constructs independently of external reality, other people and the individual's own personal abilities. It is above all a historical and social construct in which cultural and psychological factors play a part.

What the pupil can learn at a specific point in schooling depends on the possibilities set out by the ways of thinking he or she has available at that phase of development, by previously constructed knowledge and the teaching received. That is to say, pedagogical intervention must be adjusted to what pupils can manage to achieve at each moment of their learning, if it is to be of real educational advantage. Knowledge is the result of a complex and intricate process of modification, re-organisation and construction used by pupils to assimilate and interpret didactic content.

Understanding the learning process as the individual's property does not imply a devaluation of the decisive role of interaction with society and especially with school. On the contrary, school teaching and learning situations are communicative ones in which pupils and teachers **act** as co-protagonists, both exercising a decisive influence on the success of the process.

The constructivist approach affirms the mediating role of cultural patterns to integrate in a single explanatory schema questions concerning individual development and cultural relevance, knowledge-building and social interaction. It considers personal development as a process through which the human being assumes the culture of the social group he or she belongs to. It is a process in which personal development and learning from culturally organised human experience, that is, socially produced and historically accumulated, do not exclude each other or merge, but interact. From this stems the importance of interactions between children and of children with experienced partners, among whom are teachers and other teaching agents.

The concept of significant learning, which is central to the constructivist point of view, necessarily involves the aspect of reality that is known in the symbolic task of "signifying". The learning children acquire in school will be meaningful to the extent in which they manage to establish substantive rather than arbitrary relationships between didactic content and knowledge they have previously built in the course of articulating new meanings.

There exists an area of subsequent development created by the difference between what the pupil can do alone and what he or she can do or learn with the help of others. In accordance with this concept, speaking of mechanisms of educational intervention is the same as speaking of the interactive mechanisms by means of which teachers and other pupils regulate their help in the process of building meanings that is carried out by pupils as they perform their school activities of teaching and learning.

If the educational process demands re-definition of the teaching and learning process, the latter must take care to preserve the desire to know and learn which all children bring to school with them. It must maintain the good quality of the link with knowledge and not destroy it by means of repeated failure. On the other hand, ensuring successful experiences has nothing to do with omitting or disguising failure.

With clear proposals about what, when and how to teach and evaluate, the teacher will better be able to plan teaching activities for learning in a way which fits and links with his or her objectives. Starting from these definitions, the teacher can draw up the daily classroom programme and organise his or her activities so as to suggest learning situations appropriate to the cognitive abilities of the pupils.

In brief, it is not learning that has to adjust to teaching, but teaching that must empower learning: teaching has the responsibility for carrying on a dialogue with learning.

8.2.2 Specific aspects according to sectors and types

8.2.2.1 Early childhood education

Early childhood education, provided for about 5 million children aged from 0 to 6 years, is the responsibility of the municipalities and is not compulsory. Since 1996, with the LDB, early childhood education has come to be considered as the first stage of basic education, its aim being the overall development of the child in physical, psychological, intellectual and social aspects, complementing family and community activities.

Early childhood education is comprised of day-care centers for children from 0 - 3 and pre-school for those aged 4 - 6. The way in which these institutions operate varies greatly throughout Brazil: some are full-time, from 8 to 12 hours a day during the whole year and others operate half a day, following the school calendar. This type of education is not sequential in nature and evaluation is carried out through recording and following the child's progress, without the aim of promotion from one class to another. Teachers should be trained at tertiary degree level, with the minimum qualification for working at this level being secondary teacher training courses.

General Principles

Early childhood education is based on the following principles:

- respect for the dignity and rights of children, taking into account their individual social, economic, cultural, ethnic, religious and other differences;
- the right of children to play as a special form of expression, thought, interaction and communication at this age;
- children's access to available socio-cultural benefits, developing their abilities of expression, communication, social interaction, thinking, ethics and aesthetics;
- socialisation of children through participation and inclusion in the most varied social activities without any form of discrimination;
- provision for the essential care associated with survival and development of the child's individual identity.

Basic hypotheses

The history of provision for the child aged 0 to 6 in Brazil has been characterised by its welfare aspects, thanks mainly to day-care centers and pre-school programmes having been created as means of combating poverty and resolving problems

connected to children's survival. This has given rise to low-cost institutions with insufficient resources, few materials, inappropriate facilities and above all with staff lacking the training to work with this age group.

Increased urbanisation, the growing participation of women in the workforce and changes in the organisation and structure of family life, together with the greater awareness of the importance of different types of learning, carried out in interactive situations in the early years, have encouraged a movement in society and in government organs demanding that provision for children aged 0 to 6 be legally connected to the state education system.

The process of modifying the welfare attitude to provision for children has led to consideration not only of the legal aspect, but also to a re-thinking of ideas about early childhood, relationships between social classes, the responsibilities of society and the role of the state in relation to the child between 0 and 6 years. The integrated incorporation of educational and care functions, both in day-care centers and pre-schools, form part of this process.

Basic theories

Early childhood education arose out of development theories and concepts that consider children in their social, environmental, cultural contexts and, more specifically, in the interactions and social practices that give them reference points to the most diverse forms of language and contact with the most varied forms of knowledge, in order to construct an autonomous identity. From this perspective early childhood education can help the development of abilities concerning appropriation and knowledge of the physical, affective, emotional, aesthetic and ethical potential of the child, contributing towards the latter's practising of citizenship.

Basic Experiments

Early childhood education was characterised for a long time by the absence of its own identity, sometimes seen mainly as an institution to guarantee care and help to the child in the absence of its mother, sometimes as a preparatory phase for primary school. Even so, a large number of professionals were building up in their daily work, outside the restrictions of rules and models, their own knowledge system, full of experiments and contradictions. This knowledge, together with the academic systématisation of information relevant to this sector and with the definition of norms, rules and priorities on the part of the authorities, has been working towards the construction of educational projects for early childhood education, reflecting the diversity of Brazilian society. Seeking to preserve this plurality and to guarantee a guiding paradigm of the early childhood education projects in Brazil, in 1998 MEC formulated the National Curriculum Guideline for Early Childhood Education, made up of a group of teaching guidelines and directives aimed at implementing high-quality teaching practices.

Selection of knowledge content

Selection of content aims to offer a repertoire of knowledge that helps develop the following abilities in children:

- to develop a positive self-image, acting with increasing independence, with confidence in their abilities and a perception of their limitations;
- to gradually discover and become familiar with their own bodies, their potential and their limits, developing and valuing habits of health-care and well-being;
- to establish affective and interactive links with adults and other children, strengthening their self-esteem and gradually extending their possibilities for communication and social interaction;
- to establish and continually increase social relationships, gradually learning to articulate their interests and points of view with those of others, respecting differences and developing attitudes of help and mutual assistance;
- to observe and explore the environment with an attitude of curiosity, increasingly perceiving themselves as being a part of , being dependent on and an agent of change in the environment and valuing attitudes that contribute towards its conservation;
- to play, expressing emotions, feelings, thoughts, desires and needs;
- to use the various types of language (physical, musical, plastic, oral and written) adjusted to the different intentions and situations of communication so as to understand and be understood, to express ideas, feelings, needs and desires and to continue in their process of building meanings, increasingly enriching their expressive ability;
- to be familiar with certain aspects of culture, showing attitudes of interest, respect and participation towards them and valuing their diversity.

Organisation of subjects/disciplines

The National Curriculum Guideline for Early Childhood Education proposes a structure divided into two areas of the child's experience:

- Personal and social training
- Knowledge of the world, made up of the following areas of study: Identity and Autonomy, Movement, Visual Arts, Music, Oral and Written Language, Nature and Society, and Mathematics.

8.2.2.2 Primary Education

Primary education is provided for about 36 million pupils from 7 to 14 years of age, is compulsory, mainly public, free and provision is shared between state and municipal authorities.

General principles

In accordance with the LDB, primary education in Brazil aims to achieve the basic training of the citizen by means of:

- developing the capacity for learning, having in mind the acquisition of knowledge, abilities and the forming of attitudes and values;
- developing the ability to learn, taking as basic means the full mastery of reading, writing and calculating;
- understanding the natural and social environment, the political system, technology, arts and the values on which society is founded;

- strengthening family links and the ties of human solidarity and mutual tolerance on which social life is based.

In the PCNs, the proposal for the organisation of knowledge fits in with the requirement of Article 26 of the LDB:
"Curricula of primary and secondary education should have a common national base which is complemented in each education system and school, by a differentiated section attending to the regional and local characteristics of the society, its culture, economic life and target groups."

The various paragraphs of this article present the general guidelines for the organisation of curricula:

- *"they must include study of Portuguese language and mathematics, knowledge of the physical and natural world and the realities of society and politics, especially of Brazil",*
- *"art education will be a compulsory part of the curriculum at the various levels of basic education in order to promote pupils' cultural development",*
- *"physical education, included in the school's teaching programme, is part of the basic education curriculum, being adapted to age ranges and conditions of the school population, while being optional at night-school",*
- *"teaching of Brazilian history will take into account the contributions of different cultures and ethnic groups to the formation of the Brazilian people, especially that of indigenous, African and European sources",*
- *in the diversified part of the curriculum shall be compulsorily included, after 5th grade, the teaching of at least one modern foreign language, choice of which will be made by the school community, according to the institution's capacity".*

It is clear that the LDB expresses the need to work in various areas in order to supply a complete education for pupils with regard to classical knowledge and social and political realities, with a special focus on the history of Brazil, given the importance of knowing our constituent origins and feeling a sense of belonging to the nation. The LDB explains also the need to have a common knowledge base for all and to deal with questions specific to each region. It is from this perspective that the PCNs were organised in inter-disciplinary areas and themes, foreseeing the treatment of particular regional aspects.

Basic experiments

In recent years experiments in implementing curriculum proposals have been carried out in various Brazilian states and municipalities. These proposals, supported by studies and research from various backgrounds (Piaget, Vallon, Paulo Freire, Vygotsky, among others), have come to have an influence on classroom practice. With regard to specific items in the areas of knowledge, experiments have also been happening: studies on psychogenesis of written language and number, theories on conceptual fields, new paradigms of evaluation, had all been shaping a new scenario for discussion of questions about teaching and learning which have been put into practice in different ways by public schools and by some private schools. In conferences, seminars and forums, these experiments were disseminated and also served as a basis for elaborating the National Curriculum Parameters and Guidelines.

Selection of knowledge content

The areas of knowledge defined by the PCNs are: Portuguese language, a foreign language, Mathematics, Natural Sciences, History, Geography, Arts and Physical Education. With regard to these areas, the curriculum guidelines for primary education attempt to make a profile of content, starting from a broad approach and progressing to more specific details.

The different areas, the content selected in each of them and the inter-disciplinary treatment of social questions constitute a wide and pluralistic representation of the areas of knowledge and culture of our time, the acquisition of which contributes to developing the capacities set out in the general objectives.

The treatment of the area and its content makes up a series of items of knowledge of various disciplines that contribute to building the instruments of understanding and participation in the realities of the pupils' lives.

The conception of the area shows the nature of the content dealt with, clearly defining the body of knowledge and the object of learning, helping pupils construct representations of what they are studying. This description of the area is also important because teachers can identify themselves within a defined and conceptualised set of knowledge items (which they hope the pupils will learn), a necessary condition for giving directions to help achieve successful learning.

All through school, thanks to advances already achieved in the fields of knowledge and the possibilities for learning on the part of the pupils, selection and structuring of content moves in the direction of subject-based organisation, that is, towards the methods of study and internal structure of each subject.

In all areas attempts have been made to show the social dimension that learning fulfils during the process of building citizenship. For this reason content that is socially relevant and potentially meaningful for the development of affective, cognitive, motor, ethical, aesthetic and interactional skills and social inclusion was chosen.

Subjects/disciplines

Primary education lasts for 8 school years, each of which has 200 teaching days in 40 weeks of the year. The first four grades have classes where a single teacher is responsible for the development of the content of Portuguese language, mathematics, natural sciences, history, geography, art and physical education.

After 5th grade, teaching is carried out by specialist teachers in the different teaching areas. Besides the subjects already mentioned above, this stage includes teaching of foreign languages.

Both in the first and the final four grades of primary education, there is an emphasis on Portuguese language and Mathematics in the timetable.

Inter-disciplinary perspective

In accordance with the proposal of the PCNs, primary education should also deal with questions concerning Brazilian society, such as those dealing with ethics, the environment, sex education, cultural pluralism, health, work and consumption or other topics that have relevance.

Special education and curriculum adaptations

According to articles 26 and 27 of the LDB, curricula should have a common national base, supplemented and complemented by a differentiated part that responds to the characteristics of the students.

In very special cases, in which the learner with serious mental and/or multiple handicaps, cannot benefit from a curriculum which formally includes the common national basic elements, a special curriculum should be proposed, to attend to these special needs.

The special curriculum - both in early childhood education and in the first grades of primary education - is characterised by the functional and pragmatic nature of the activities proposed.

Pupils with serious mental or multiple disabilities spend, in the great majority of cases, a long time in school without showing the educational results set out in Section I of Article 32 of the LDB: *"development of the ability to learn, taking as basic means the full mastery of reading, writing and calculating!'.*

In this case, and if all the possibilities mentioned in Article 24 of the LDB have been exhausted, these pupils can receive a certificate of completion of schooling called 'Specific Terminality' (Specific Terminality therefore, *is a certificate of completion of schooling with a school record that shows, in descriptive form, abilities developed by learners whose special needs, arising from a serious mental or multiple disability, do not allow them to reach the level of knowledge required for completion of primary education, according to the existing legislation, after exhausted all possibilities set out in article 24 of Law 9,394/96, and in accordance with the regime and teaching programme of the school).*

This certificate of schooling should open up new educational alternatives such as directing learners towards adult education and work-preparation courses, vocational courses and entry into the labour market, be it the competitive area or not.

Special Education for Work is an alternative that seeks to integrate the disabled learner into society by offering vocational training. It is carried out by adapting work-preparation programmes and vocational education to create access for those with special educational needs on courses at the basic, technical and technological levels, which in turn give access to the formal or informal labour market. Adaptations are carried out by means of:

- adapting teaching resources: teaching materials, equipment, curriculum and others;
- staff training: teachers, instructors and specialised professionals;
- removing architectural obstacles.

Special Education for Work can be effected in special schools, whether public or not, in pre-vocational or vocational workshops, in vocational schools and in other similar institutions.

Articles 3 and 4 of Decree No. 2,208/97 provide for the inclusion of pupils on basic level vocational education courses irrespective of previous education. Thus, learners with special needs may also benefit from these courses, becoming qualified to carry out the functions required by the world of work.

Special Education for Work for pupils who cannot be integrated to the vocational courses mentioned above should be provided in sheltered vocational workshops, aiming at the non-competitive inclusion in the labour market.

8.2.2.3 Adult Education

Adult education (EJA) serves about three million students and stimulates the institutionalisation, for those aged 15 and over, of primary and secondary education. The provision endeavours to teach literacy and give general education by means of quite different types of courses structured in modules, cycles or stages, in general corresponding to one year for every two grades, since it takes into account experience and previous knowledge on the part of the students.

Both in the 1st-4th grades and the 5th-8th grades, students are evaluated and study in the appropriate stage. 'Supplementary examinations' are also offered by the education systems, which are subject-based examinations, open to all and completely free. As well as being offered by state and municipal systems, adult education, especially literacy courses, is provided by NGOs, firms and community institutions.

The teaching systems have to define, in their context, the structure, curriculum, teaching proposal and appropriate monitoring for adult education, based on the curriculum guidelines for primary and secondary education.

Adult education in Brazil has, in recent years, made great advances in consolidating itself in terms of public policy. Because of this, the institutionalisation of this sector has also been increased and for this reason the training of young and adult learners and their teachers has been discussed, re-thought and re-organised in order to fulfil more efficiently the learning needs of this target group.

According to School Census data for 1999, more than three million young and adult students were taught in classroom programmes, with evaluation in this process. (The School Census does not include innumerable courses which do not include evaluations, offered mainly by NGOs, or those offered by distance learning).

According to present statistics, the greatest number of illiterates and of people with the lowest levels of education are found among the older population in the less developed regions, mainly in rural areas, and coming of Afro-Brazilian origin.

In this context, adult education represents an unpaid social debt to those who have not had access to and have not mastered reading and writing as social benefits, either in school or outside it, and who have constituted the workforce used in the country's development. Being deprived of access to school education is, in fact, the loss of an essential instrument that helps the individual to be a significant presence in modern social life.

According to the National Curriculum Guidelines, adult education has three functions: reparation, equalisation and qualification.

The reparation function refers not only to the entry of young people and adults into the circuit of civil rights by restoring a right that was denied to them: the right to a good-quality school. It is also the recognition of the ontological equality of each and every human being to have access to a real, social and symbolically important benefit. However, it is important not to confuse the notion of reparation with that of supply. For this, it is necessary to have a teaching model that creates teaching situations capable of satisfying the specific learning needs of young people and adults.

The equalisation function is related to equality of opportunities that provide people with the possibility of entering the world of work, social life, aesthetic areas and channels of social participation. Equity is the way in which social goods are distributed in order to ensure re-distribution and allocation, with a view to more equality, given specific situations. In this sense, adult education represents a promise to provide a means of development for all people of all ages. Within the educational world, adolescents, young people, adults and the elderly will be able to up-date their knowledge, demonstrate abilities, exchange experiences and have access to new areas of work and culture.

The qualification function is the permanent one and, more than just a function, it is the real meaning of adult education. It refers to lifelong education, with its base in the incomplete nature of the human being, whose potential for development and accommodation may be brought up to date within the school setting or outside it.

General Principles

Political and Legal

- honouring the social debt owed to millions of Brazilians who have not had access to school or were forced to leave it early;
- education as a right;
- institutionalisation as public policy in education systems, integrating policies in primary and secondary education;
- expansion of provision and quality of teaching;
- flexibility in teaching plans to achieve pupils' progress without sacrificing quality;
- international recommendations (CONFITEA);
- the 1988 Federal Constitution;
- the National Curriculum Guidelines for Adult Education.

Socio-cultural

- singularities and characteristics of the target groups;
- singularities of the context in which pupils live.

Epistemological/Pedagogical

- pupils' previous knowledge and world view;
- psychogenesis of the adult/knowledge-building;
- appropriate methodology for young people and adults;
- concepts to be developed by the curricula: to know, to know how, to be and to live together.

In accordance with the CONFITEA international recommendations, adult education should have as its principles:

- Inclusion in an innovative, high-quality educational model aimed at training democratic citizens, subject to democratic rules, with the services of teachers who have continuos training to back up the quality of their work.
- Varied curriculum that respects ethnic diversity, containing aspects of regional and popular culture, whose content is planned as a social construct based on interaction between theory and practice and the process of teaching and learning is seen in terms of widening knowledge.
- Coverage of basic content, making use of the socio-cultural benefits accumulated by humankind.
- Modern communication technologies available to improve teachers' performance.
- Articulation of adult education with vocational training.
- Respect for knowledge constructed by young people and adults in their daily lives.

Basic Hypotheses

Young people and adults who are illiterate or have little education make up a homogeneous group from the socio-economic point of view. They belong to the least favoured classes in society and left school or were excluded from it because of the need to work for their subsistence.

From the socio-cultural point of view, young people and adults are a heterogeneous group, performing different kinds of jobs. Many attend school for a time, but this period of schooling often does not determine their abilities.

In modern psychology, the adult phase is understood as a continuity of the developmental process begun in childhood and adolescence. Thus, from the point of view of psychological development, the adult stage is understood as being capable of change and processes of adaptation, and is not considered as a stable phase, but rather one of continuity of psychological development.

Young people and adults who enter or return to school generally have questions about their self-image and have a long history that includes 'school failure', low self-esteem, a stereotyped idea of school and learning. Inability to read and write conventionally makes them vulnerable both emotionally and cognitively, since they are 'excluded' from the literate world. They generally claim to know nothing even when they show evidence of considerable knowledge.

The model of the school that illiterate or less-educated young people and adults have, is related to a school where activities basically consisted of making copies and calculations, receiving reading books and learning to read. Learning to express their

opinions, listening to opinions of other students, listening to stories, writing, even if not in a conventional way, reading, even if it is only the title of a text, reading problems and solving them, glancing through a newspaper, reading the news, etc., are not characteristic of the school model they are familiar with. The model they usually have in mind interferes with their adaptation to learning once more, but the educator must understand this process in order to be able to help them understand the new idea of school that is being offered to them.

Basic Theories

The theoretical basis underpinning the teaching and learning process in the pedagogical practices of adult education involves a model of teaching by problem-solving; using different methodological strategies for learning different types of content; significant learning that should start from students' prior knowledge; interaction between peers and more experienced partners.

Students build their knowledge by interacting within their social context, even without attending formal education. It is essential to value this knowledge and relate it to new content in order to gain significant knowledge. The deeper and better the relationships established, the greater is the significance of the learning.

New content should be meaningful, scientifically well constructed, be functional, and take into account students' abilities and their cognitive and affective potential.

This content should be re-labelled in order to regain its importance in the teaching and learning process, with cultural knowledge understood as: concepts, explanations, skills, languages, facts, values, beliefs, feelings, attitudes, interests, behaviour, reasoning, etc. so as to develop the learners and their overall education. Re-labelling content requires an understanding of what the learner should know, should know how to do and how it should be done.

Basic Experiments

- Research based on psychogenesis of written language
- Studies developed from the principles of Paulo Freire.

Experiments carried out by Paulo Freire in the 1960s respected knowledge constructed outside school by young people and adults and considered this knowledge to be a starting-point for new knowledge. In these experiments there was a preoccupation with learners' linguistic repertoire, and it was said that "reading the world comes before reading the word".

This knowledge content is the starting-point for producing new knowledge. Therefore, when they come to school, young people and adults are not "empty" as the school sometimes believes.

Writing, like any human invention, is a cultural object. It is the consequence of needs that have arisen as mankind has dealt with its world. The alphabet is also a producer of culture and thus has to be considered in the literacy process. This must be

thought of not as a mere memory exercise, but as active learning carried out through the act of thinking.

As a cultural producer and bearer of knowledge, the student learns to read and write based on "the reading of the world" which he could already do even when illiterate.

Educator and learner, both have their own knowledge but they will never be ready and complete, they do not know everything. This situation places the educator and the learner in a position of equality that is essential for a dialogue to exist.

It is through dialogue that teacher and student exchange their knowledge and stir each other's interest in their aims: learning to read and write.

The authoritarian model distances the teacher from the learner and hinders the production of knowledge, since it hinders dialogue and only permits orders which, coming "from above", do not stimulate the reflection that creates knowledge.

Education, as defined by Freire, sees knowledge as the most efficient instrument in the world for human action. This action always has a label: change or continuity. Therefore it is never a neutral act. Literacy for the poorest is what gives the illiterate strength and the capacity to understand, which uses language and writing to reflect reality and to reveal what is not yet within their knowledge systems.

In the 1980s we have had the contributions of Emilia Ferrero and Ana Teberovsky, who introduce a new way of understanding the process by which pupils learn to write. One of Ferrero's studies also supplies information about the writing systems of less-educated or illiterate adults.

From these studies, we can see that learning to read and write starts very early; contact with the literate world develops knowledge about what writing is and what it does; adults teach themselves to write through contact with many texts (many words and letters) because this contact allows them to establish ideas/hypotheses about how to write.

For adults to learn the language it is necessary to permit their intelligence to act on the written language that they want to understand and explain. Trying to explain to themselves how the written word is organised, the literacy student faces problems and by solving them, learns to write and to read. And it is this action that produces knowledge.

It is important to emphasise that adult education involves the participation of a great variety of government and non-government bodies, which has made it possible to carry out many successful experiments on a national basis.

The Ministry of Education supplies support materials developed by NGOs, such as Educational Action in São Paulo, to state and municipal secretariats of education and adult education teachers, in order to contribute to and help develop local curriculum projects and proposals.

Selection of knowledge content

- Spoken language (active listening and production of oral work).
- Written language (reading and production of texts).
- Analysis of and reflection on language.

- Decimal system.
- The four operations.
- Geometry.
- Dealing with information (graphs and tables).
- Social sciences.
- Natural sciences.

Selection of knowledge content should be planned using the same criteria as those of primary education from 1st to 8th grades, the only difference being consideration of the length of time spent in school and the specific needs of those studying in adult education.

The content selected should enable learners at this level to be able to:
- use the basic instruments of the literate world that will enable them to understand better and participate in the world in which they live;
- join the world of work in a better position to perform and participate in the distribution of the wealth produced;
- know and value the cultural diversity of Brazil, respect differences of gender, age, race and religion, and create non-discriminatory attitudes;
- increase their self-esteem, strengthen confidence in their own ability to learn, value education as a means of personal and social development;
- recognise and value scientific and historical knowledge as well as literary and artistic production as human cultural heritage;
- exercise personal autonomy with responsibility, improving ways of living in different social areas.

Organisation of subjects and disciplines

The curriculum proposal for grades 1-4 in adult education requires the study of three areas: Portuguese language, Mathematics and Social and Natural Studies. All areas of study and cross-curricular themes, however, must be considered as stated in the 1st-4th grade PCNs.

For grades 5-8, the PCNs of the 5th-8th grades are used as references for the areas of Portuguese language, a foreign language, Mathematics, Natural Sciences, Geography, History, the Arts and Physical Education.

8.2.2.4 Indigenous Education

Indigenous education is provided for about 77 thousand pupils from 1st-4th grades, with fewer than a hundred schools offering 5th-8th grades. Teaching is public and free.

Age groups vary in indigenous schools and are different in each community. There are variations in individual cases, but children, young people and adults may go to the same school or the same level of education, at the same times on different days or periods of the day.

Most indigenous schools are identified as "rural schools", with school calendars and course plans typical of these schools. It is still common for indigenous schools to be thought of as extension classrooms or rooms adjoining a non-indigenous school.

Almost none of the indian teachers have had conventional teacher training. They are knowledgeable about their own culture and have little knowledge of Portuguese and the other areas of content that are considered to be school subjects. Non-indian teachers, even with training qualifications, do not have this knowledge of the indian way of life, which hinders the educational process. The guidelines for training these teachers are recent and are still in the process of being put into place which, in the medium term, will change the present situation.

General principles

The general principles of indigenous formal education are based on the multi-ethnicity, plurality and cultural and linguistic diversity of Brazil's indigenous societies. There are about 210 peoples, speaking 170 different languages.

Respect for the right to be different is enshrined in the 1988 Federal Constitution. The National LDB also guarantees indigenous peoples the right to a formal education. Recently, a resolution by the National Council of Education established National Guidelines for Indigenous Formal Education, creating the category of Indigenous School.

Finally, school institutions in the indigenous community have been founded on principles that are relevant to them, among which we may quote: relationships of cooperation and interchange, obligations of reciprocity between groups that make up societies, individual ideas formed within the culture concerning the person and his or her attributes, capacities and qualities and the training of children and young people as an integrated process in spite of their many individual characteristics.

Basic hypotheses

In Brazil today there are about 210 indigenous societies, each with different cultural traditions and histories. Thus, those attending indigenous schools live in different situations of mult-lingualism. Indigenous formal education should, therefore, be based on respect for the culture of each people, encouraging interchanges between the different communities, promoting the preservation of language, customs and singularities.

Basic theories

Anthropological and linguistic theories associated with the new pedagogical concepts concerning knowledge construction, which focus on the need for respect for each individual's knowledge, have guided the indigenous educational process.

All the work of the indigenous school is designed on the principle of recognising the socio-cultural and linguistic diversity of indigenous societies and their preservation.

Basic Experiments

Several projects are being run by universities which are working in indigenous areas. As well as these government experiments, attention should be drawn to indigenous

teacher training programmes developed by indigenous organisations and indian support organisations.

These projects are systematically monitored and evaluated to ensure that they are constantly being adapted to the needs of indigenous communities, which take an active part in the process.

Selection of knowledge content

Indigenous peoples, have their own methods for transmitting knowledge and socialization, outside the school system. The institution of the school is the historical result of contact these peoples have had with sectors of national society. Thus it is necessary to make a clear distinction between the terms 'indigenous education' and 'indigenous formal education'.

In terms of indigenous formal education, the school has assumed different roles over the years, from the most traditional forms of imposition of existing models to the most modern models, demanded by the indians. Current thinking is that activities developed in indigenous schools should not be compartmentalised. Content should be developed in a global and integrated way that allows learners to give its own meaning and to work on it in order to construct knowledge. To this end dialogue is fundamental, as is the involvement and commitment of the respective indigenous groups - pupils, teachers and communities - with regard to literacy and educational proposals, acting as agents and co-authors of the whole process.

The context and socio-cultural practices of each indigenous society should be the basis for curriculum design in indigenous schools. The whole curriculum should be developed and defined so as to guarantee the teaching and learning process is placed in a wider context of understanding the real world.

Organisation of subjects/disciplines

Various subjects/disciplines have been the focus of training courses for indigenous teachers, among them: Portuguese language, Indian Languages, Mathematics, Biology, Physics, Chemistry, Geography, History, indigenous teaching, reflective practices, introduction to research methods, environmental education, independent studies and supervised work placements.

Within the indigenous school there exists a process of authorship in which learners take, in a natural, automatic way, an active role in the whole process of learning at the same time as the same relationship is established in specific social and historical contexts. In this way, curriculum content in indigenous schools is studied in an interdisciplinary way.

Inter-disciplinary perspective

The indigenous teacher plans his or her objectives bearing in mind the various types of knowledge learners should acquire, and ways in which to teach them, knowing that each pupil has his or her own rhythm of learning. In this sense, the objectives will take account not only of cultural diversity, the basis of the idea of inter-culturality that underlies the general foundations, but also individual differences within the same school.

In this process of inter-disciplinary teaching, both the knowledge coming from **a** particular people and knowledge brought by the school culture on the same topic, are present. The study of Mathematics and/or Portuguese cannot exist in isolation, but does so in constant integration of the different content.

8.3 Teaching and Learning Strategies

8.3.1 Teaching and learning methodology to encourage active learner participation

8.3.1.1 Problem-solving

It is relatively recently that attention has been paid to the fact that the pupil is the agent of the construction of his or her knowledge by means of connections established with prior knowledge, in a problem-solving context.

Even so, there are ever more experiments concerning teaching and learning in the different knowledge areas, based on problem-solving, in which the learner builds concepts, procedures and even attitudes, through involvement in challenging situations where he or she builds hypotheses, tests them, validates them or disproves them and draws conclusions.

In this perspective of work in which the learner is seen as a protagonist in the building of his or her knowledge, the role of the teacher takes on new dimensions. An important facet of this role is that of the organiser of learning; in order to carry out this role, as well as being aware of the socio-cultural conditions, expectations and cognitive competence of the learners, the teacher needs to choose problems that allow for the construction of concepts and procedures and to nourish the resolution processes that arise, always bearing in mind the objectives it is intended to achieve. In addition to this, he or she acts as a guide to learning.

8.3.1.2 Use of Information and Communication Technologies and other Teaching Resources

Although it does not appear as a means of teaching, the use of information and communication technologies - such as the computer, calculator, video, etc. - has come to have an important position alongside the other didactic resources already incorporated into teachers' pedagogic practice (teaching materials such as games and the so-called concrete manipulation materials).

It is worth pointing out, however, that the use of new technologies should not be seen only as a pedagogic innovation - using new methods and instruments. It is necessary to know in what ways different technological resources can contribute to education, that is, to identify when, why and how technology can help teaching. Only in this way can technological resources be put at the service of teaching aims.

Incorporating technological resources into teaching is not, on its own, a guarantee of better quality in education. The use of the videocassette, television, calculator and even microcomputers, is not synonymous with transforming teaching practice, since it could come to represent simply the incorporation of new technological resources

while at the same time maintaining the pattern of the traditional school as its basic premise.

8.3.1.3 Implementation of the PCNs and continuing training of teachers

To help the Secretariats of Education in their task of introducing the curriculum guidelines for the use of teachers, the Secretariat for Primary Education (SEF/MEC) has been developing, since July, 1999, the 'PCNs in Action' programme.

This is a wide-ranging programme. In the first phase about 2,000 municipalities took part and SEF/MEC trained about 17,000 educators to act as general and group coordinators to promote activities involving collective study and discussion based on the National Curriculum Parameters and Guidelines.

This programme encourages a guided reading of the PCNs, seeking to establish relationships with the work of teachers in the classroom, as an act of continuous training. The idea is that teachers can use the materials produced by MEC to help them face the challenges they meet in their work and thus develop their professional competencies.

The "PCNs in Action" programme is based on a collection of printed materials with modules containing activities aimed at the different educational sectors: early childhood education, 1st-4th grades, 5th-8th grades, adult education and literacy classes.

The modules are made up of activities aimed at being developed with groups of teachers, providing experiences of group work, exchange of experiences and studies explicitly geared towards training.

The training methodologies used try to broaden the understanding of teachers about the main problems found in their work, to develop conceptions concerning school that have been built on their professional and personal experiences, to consider the specific nature of their teaching practices, to reflect on their attitudes towards pupils, to discuss new ideas about teaching and learning in subject areas, to solve problem situations in daily school life and to think about the social function of the school.

Another striking and important aspect of the programme is that its development takes place in working groups, with teachers creating a collective working practice which may become permanent. This is not a course that has an end: these are working groups that should also include discussions and decisions suggested by teachers as part of their professional activities.

This is a partnership action. Besides providing the printed material, MEC is responsible for organising the first training meeting of the programme local coordinators (1st stage) and to advise on its development (2nd stage). To fulfil this advisory role, SEF organised a National Network of Trainers (RNF) to work on the training and advising the team from the Secretariats of Education.

Secretariats of Education participating in 'PCNs in Action' select and indicate, according to criteria established by the programme, the general and group co-

ordinators, provide the physical conditions, infrastructure, planning and carrying out of the programme.

It is hoped that by means of this programme, a contribution can be made to practices of permanent professional development of teachers, as it allows:

- Identification and strengthening of reference groups inside and outside of Secretariats of Education, who can give local support to training activities.
- Articulation of various programmes to optimise and empower teacher training practices.
- Experience of group work and of different training methods.
- Creation of working areas that may become permanent within education systems.
- Discussion with teachers about the present prospects regarding primary education.

The Training Programme for Literacy Teachers that was recently launched, is a proposal to be carried out in partnership with state and municipal secretariats of education, universities and public and private teacher training schools, as well as interested NGOs. It involves a joint effort to revive the commitment of the school to initial training of the pupil as a reader and text-producer. Through this programme, MEC hopes to assist, in theoretical, methodological and organisational terms, the teacher's work by giving it a collective and institutional dimension.

It involves an annual training course aimed especially at teachers who are teaching reading and writing in early childhood education and in primary school, both to children and to young people and adults. As well as literacy teachers, the target population of the programme, it is open to other educational professionals who wish to increase their knowledge about the early teaching and learning of reading and writing.

The course aims are to develop the professional skills needed by all teachers of reading and writing. By means of this project, the possibility will be offered to create a favourable context for building the professional skills and knowledge needed by all teachers of literacy. There are two recurrent themes in the programme: how the learning processes of reading and writing happen, and, using this knowledge, how to organise teaching situations suitable to the pupils' learning needs that have been suggested by the problem-solving methodological model.

From the didactic point of view, the general questions that permeate these two themes, and which are organised around the theme of classroom management, are the following: constructing learners' intellectual autonomy; dealing with classroom diversity; interaction and co-operation; willingness to learn; rational organisation of time and space; selection of materials suitable for developing work; management of learning objectives and pupil success; and bringing as close together as possible the 'school version' and the 'social version' of the practices and knowledge that are turned into school content.

The course lasts for a total of 160 hours distributed in three modules, with 75% of the time devoted to group training and 25% to personal work (study and writing texts and materials to be discussed in the group or handed to the co-ordinator for evaluation).

The proposal consists of carrying out weekly meetings lasting three hours with one hour for individual work, during 40 weeks.

> Using the Training Programme for Literacy Teachers involves a Technical Cooperation Agreement in which MEC and Secretariats of Education, universities, teacher training institutions or NGOs establish the bases of partnership that will turn it into reality.

8.4 Evaluation Policies and Instruments

The pupil's progress is decided by the schools, especially by their Class and/or Grade Councils as a result of the regulations contained in the schools' rules as directed and overseen by the state/municipal secretariats of education under whose jurisdiction they come.

The LDB points out that checking on school performance must take as criteria:

- Continuous and cumulative assessment of the pupil's performance, emphasising qualitative over quantitative aspects and results over time over those obtained in final examinations.
- Possibility of 'catch-up' lessons for pupils who are behind in school.
- Credit for studies successfully completed.
- Compulsory remedial lessons parallel to teaching times.
- Requirement of at least 75% attendance to promotion.

Up to the present time, there has not existed in Brazil a rigid system regulating the revision or modification of curricular norms. However, during the process of discussing the curriculum parameters and guidelines described in this report, this aspect was frequently mentioned. There is a reasonable consensus concerning the need to systematically follow the implementation of this curricular guidance and to evaluate the results obtained in order to indicate what changes should be made as well as those arising from the production of knowledge in the educational area and from the new social demands that are bringing new challenges to the school curriculum.

8.4.1. The National Basic Education Evaluation System - SAEB

The National Basic Education Evaluation System (SAEB), implemented since 1990 with the support of municipal and state secretariats of education, is the most important instrument for evaluation of basic education in Brazil.

The survey is implemented every other year, on a probabilistic sample of the 27 Brazilian states. The System aims at assessing the students' knowledge and abilities, through the administration of tests, as well as the contextual and school factors (such as school facilities, principals' profile, school management mechanisms, teachers' and students' profile) that affect education quality, through the administration of questionnaires.

The analysis of SAEB results allows the monitoring of the evolution of students' performance and of the several aspects and factors related to the quality and

effectivity of education. It provides subsidies for the formulation, reformulation and monitoring of public policies, thus contributing to the universalization, quality improvement, equity and eficiency of Brazilian education.

Since it was first implemented, SAEB's sample has been expanded. Until 1993, it included only the public education network. From 1995 on, it came to include also the private school network, therefore representing the whole of the Brazilian education system.

Currently, tests and questionnaires are administered to 4th, 8th and 11* graders. Questionnaires are also administered to their teachers and to the principals of the schools participating in the sample.

Regarding the subjects included in SAEB, its initial editions only assessed content of Portuguese language, Mathematics and Sciences. In 1999, History and Geography were also assessed.

Also, in 1995 the data collection and analysis methodologies were improved so as to allow the comparability of results among the different years.

In fact, the development of SAEB represents significative advances in the monitoring of the transformations Brazilian education has been going through.

8.4.2 Remedial teaching programmes

The case of low-achieving pupils is covered by the legislation, which requires obligatory provision of remedial lessons given parallel to the teaching period. Schools themselves are responsible for this task. However, in recent years **a** programme called 'Accelerated Learning' has been created by MEC with a view to increasing the possibilities for a school career more appropriate to the needs of pupils whose age is out of phase with the grade they are in. It is a way of guaranteeing that the school will carry out its social duty by avoiding the situation in which young people are increasingly excluded from the educational process and deprived of access to the cultural benefits everyone has a right to.

The programme was launched by MEC in 1997. It is aimed at pupils in the 1st-4th grades who are more than two years out of phase with their grade, and is supported by the LDB. The Accelerated Learning Programme was formulated to support teaching systems in states, municipalities and the Federal District in their struggle against the problem of repetition and drop-out in the initial grades of primary education. For the execution of this programme the following actions were taken:

- Announcement and distribution of a kit to the states, containing the materials for the Accelerated Learning Programme..
- Agreements between MEC and those states and municipalities and the Federal District which were interested in carrying out the Accelerated Learning Programme, for the reproduction of the material mentioned and the training of teachers who will work in the programme.

To guarantee the quality of the process, the programme requires the involvement of educational managers who must generate the conditions necessary for its

implementation. In order to set it up, the education system that is interested, as well as submitting a proposal for accelerated learning to the State Education Council (in the case of a state) or to the Municipal Education Council (in the case of a municipality), must also send the project to MEC. The norms for designing a project require the following aspects to be considered:

- Diagnosis of the age/grade gap situation
- Pedagogical proposal
- Evaluation procedure to be developed
- Process of choosing teachers
- Process of training teachers

In this way it is hoped that the programme will take shape as an effective qualitative change in the school's teaching plan, involving Secretariats of Education, the school's staff and the community.

Although the Accelerated Learning Programme was only launched three years ago, it is already being used by various states and municipalities. After a relatively timid start in 1997, when only 112 bodies joined the scheme, the programme has grown rapidly since 1998, when this number increased to 719. Taking the total number of memberships in the three years of the programme's existence, 48 agreements were signed with state secretariats, 1,755 with municipal governments and one with an NGO, totalling 1,804 agreements.

Research undertaken to monitor the installation of 'catch-up' classes between the years 1997-1999 showed that the average number of pupils per class is about 25. In most cases (78%), the 'catch-up' classes are only held in the morning and/or afternoon periods. It should be noted that these periods are, in fact, those best suited for offering this kind of provision considering that the 'catch-up' classes in question are for 1st-4th grades.

Research was also done into the age groups provided for. The focus of interest was the upper age limit of pupils attending 'catch-up' classes. About 52% of the secretariats that replied to the questionnaire showed 12-16 years as being the oldest pupils attending their 'catch-up' classes. This means that in the majority of cases, pupils attending 1st-4th grade 'catch-up' classes have a maximum age-grade mismatch of nine years (assuming a 16-year-old pupil who is in 1st grade). However, 13% said they had students of up to 18 years of age and 13% reported providing for pupils up to 19 and over. Those that did not reply or have not yet given an upper limit, are in the proportion of 22%. Thus the data show that often young people and adults are being catered for in 'catch-up' classes in the 1st-4th grades. It is important to discuss this overlap because it is known that the specific nature of adult education demands different procedures and materials from those used in the Accelerated Learning Programme. With regard to the main difficulties met in setting up the Accelerated Learning Programme, the following results were found:

Difficulties met in setting up 'Catch-up Classes'	Nº of cases	%
Operating/administering the programme	**240**	48.3
Insufficient or inadequate technical and/or pedagogical support	**58**	11.7
Difficulties in re-organising physical and human resources	**47**	**9.5**
Delays in setting up the programme.	**46**	**9.3**
Operational difficulties in reproducing teaching material	**41**	**8.2**
Resistance and initial doubts because of being a new programme	**27**	**5.4**
Difficulties concerning legislation/documentation	**21**	**4.2**
Difficuties attributed to learners	**185**	37.2
Problems of discipline and motivation	**76**	15.3
Insufficient knowledge/learning difficulties	**41**	**8.2**
Drop-out/absenteeism	**36**	**7.2**
Difficulty in handling mixed-ability groups	**27**	**5.4**
Socio-economic conditions of learners	**5**	**1.0**
Lack of material resources	**181**	36.4
Insufficient financial resources.	**64**	12.9
Lack of physical infrastructure.	**59**	11.9
Insufficient or inadequate teaching material.	**58**	11.7
Difficuties in overcoming resistance in the school and the community	**138**	27.8
Increasing awareness among parents and the community in general.	**72**	14.5
Adaptation to the new methodology	**43**	**8.7**
Integration of the programme in the school as a whole	**23**	**4.6**
Lack of available teachers with an appropriate background	**84**	16.9
Other	**42**	**8.5**
No difficulty	**26**	**5.2**

Putting together all those who cited some difficulty, 88.4% of the secretariats of education claimed to have confronted some kind of problem in setting up the Accelerated Learning Programme, which is to be expected, since we are dealing with a new programme. It is important to point out that the challenges do not seem to have discouraged the state and municipal secretariats involved since, as Prado[8] emphasises, membership of the Programme recorded in the last three years leads us to believe that the concept of accelerated learning has already been legitimised and its importance widely recognised. But there is still much to do. It is important that the

[8] Prado, Iara Glória de Areias (2000). LDB e Políticas de Correção de Fluxo Escolar. In **Aberto, v. 17, n. 71, p.** 49-56.

results of this first evaluation be used in the discussion of the programme's future, a discussion that must necessarily include reflection on questions such as the roots of school failure, pedagogical-curricular organisation of the school, teacher training and involvement of the school community.

8.5 Changes and Adaptations in Educational Content

The state of education in Brazil is still not satisfactory, either from the point of view of equity or in relation to some of its qualitative and quantitative indicators. Comparisons with other countries in a similar state of development show Brazil at a disadvantage in the area of education. Nevertheless, analysis of the Brazil Education System's recent performance indicates considerable and consistent advances towards overcoming the national educational deficit.

As well as reflecting regional inequalities and differences related to gender and race, the unequal state of the country's education shows the results of the process of extreme concentration of wealth and high levels of poverty.

We cannot fail to take into account, naturally, that in today's Brazil, deep social division resulting from unequal wealth distribution has prevented a large part of the population from taking advantage of their rights and fundamental interests, such as the right to education.

On the other hand, it is possible to see that the issue of citizenship and community problems are not present in the daily life of the school. In general the school has not succeeded in creating links between the classroom and society. As a consequence, parents, community, society and, principally, pupils do not see much sense in school. Although it has traditionally been valued as an institution by the Brazilian people, school will lose its credibility if it does not bring about rapid changes that will place it once more in the situation of an educational agency *par excellence,* dedicated to constructing a conscious, active and real state of citizenship.

If it limits itself to always transmitting elements of knowledge, sometimes of questionable relevance and rather rudimentary in form, the school will become increasingly obsolete, especially in the face of the growth in new information technologies; the skills offered are inadequate to enable pupils to understand the changes going on around them and interpret the avalanche of information they meet daily.

As a natural space for social interaction, school has also lost this function; it is often seen as an extraneous body living off the community; isolated behind high walls, bars and padlocks. It looks more like a prison than a place where people live together, cooperate, build their identities, preserve their traditions and respect pluralism.

Today's Brazilian society demands high-quality education, that is, an education relevant to their social, political and economic needs and which caters for the interests and motivations of all pupils and guarantees all of them the knowledge

essential for the shaping of autonomous, critical and participating citizens able to act with competence, dignity and responsibility in their society.

Brazilian society is worried today about the large number of young people who, even though they have some schooling, are ill-prepared to understand the world in which they live and to act in that world in a critical, responsible and transforming way and, particularly, to be absorbed by an unstable, vague and ever more demanding labour market.

As has been described already, teams of educators (university lecturers, researchers and teachers with long and good experience in classrooms) have formulated the preliminary curriculum guidelines on a national level. The preliminary documents were sent for review and have received the criticism and suggestions of university lecturers, classroom teachers, researchers and experts who work in the educational teams of the secretariats of education.

As a result of these analyses, the final version of the document was reformulated before being sent not only to secretariats of education and training institutions, but also to teachers:

Curriculum Parameters - 1st - 4th grades	750,000 copies
Curriculum Parameters - 5th - 8th grades	730,000 copies
Curriculum Guidelines for Early childhood education	600,000 copies
Curriculum Guidelines for Indigenous Education	20,000 copies
Curriculum Proposal for Adult Education	831 kits

These documents may also be used by state and municipal secretariats of education in the process of constructing or revising their proposals, which are adapted according to the needs and characteristics of their region.

National curriculum guidelines do not include lists of content to be compulsorily covered. Thus, in this item, the guidelines present a synthesis of the perspective of each subject/area of knowledge in primary education, which allows secretariats of education, schools and teachers to revise the subject content taught, to choose more important topics, etc.

Although the introduction of new subjects has not been suggested, the curriculum guidelines include, in their education proposal, under the title of Cross-curricular Themes, the approach to social problems with regard to ethics, health education, the environment, cultural plurality, sex education, work and consumption. These are not new areas, but rather a group of themes that are seen crossing over area boundaries and permeating the concept of the area itself, its aims, its content and the orientation of its teaching.

This decision fits in with the LDB of Education which, in Article 27, Section 1, also emphasises that curriculum content in basic education should entail *"the diffusion of*

values that are fundamental to social interests and to the rights and duties of citizens with regard to the common good and democratic order".

The documents emphasise another important aspect to be introduced into the curricula, which is the use of information and communication technologies, not as a specific area or as separate content, but integrated into other areas.

Presented below are some considerations in respect of the different areas of knowledge and Cross-curricular themes and of the use of information technology.

Portuguese Language

The PCNs for the area of Portuguese language focus on the need to give pupils the ability to broaden mastery of the theory and practice of language, essential knowledge for the exercise of citizenship. To this end, the school should organise teaching to make it possible for pupils to achieve progressive active mastery of discourse in various communicative situations, above all in public opportunities for language use, to permit their effective entry into the world of writing and increasing their chances of participating in society.

This idea stems from the principle that language acts are a totality and that the individual expands the ability to use language in linguistically significant situations of effective interlocution. Thus the object of teaching language in school (and, therefore, of learning it) is to acquire all that knowledge of discourse and language which the individual uses to participate in social practices requiring language. Teaching situations for Portuguese language should be organised by considering the text (oral or written) as the basic unit of study, using the diversity of types of texts circulating in society.

Teaching Portuguese language should be directed towards allowing the pupil to produce and understand texts - oral and written - responding to the multiple social demands and responding to different communicative and expressive purposes. It should be organised to allow the pupil to analyse discourse critically, identifying and analysing the values and contesting the prejudices contained in them, using linguistic knowledge already acquired.

Organised in this way, teaching the theory and practice of language in school permits the pupil to master oral and written expression in situations of public language use, the basis of the individual's autonomy and a precondition of responsible participation in society and of the exercise of citizenship.

Mathematics

The PCNs for the area of mathematics constitute a guideline for the construction of a practice that gives all pupils access to mathematical knowledge in such a way that they are really able to enter, as citizens, the worlds of work, social relationships and culture. It is emphasised that mathematics is not meant for a few 'gifted' pupils who can understand what they are learning, but that it is a part of everyone's life, from the simplest actions of counting, comparing and decision-making, right up to the interface with other areas of knowledge.

The mathematics PCNs try to overcome the idea of learning focused on mechanical processes, preferring to use problem-solving as a point of departure for mathematical activity to be developed in the classroom. They show mathematics to be a human creation, demonstrating that it has been developed to give answers to the needs and concerns of different cultures at different times, and pointing out the importance of including the resources of communication technologies in teaching it.

In summary, the PCNs suggest that teaching mathematics allows learners to understand and change the world they live in, to develop confidence in their ability to face challenges and build resources for exercising citizenship throughout their period of learning.

Natural Sciences

Since the area of science covers a wide range of topics, the PCNs for natural sciences opt to gather some themes that have already been enshrined in the teaching of this area, because of their social relevance.

The selection of content and treatment of the wider themes that have been chosen, helps pupils understand better the world they live in, to relate items of information with each other, produce comparisons, formulate explanations and draw conclusions so that pupils will want to, and be able to, ask questions about what is happening in the world, relating scientific discoveries to different historical periods. In this way, learning natural sciences is not reduced to merely memorising definitions, but encourages the development of an investigative attitude that values debating ideas and increases communication.

The teacher's role is to create situations that allow interested pupils to carry out research and find out information that encourages the development of work and the construction of values and attitudes associated with respect for knowledge, within an ethical ambience and with a sense of mutual co-operation.

History

The history PCNs demonstrate that the pupil can learn to see reality in all its diversity and many temporal dimensions. They emphasise the commitment and attitudes of individuals, groups and peoples in the construction and re-construction of societies, suggesting studies of local, regional, national and global questions, of cultural differences and similarities, of changes and permanent conditions in ways of living, thinking and doing, and of the heritage handed down over generations.

They attempt to give value to the interchange of ideas, encouraging the analysis and interpretation of different sources and languages - image, text, object, music, etc. -, comparisons between information and debates about different explanations of the same event. Thus they promote an education based on dialogue, exchange, question-forming, construction of relationships between past and present, and the study of representations.

Geography

The PCNs in the area of geography contain a wide view of the topics being discussed in this subject today. They aim at a humanist approach to relationships between social and natural occurrences, bearing in mind the appropriate times for these to take place, and the interactions between them. This approach increases the possibilities for creating teaching situations that allow pupils to understand and explain how human actions inform and transform nature by means of culture. Studying how this has happened over the course of time and permitting learners to recognise the landscapes of many areas.

The focus of the document encourages pupils to value the attitudes and procedures they can acquire by studying geography. By observing, describing, investigating and explaining different landscapes, learners will understand their individual and collective role in the set of actions that are changing and have changed the landscape. From the content of this proposal, pupils will be learning a geography made up of experiences and perception of places, in order to construct a way of reading the world. Thus, the themes proposed are based on local and global scope and are treated as a synthesis of relationships that are not always harmonious, the product of encounters and conflicts in a pluralistic society in search of citizenship.

Art

The PCNs of Art endeavour to point out that visual arts, dance, music and theatre can be learned in school For a long time these were felt to be important activities for recreation, psychological balance, creative expression or just training in motor skills. In the PCNs, however, art is presented as an area of knowledge requiring space and a permanent presence, like all the other areas of the school curriculum.

Pupils learn in the most meaningful way when they establish a relationship between their personal artistic work and the social production of art, assimilating and perceiving the correlation between what they do in school and what is done by those who produce art in society, in the local, regional, national and international environments.

According to the PCNs, learning art involves, in addition to development of artistic activities and aesthetic education, appreciating art and placing the social production of art of all periods within different cultures.

Physical Education

The PCNs approach physical education as an area of knowledge of the culture of physical movement and school physical education as an area that introduces pupils to and includes them in this culture with a view to the exercise of citizenship. Considering the content and skills which it is aimed to develop as socio-cultural products, physical education in schools affirms the right of everyone to access to the physical culture of movement. The PCNs believe to be fundamental the knowledge produced in cultural activities of movement directed towards leisure, expression of

feeling, affections and emotions for the recovery, maintenance and improvement of health.

The PCNs break with the traditional treatment of content that favours pupils who already have aptitude in this area, adopting as a structural principle of teaching the Principle of Inclusion, aimed at a methodological perspective of teaching and learning that seeks the development of autonomy, co-operation, social participation and the affirmation of democratic values and principles. In this sense, the PCNs of physical education are attempting to guarantee to all the chance to profit from games, sports, dance, contests and gymnastics on behalf of quality of life.

Foreign Languages

Learning foreign languages is one way of increasing the pupils' self-perception as human beings and as citizens. To achieve this, the subject must be focused on their engagement in discourse, that is, on their ability to engage themselves and to engage others in discourse so as to be able to act in the social world. To make this possible, it is essential that the area of foreign language teaching is defined by the social function of this type of knowledge in Brazilian society. This function is mainly related to the use made of foreign languages for reading, although other communicative skills may also be considered because of the specific nature of some foreign languages and of the existing conditions in the school context.

In addition to this, although it may desirable to have a policy of linguistic pluralism, pragmatic conditions indicate the need to consider the history, the local community and tradition as criteria to determine the inclusion of a given foreign language in the curriculum.

Cross-curricular Themes

If, on the one hand, areas of knowledge constitute important structured markers in the reading and interpretation of reality, essential elements for guaranteeing the possibility of the citizens participation in society in an autonomous manner, on the other hand there is no doubt that there are urgent social problems that are not being sufficiently or necessarily studied in the traditional areas.

If the school wishes to be in harmony with the demands of modern society it will have to deal with questions that affect the lives of pupils and which the latter are facing in their daily lives. Social themes, because of their undeniable importance in the education of pupils, are already being discussed and often built into curricula of areas linked to natural and social sciences, in some proposals even coming to exist as new areas. More recently some proposals have indicated the need for cross-curricular treatment of social themes in school as a way of studying their complexity without confining them to the approach of a single subject area.

Cross-curricular themes must be dealt with through subject integration and a commitment to interpersonal relationships in the school environment in order for there to be an exposition of the values to be passed on and a coherence between these values and those experienced in school life. There must be a view to

developing the ability of all pupils to intervene in real life, transforming it, and this ability is directly related to access to accumulated human knowledge.

Content relative to these themes, in addition to the focus adopted in each theme, is made explicit in the treatment of subject content. It was decided to produce a basic document on each theme to provide a better foundation for the subject and also to help the development of specific projects that the school has the need and interest to develop.

The set of documents on Cross-curricular Themes discusses the need for the school to perform its social function, taking into account general and unifying values that define a position in relation to personal dignity, equality of rights, participation, and the shared responsibility to work for the establishment of the right of everyone to citizenship.

The Cross-curricular themes chosen to make up the PCNs are: ethics, health, environment, cultural pluralism, sexual orientation, work and consumption. They involve current and urgent social problems felt to have nation-wide and even worldwide relevance today.

This scope does not mean that the Cross-curricular themes should be dealt with equally everywhere. On the contrary, they require adaptation in order to correspond to the real needs of each region or even of each school. Environmental questions, for example, have different meanings in the rubber-producing areas of the Amazon than they have on the outskirts of a big city.

As well as adapting the themes to be presented, it is important that local themes be chosen. For example, many towns have very high rates of traffic accidents, which means that their schools should include Traffic Education in their curriculum. Other themes related, for example, to non-violence or the use of drugs could be sub-themes of the general themes; in other cases, however, they might require a specific and intense coverage, depending on the nature of each social, political, economic and cultural situation.

Ethics

Ethics is concerned with reflections on human conduct. The prime ethical question is: "How do I act in the company of others?" The central question of ethical concerns is that of justice understood as the values of equality and equity.

In school the term 'ethics' is mainly met in the relationships between the agents who form this institution: pupils, teachers, support staff and parents. Secondly, the theme of ethics is found in curricula, since knowledge about it is not neutral nor impermeable to values of all kinds.

The proposal of the PCNs is that ethics - expressed in the principles of mutual respect, justice, dialogue and solidarity - should be the object of reflection about different human actions and that the school should consider school life as a base for learning about it, without there being any dichotomy between "don't do what I do, do what I say". Starting from this viewpoint, ethics as a Cross-curricular theme proposes

that the school carry out work that makes possible the development of moral autonomy, which depends more on favourable life experiences than on lectures and repression. In the daily life of school, pupils can learn to resolve conflicts by means of dialogue, can learn solidarity by helping and being helped without self-interest, can learn to be democratic when they have the chance to say what they think, to submit their ideas to the opinions of others and learn how to listen to the ideas of others.

Cultural Plurality

To live democratically in a pluralistic society it is necessary to respect the different groups and cultures it is composed of. Brazilian society is made up not only of different ethnic groups, but also of immigrants from different countries. Moreover, the various migrations put different groups in contact with each other. It is clear that the regions of Brazil have quite different cultural characteristics and that the act of living together on the part of so many groups differentiated on social and cultural grounds is often marked by prejudice and discrimination.

The great challenge for the school is to recognise diversity as an inseparable part of the national identity and to acknowledge the wealth represented by this ethno-cultural diversity which comprises Brazil's socio-cultural heritage, working towards overcoming all kinds of discrimination and valuing the particular paths of the groups that make up this society.

In this sense the school must be the place to learn that the rules concerning public space allow co-existence on an equal basis, of different people. The work of cultural plurality is constant and requires the school to nourish a 'culture of peace' based on tolerance, respect for human rights and the idea of a citizenship that is shared by all Brazilians. This learning will also not happen through lectures but rather by a daily routine in which no-one is 'more different' than others.

The Environment

The main task of working with the environmental theme is to contribute to shaping citizens who are aware, able to decide and act on their socio-environmental situation in a manner that is committed to life, to the well-being of all and of society, both local and global. For this it is necessary that, more than information and concepts, the school tries to work with attitudes, with the shaping of values, with teaching and learning of skills and processes. This is a great challenge for education. 'Environmentally correct' behaviour will be learned through the school's daily routines: acts of sharing, as well as habits of personal and environmental hygiene can be examples of this.

Health

People's health levels reflect the way in which they live in a dynamic interaction between individual potential and living conditions. The situation of an individual or a community cannot be understood or changed without taking into account the fact that it is produced by the relationship with the physical, social and cultural environment. Talking about health implies taking into account, for example, the quality of the air we

breathe, the ways in which different segments of the population enter the world of work, personal lifestyles.

Favourable or unfavourable attitudes to health are constructed since childhood by identifying with values observed in external models or reference groups. The school fulfils an important role in training citizens for a healthy life, insofar as level of education in itself has a proven relationship with the health levels of individuals and population groups. But introducing health education as a curriculum theme raises the school to the role of a trainer of protagonists - and not patients - capable of valuing their health, identifying and participating in decisions relevant to individual and collective health. Therefore, training pupils to exercise citizenship involves motivating and enabling them for self-care, as well as involving health as a right and a personal and social responsibility. *Sexual Orientation*

The PCNs proposal for sexual orientation is for the school to treat the subject not just as a matter of anatomy and physiology, but one which involves cultural, affective and social use of the human body. The child brings to school notions and emotions about sex acquired in the home, in social relations and in contact with the media. Sexual orientation should take this repertoire of information into account and enable pupils to form their own opinions on the matter.

School cannot substitute nor compete with the family but it makes possible discussion of different points of view about sexuality without imposing fixed values on others. In no case must the school make judgements about the orientation offered within the family. As a teaching process, this area's aim is to transmit information and suggest questions related to sexuality, including attitudes, beliefs, taboos and values associated with it, while never invading the intimacy and behaviour of pupils.

Work in sexual orientation seeks to create in pupils awareness that exercising their sexuality implies not only pleasure, but also responsibility. The development of the theme should offer criteria of discernment of behaviour connected to sexuality that require privacy and intimacy, as well as a recognition of manifestations of sexuality that may be expressed within school.

Work and Consumption

The dilemmas and uncertainties of the world of work, the practices and habits of consumption, affect all of us and are ever-present questions in the daily life of school. Directly or indirectly, explicitly or implicitly, the school works with values, concepts and attitudes in relation to work and consumption. As everyone carries with them ready-built pictures of values of jobs and types of work, this theme proposes that these values should be questioned, as well as their transformation into consumer practices, in the possession or not of objects, of 'brands' with symbolic value. The school will be able to work on the education of children and young people in regard to their relationships with work and consumption, mainly by means of a practice that fits the principles chosen by it.

The work and consumption theme tries to analyse the relationship between production and consumption, both understood as instances inseparable from social

life, since it is through them that dilemmas of citizenship are expressed in daily life. These relationships are obscured by the idea that we are all equally free both to work and choose any type of work, and to consume. From this point of view, inequalities of access to work, consumer goods, services and their distribution among different social classes, are diluted.

Work and consumption are presented integrally so that pupils may learn more about the ways work and consumption are effected and organised, understand the relationships, dependence, interactions, problems and rights of the citizen that are linked to them, also their contradictions and values, and may conscious create attitudes and positions with regard to society and themselves.

In the present context, entry into the world of work and consumption, care of one's own body and health, going on to sexual orientation and preservation of the environment, are themes that are winning a new place in a universe in which traditional guidelines (in which these themes were seen as local or individual questions) no longer take account of the national and international dimension they have assumed. In this sense the school has a vital role in placing the accent on resources for debating these themes and their critical application from the point of view of social and political participation.

8.6 Results - Problems and Solutions

In spite of all the efforts, means and changes that have been proposed, the fact is that in Brazil we still have a high rate of repetition and drop-out caused basically by the fact of pupils not having learned to read and write.

Even in those places where the 'continuous progress' proposal has been put in place to ensure a more inclusive school, not much progress has been observed. This proposal is not only based in non-repetition, but in the possibility of pupils being able to continue to learn without having to repeat everything again. But the lack of success of this proposal arises from the fact that it is meaningless for pupils not to repeat if in fact the school system cannot guarantee the conditions necessary for its pupils to learn. Thus we are watching an 'automatic progress' happening, in which pupils are not repeating, but also are not learning.

At the beginning of school pupils have difficulty in reading and writing, that is, in making themselves literate, which causes the high rates of repetition during these early years. Later, those who have made themselves literate arrive at 5th grade, where we have another bottleneck caused by the impossibility of their being competent users of the written language, which is absolutely fundamental if they are to continue studying.

This being the case, MEC has taken the question of literacy and Portuguese language teaching as a priority for the coming years and some of the main actions envisaged are the inclusion of the literacy module in the "Parameters in Action" programme, formulating literacy teaching materials for pupils and teachers and developing a Training Programme for Literacy Teachers to be broadcast by the School TV and linked with the universities, which will give qualifications to teachers taking part.

Within this picture it is still possible to see that many changes have happened in the last 20 years in relation to the way in which the process of acquiring literacy is understood and in the methods of teaching writing, but these changes have not yet been incorporated into classroom practice. So we see teachers abandoning old, outdated methods, but with no clear view of how to organise their work. MEC's reason for carrying out this Training Programme for Literacy Teachers is the need to offer teachers the didactic knowledge that has been accumulated over the last 20 years.

All the professionals who have responsibility for training teachers, as well as all the training agencies, including those at university level, have already had contact, in one way or another, with what we have called the change in the pattern of literacy education. But only the theoretical knowledge cannot help teachers to achieve the necessary change in teaching practice. Given the urgent need to incorporate it both in initial training and in-service training among Brazilian teachers, MEC has taken on the responsibility of offering to training agencies and public education systems the technical possibilities for spreading this didactic knowledge by means of the Training Programme for Literacy Teachers for 1^{st}-4^{th} grades.

8.6.1 Urgent Questions

Considering the present situation in teacher training, MEC feels that the most urgent problem to be solved is precisely that of qualifications for professionals in the field of education.

As well as facing the challenge of training the present lay teachers, it is clear that the very nature of the task of teaching demands of teachers a continual process of rebuilding their knowledge and professional skills, which starts in initial training and carries on throughout their careers.

This need is caused by the advances in research in the area of education and the social, cultural and political changes that directly affect the functions of the school. In addition to this, the teacher works in particular contexts and lives with differences that have to be addressed so that pupils may have the conditions in which to learn. This aspect of the education/teaching task is always asking new questions requiring from the teacher considered and planned actions and decisions. As a result of the particular nature of the task and a professional activity in constant change, it is vital to consider the need for permanent professional development of teachers if we want our schools to be successful.

Within the limits of possible federal intervention, MEC has been developing a series of actions that make up the National Teacher Training Programme. These actions involve connections between the various bodies and sectors responsible for the public education system to work in technical and financial partnership with the state and municipal secretariats of education and other training agencies (in the case of in-service training), universities, higher education institutions, university centres and other higher education institutions legally accredited (in the case of initial training).

Thus, MEC is reinforcing the idea that shared responsibilities and integrated actions on the part of different spheres of government towards the provision of basic education are essential for consolidating change, empowering a new culture of cooperation between federal, state and municipal governments in order to confront the problems we cannot put off solving.

MEC's actions are directed towards the following objectives/perspectives:

- Boosting the construction of systems of permanent professional development (actions linking initial and in-service training), contributing to training teachers working in different educational situations.
- Boosting professional development practices inside teaching systems, forming teams of experts in the secretariats of education and creating room in institutions for group work by schoolteachers.
- Encouraging the development of a culture of systematic reflection concerning teaching in schools, emphasising that this practice should be understood as part of a professional behaviour committed to the successful learning outcomes of all pupils.
- Strengthening institutions responsible for the professional development of educators, helping secretariats of education to develop their educational projects free from administrative discontinuity.
- Strengthening teacher training institutions (universities, institutes, etc.) encouraging the implementation of new curricula in training courses that are relevant to the specific professional work of teachers, taking into account its complexity and eliminating the present separation between training teachers in early childhood education, 1st-4th grades and 5th-8th grades in primary education.
- Encouraging the establishment of research and information centres to help the work of teacher, trainers and other educators.

9. Secondary Education - Teaching programmes - principles and theories

Secondary education in Brazil is the final stage of basic education and completes the education that all Brazilians should have in order to be in the best position to deal with adult life. According to the aims of secondary education set out in the LDB, this means ensuring that all citizens have the chance to consolidate and increase the knowledge they have acquired in primary education, improving the learner as a human being, facilitating further study, guaranteeing basic preparation for work and citizenship and giving the learner the instruments that will allow him or her "to *continue to learn",* with the aim of developing understanding of the *"scientific and technological bases of the processes of production"* (Article 35, Sections I to IV).

In order to achieve these aims a new model curriculum was proposed and regulated with the aim of creating better citizens, preparing them to take part in democratic life, to deal with the new technologies and new ways of producing goods, services and information, and enabling them to respond to the challenges of the modern world.

In the design of secondary education, in addition to the structural modifications that separate it from vocational education, the Ministry of Education has made changes in teaching methods and curriculum. On the level of teaching, the new secondary education endeavours to associate knowledge with the learners' practical life, guiding them with regard to their future and no longer limiting itself to being a mere stage of preparation for entering higher education. On the level of the curriculum, the choice was to work from the concept of competencies, recognising that we also learn outside school and that therefore education in school should equip pupils for lifelong learning.

Working with educators from all over Brazil, MEC has constructed the new curriculum for secondary education with the aim of eliminating the existing practice of fragmented teaching based on accumulating information. Instead, school knowledge will have to be put into a context and to make sense to pupils. Reasoning and the ability to understand will be more important than memorisation.

This curriculum, compulsory for all schools, is described in the National Curriculum Guidelines for Secondary Education, formulated by the National Education Council after consulting the proposal submitted by MEC. The Ministry has also produced the National Curriculum Parameters for Secondary Education (PCNEM), together with advice and recommendations to support the work of classroom teachers.

The reform of the curriculum of the new secondary education in Brazil is based on three main principles:

- flexibility in providing for different people and situations and the permanent changes that are typical of the world of the information society;
- diversity guaranteeing attention to the needs of different groups in different areas and situations;
- contextualisation which, guaranteeing a common base, diversifies careers and allows the establishment of meanings that give meaning to learning and what is learned.

As well as carrying out curriculum reform with the aim of improving the quality of educational provision, it was necessary to respond to the huge demand that now exists in the country and which has led to an unequal growth in the system. Without adequate physical installations, without its own areas and often without other areas in school than the classrooms, secondary education has grown without having its own identity. For this reason it has become necessary to promote the expansion of access and adjust the present supply situation in an ordered manner and with minimum basic standards, in order to create a school network to provide only secondary education or, at least, to operate together with the final grades of primary education (5^{th}-8^{th} grades). In this case, the policies recommended was the reorganisation of physical infrastructure and re-distribution of staff. The immediate advantages of these policies were the creation of a school for young people and young adults, with its own identity, different from a school for children, making better use of teaching, technical and administrative staff, encouraging teachers to stay in one school and helping the development of a curriculum model suited to the new concepts concerning education and learning.

9.1 The Decision-making Process

Development of teaching programmes goes through different levels of decisionmaking. Decisions taken at each step are determined by details of their legal scope. Thus, MEC forwarded to the National Education Council (CNE[9]) a proposal for curriculum guidelines to direct the development of programmes for secondary schools in the whole country; CNE promoted analysis and discussion with the Brazilian educational community, and then produced the normative instruments for the proposed curriculum reform; the State Councils of Education (CEED[10]) made regulations on this material in the context of their systems of education, adapting it to the policies of each state; the schools stamped their own identities on those general guidelines, in accordance with their ideas about the world and mankind and with the demands of their situations, and formulated their own school plans (Art. 12/LDB).

Although decisions taken at the different levels are restricted to their respective areas of competence, there remains among all of them a strong agreement about the conception of teaching and learning which preserves the epistemological unity of the curriculum reform. Thus the reform accords with the principles of flexibility and diversity in the policies offered in secondary education

The application and evaluation of the decisions taken pass through a decentralised process in which each relevant organ/sector creates appropriate mechanisms/instruments to guarantee they are carried out. Thus the application of these decisions is done by means of legal norms compulsorily applied (MEC/CNE-CEED) and by creating technical-pedagogical councils (teaching establishments) with normative, deliberative and consultative attributes, within each institution. Evaluation is the responsibility of MEC, the state systems of education and each school, carried out using various instruments (national and state-wide examinations, tests and other methods), in order to evaluate how much learning pupils have achieved by means of the programmes proposed.

9.2 Planning and Conception of Teaching Programmes

9.2.1 Principles

The fundamental principles for planning and organising teaching programmes in accordance with the curriculum reform, are philosophical, epistemological, pedagogical and educational, as explained below:

[9] The National Education Council, made up of the Basic and Higher Education Committees, have normative, deliberative and advisory functions to the Ministry of Education, in order to affirm the participation of society in the improvement of national education (Law No. 9,131, 24/12/1995).

[10] Under the aegis of the policy of decentralisation established by the first LDB (4,024/61), the State Councils of Education were created with the aim of directing the educational policies of the states, with a regulatory function by means of normative actions based on the foundations and guidelines coming from the National Education Council.

Philosophical Principles

I - *The Aesthetics of Sensibility* which must take the place of repetition and stereotyping by stimulating creativity, the spirit of invention, curiosity about the new and affective qualities, as well as enabling the construction of identities capable of dealing with worry, living with the uncertain, the unpredictable and the different, of accepting and living with diversity, valuing lightness, delicacy, subtlety, playful and allegorical ways of looking at the world and making leisure, sexuality and imagination an exercise in responsible freedom;

II - *The Policy of Equality,* having as its point of departure the recognition of human rights and the duties and rights of citizenship, aiming to build identities that seek and practise equality of access to social and cultural benefits, respect for the common good, the capacity to be a protagonist and to have responsibility in the public and private arenas, the fight against all forms of discrimination and respect for the principles of the rule of law, in the form of the federative system and of the democratic and republican government;

III - *The Ethic of Identity,* that seeks to eliminate the dichotomies between the moral world and the material world, between the public and the private, in order to create sensitive and egalitarian identities in the face of the values of their own times, practising a modern form of humanism through the recognition, respect and acceptance of the identity of the other and by accepting solidarity, responsibility and reciprocity as guide principles for their own actions in professional, social, civil and personal life.

Epistemological Principles

I - Learning based on the development of competencies, that is, on actions and mental actions that are by nature cognitive, socio-affective or psycho-motor which, motivated by and associated with theoretical knowledge or based on experience, generate skills.

II - An organic view of knowledge and a willingness to follow this view, organising and dealing with teaching content and learning situations in such a way as to emphasise the many interactions between the areas of knowledge in the curriculum.

III - A receptivity and sensibility in order to identify the relationships between teaching content and learning situations, and the many contexts of social and personal life, in order to establish an active relationship between the pupil and the object of knowledge, as well as developing the ability to relate what is learned to what is observed, theory and its consequences and practical applications.

IV - Recognition of languages as forms of constituting knowledge and identities, therefore as the key element in constituting the meanings, concepts, relationships, conduct and values the school wishes to transmit.

V - Recognition and acceptance of the fact that knowledge is a collective construct shaped in social form and interactive in the classroom, at work, in the family and in all other forms of social existence.

VI - Recognition of the fact that learning mobilises affections, emotions and relationships with peer, as well as cognition and intellectual abilities.

Pedagogical Principles

I - Recognition that schools have an identity as the institution that educates young people.

II - Recognition that achieving equality demands differentiated treatment that looks on inequality from the point of view of the pupils as the most effective way of guaranteeing to all a common path to the points of arrival.

III - Autonomy to formulate a school plan that guarantees times, places and situations for interaction, ways of organising learning and of including the school in its social environment that promote the development of competencies and the acquisition of the values that are necessary for life in society.

Educational Principles

I - Treatment of knowledge in context, encouraging significant learning experiences that mobilise pupils and establish a reciprocal relationship between them and the object of knowledge.

II - Inter-disciplinary treatment of the different areas of knowledge/subject on the curriculum, which should not be simply a juxtaposition of subjects, and making possible a permanent dialogue between items of knowledge content which might be confirmation, complementation, negation, amplification or the illumination of unclear aspects.

9.2.2 Curricular Organisation

In the context of basic education, the LDB describes the construction of the curricula in primary and secondary education *"with a Common National Base which is complemented in each education system and teaching establishment, by a differentiated section answering the regional and local characteristics of the society, culture and economic life of the target group. " (Art. 26)*

The Common National Base has two dimensions:

- that of preparation for further studies, which means the objective of the learning process must be the construction of basic competencies and abilities, and not the accumulation of pre-established schema with set answers;
- that of preparation for work, which highlights knowledge as an instrument for solving concrete problems related to various social contexts and practices.

Artide 26 of the LDB also sets down that this Common National Base *"must include study of Portuguese language and mathematics, knowledge of the physical and natural world and the realities of society and politics, especially of Brazil, art education ... in order to promote pupils' cultural development and physical education, included in the school's teaching programme".*

In the organisation of the curriculum, the National Common Base comprises 75% of the minimum time of 2,400 hours, lasting at least through three year-long grades. The remaining 25% make up the diversified part, devised by the schools and based on local and regional socio-economic characteristics or on the interests of the school community. The diversified part should be organically integrated with the Common National Base by its context and by complementation, diversification, enrichment and explanation, among other forms of integration.

When the LDB emphasises the specific curricular guidelines of secondary education, there is a concern to indicate that the planning and development of the curriculum should be organic in form, eliminating organisation by self-contained subjects and reviving the integration and interaction of areas of knowledge in a permanent process of inter-disciplinarity. This proposal for an organic approach is contained in Article 36, according to which the secondary education curriculum *"will emphasise basic technological education, understanding of the meaning of science, literature and the arts, the historic process of changing society and culture; the Portuguese language as a tool for communication, access to knowledge and the exercise of citizenship".*

It is important to understand that the Common National Base cannot be a straitjacket impeding the ability of the systems, teaching establishments and pupils to profit from the flexibility that the Law not only allows, but encourages.

For reasons already mentioned in the LDB, MEC has formulated and sent to the CNE the proposal for National Curriculum Guidelines for Secondary Education, based on the principles explained above, and with a curriculum organised into areas of knowledge, on the understanding that knowledge increasingly overlaps the knowers, both in the technical-scientific field and in daily social life.

Thus, the organisation into three areas (Languages, codes and their technologies; Natural sciences, mathematics and their technologies; and Human sciences and their technologies) is based on collecting the knowledge shared by the objects of study and which, therefore, are most easily communicated, creating conditions by which school practice develops in an inter-disciplinary perspective.

Structuring the curriculum by area of knowledge is thus justified since it affirms the development of an education with a scientific and technological basis in which concept, application and the solution of concrete problems are combined with a review of socio-cultural components guided by an epistemological view reconciling humanism and technology within a technological society. Finally, it is desirable that the curricular concept should be inter-disciplinary and productive so that the stamp of languages, sciences, technologies and, still, historical, sociological and philosophical forms of knowledge, as knowledge that permits a critical reading of the world, should be seen in all aspects of school practice. In this way, areas of knowledge that make

up the curriculum of secondary education, with their respective competencies, are the following:

/ - *Languages, Codes and their Technologies*

- Understanding and using the symbolic systems of different languages as ways of cognitive organisation of reality by means of building up meanings, expression, communication and information.
- Meeting opinions and points of view about different languages and their specific manifestations.
- Analysing, interpreting and applying the expressive resources of languages, relating text to context by means of the nature, function, organisation and structure of their manifestations, in accordance with situations of production and reception.
- Understanding **and** using the Portuguese language as a mother tongue, a generator of meaning and an integrator of the organisation of the world and of individual identity.
- Knowing and using one or more modern foreign languages as an instrument to gain access to information and to other cultures an social groups.
- Extending the principles of technology of communication and information, associating them with scientific knowledge, to the languages that support them and to the problems they claim to be able to solve.
- Extending the nature of information technologies to the integration of different means of communication, languages and codes, as well as to the integrative function that they perform, in their relationship with other technologies.
- Extending the impact of information and communication technologies to their **lives, to** the processes of production, to the development of knowledge and to social life.
- Applying information and communication technologies to their lives, to processes of production, to the development of knowledge and to social life.

// - *Naturai Sciences, Mathematics and their Technologies*

- Understanding sciences as human constructs, seeing them as development by accumulation, continuity or breaks with patterns, relating scientific development to changing society.
- Understanding **and** applying methods and procedures appropriate to natural sciences.
- Identifying relevant variables and selecting the necessary procedures **for** production, analysis and interpretation of results of scientific and technological processes or experiments.
- Understanding the uncertain and non-deterministic nature of natural and social phenomena.
- Understanding **the need to** use appropriate instruments **for** measurement, classification of samples and calculation of probabilities.
- Understanding mathematical concepts, procedures and strategies and applying **them to** different situations in the context of science, technology and daily activities.

- Identifying, analysing and applying knowledge concerning values of variables represented in graphs, diagrams or algebraic expressions, making forecasts of tendencies, extrapolations/interpolations and interpretations.
- Analysing qualitatively quantitative data presented graphically or algebraically, related to socio-economic, scientific or daily contexts.
- Identifying, representing and using geometric knowledge for the improvement of reading, understanding and acting upon real-life situations.
- Gaining knowledge of physics, chemistry and biology and applying it to explaining the workings of the natural world and to planing, executing and evaluating actions that intervene in real-life situations.
- Understanding the relationship between development of natural sciences and technological development and associating the different technologies to the problems they claim to be able to solve.
- Understanding the impact of the technologies associated with the natural sciences on personal life, in the processes of production, on development and on social life.

/// - *Human Sciences and their Technologies*

- Understanding the cognitive, affective, social and cultural elements that make up the identity of the individual and of others.
- Understanding societies, their genesis and transformation and the many factors that act upon them as products of human action, oneself as a social agent and social processes as guiding the dynamics of different groups of individuals.
- Understanding the relationships between human life and the landscape, as they are seen in political, social, cultural, economic and human terms and the development of society as a process of occupying physical spaces.
- Understanding the origin and the historical role of social, political and economic institutions, linking them to the practices of the different groups and social actors, to the principles that regulate social co-existence, to the rights and duties of citizenship, to justice and to the distribution of economic benefits.
- Translating knowledge about the individual, society, the economy and social and cultural practices into actions of seeking, analysis, questioning and action in the face of new situations, problems or questions about social, political, economic and cultural life.
- Understanding the principles of the technologies associated with individual knowledge, society and culture, among which are those of planning, organisation, management and teamwork, and associate them with the problems they claim to be able to solve.
- Understanding the impact of technologies associated with human sciences on their personal lives, the processes of production, the development of knowledge and social life.
- Understanding the importance of modern technologies of communication and information for planning, management, organisation and strengthening teamwork.
- Applying the technologies of human and social sciences in school, in work and in other contexts that are relevant to their lives.

The areas of knowledge, with their respective competencies, may be organised in the form of disciplines, projects or both, according to the curriculum design drawn up by

the school, the same happening in the individualised part of the curriculum. Independent of the curriculum plan adopted, what is important is to guarantee the principles underpinning the curriculum guidelines and to ensure that pupils learn. For this reason, subject and/or projects should support teaching aims in order that knowledge of different areas of knowledge may stimulate common competencies. this way the autonomy of teaching establishments and the right of pupils to effective learning, is respected. Subjects and projects chosen by different schools to make up their curriculum plan may be distributed in equal periods or not, in accordance to decisions freely made by the schools, as long as, seeking to make subjects complement each other, they enable more complete and integrated intellectual, social, and affective development to take place.

9.3 Teaching and Learning Strategies

A correlation between teaching and learning encouraging active pupil participation in the process obviously requires proper selection of teaching methods capable of making pupils the subject of knowledge and training teachers who can make didactic transference an exercise in creativity and pleasure. Today it is no longer possible to think about the development of teaching programmes as being a simple unrolling of content passed from teacher to pupil, who copy onto worksheets or exercise books with a passive attitude that contributes nothing to their intellectual autonomy. Thus, both in the teaching methods to be used in the new Brazilian secondary education and in the on-going in-service training of teachers, these areas have been the object of reflection and special actions, summarised as follows:

9.3.1 Teaching Methods

According to modern theories of the development of learning, pupils are led to construct competencies when they have many different chances to face problems that demand the use of various cognitive resources. For this reason, a report by the National Education Council suggests:

- adopting differentiated teaching strategies that use memory less and make use of more reasoning and other higher-level cognitive competencies as well as enabling teacher-pupil and pupil-pupil interaction to take place in order to achieve the permanent negotiation of curriculum meaning and content;
- stimulating all procedures and activities that allow the pupil to re-construct or 'reinvent' knowledge didactically transferred to the classroom, including experimentation and carrying out projects and taking part in social situations;
- organising the teaching content in inter-disciplinary studies or areas and projects that best contain an organic view of knowledge and permanent dialogue between the different areas of knowledge;
- treating teaching content in a contextualised manner, always taking advantage of the relationships between content and context in order to give meaning to what is learned, stimulate pupils' capacity to be a protagonist in situations, and stimulate them to have intellectual autonomy;
- dealing with the feelings associated with learning situations in order to facilitate the relationship of the learner with knowledge.

This manner of working will demand, naturally, that teachers take a new and democratic position as well as acquiring mastery of pedagogical knowledge in order to be able to create, plan, develop, manage and evaluate didactic situations based on knowledge of the areas or subject to be 'taught', promoting educational practice that takes into account the characteristics of pupils and society as well as the principles, aims and objectives of secondary education.

9.3.2 On-going teacher training

One of the policies of MEC's Secretariat of Secondary Education and Technology (SEMTEC/MEC) is to prioritise the on-going in-service training of secondary school teachers within the framework of the present LDB, the National Guidelines (DCNEM) and the Parameters for Secondary Education (PCNEM). Designing this policy is a complicated task demanding a clear idea of what on-going training will be, the identification of the resources necessary for its implementation and the choice of strategies and actions compatible with the concept adopted and with the needs diagnosed in the different regions and schools in the country.

It is important to emphasise that for more than twenty years, Brazil has relied on generalised activities in continuing teacher training by means of events that focused on wide-ranging topics, based on the assumption that the objective of improving the quality of teaching would be reached through understanding the role of the school, the teacher and knowledge as a way of changing the prevailing social model and many others, examined from a predominantly sociological (sometimes only sociological) point of view. It has to be admitted that the choice of this way of conceiving on-going education worked as a kind of reaction of educators to the years when school was seen only as a tool of the system, with no autonomy and therefore having to develop pre-established programmes that were almost always incompatible with their real situations and in a non-critical way.

According to the present point of view, with the school considered as an autonomous unit in the education system, generic events tend to be replaced by activities reflecting commitment of the teaching plans to pupils' learning. For this reason, autonomy depends on the continuing qualification process of those working in school, especially teachers, in the twin sense of self-training and of working in concert, as a way of keeping up to date and as a search for solutions to problems that arise in daily life in the classroom and in the context of the institution as a whole, without abandoning knowledge concerning the cultural, social, political and economic dimension of education and above all, without losing sight of the fact that the DCNEM were conceived according to the logic of developing competencies.

To accomplish all this, SEMTEC/MEC has been developing activities aimed at the teams of experts in the state secretariats of education and the teachers who are working in secondary education focusing on management of the school, of the curriculum and the classroom, such as:

- series of conferences;
- seminars and workshops;
- distribution of the PCNEMs in printed form to educational institutions (universities, schools and organs responsible for drawing up educational policies) and to each

teacher in the public systems in Brazil and, in an electronic version, for the information of the general public;
- courses for secondary school teaching teams in the 27 units of the Federation;
- bi-monthly publication of the Secondary Education Bulletin;
- broadcast of television programmes;
- distribution of teaching materials containing suggestions about the way of working with the PCNEMs and ensuring the principles of inter-disciplinarity and contextualisation.
- constitution of a permanent schools forum with the aim of disseminating innovative and successful ideas coming from schools;
- organisation of school networks according to region and common problems, to exchange experiences and seek solutions for problems;
- exchange of teachers inside the country and abroad, to work in their areas of academic knowledge.

It is important to emphasise that in addition to these activities, which are being developed by SEMTEC/MEC, the secretariats of education in the 26 states and the Federal District, in order to implement the DCNEMs, have their own ways of training in-service teachers by trying, in many cases, to establish partnerships with local higher education institutions by means of special programmes organised for that purpose.

Since on-going education is a permanent challenge to the education systems, especially at this time, when, in the logical progression of developing competencies, there is an attempt to ensure effective learning by pupils, it is felt that this is a long way to go and that it will produce more permanent results in relation to the extent that initial teacher training is guided by the same logic.

9.4 Evaluation Policies and Instruments

In Brazil two important evaluation mechanisms have been implemented as permanent programmes: SAEB, aimed at basic education pupils (which includes secondary school pupils) and the National Secondary Education Examination (ENEM), which is only for secondary school pupils.

9.4.1 National Secondary Education Examination (ENEM)

The overall aim of ENEM, implemented since 1998, is to evaluate the performance of the pupil at the end of basic education in order to gauge the development of the fundamental competencies needed in the full exercise of citizenship. It is linked to a wider, structural concept of human intelligence and is taken annually by means of a single test that covers the various areas of knowledge into which basic education teaching activities in Brazil are organised.

For structuring the examination a matrix was developed indicating the competencies and skills associated to primary and secondary education teaching content, appropriate to the cognitive development phase corresponding to the end of basic education. The reference points of this matrix are: the LDB, the National Curriculum Parameters for primary and secondary education, the legal regulations that guide the

reform of secondary education and the texts behind the organisation of the curriculum in areas of knowledge, as well as the points of reference used in SAEB.

The ENEM is not a compulsory evaluation. Pupils who take it are those who are finishing and leaving secondary education who want to have a better idea of their potential and their problems in the light of their future choices in terms of further studies and entrance into the labour market.

The number of pupils wishing to take the ENEM is increasing each year. In 2001, when the test became free for pupils in the public system, 1.6 million students enrolled for the test.

9.4.2 Norms of Evaluation

The LDB has two guiding principles for executive and normative action in secondary education teaching systems and establishments:

- the principle of flexibility, around which operate the processes of decentralisation, deconcentration, deregulation and collaboration among those taking part, culminating in the autonomy of school establishments to define their teaching plans;
- the principle of evaluation, around which operate the processes of monitoring results and co-ordination, culminating in actions for the compensation and support for schools and regions showing the greatest imbalances, and of becoming responsible for results at all levels;

In this way, and as has already been explained in this document, the National Education Council, the state education councils and the teaching establishments within their legal control, issue respectively: the first, general guidelines; the second, guidelines specifically related to their systems, but in accordance with the CNE; the third, general school rules, including those concerning evaluation, which express the aims and objectives contained in the school plan, but in accordance with the regulating organ of the education system it belongs to.

For the reasons outlined above, there is no one general rule applicable to all the systems and to all teaching establishments. It is possible to find situations where pupils are evaluated by means of conventional instruments (norm-referenced examinations and tests) and others in which the evaluation process involves innovative elements like the design and execution of special projects, organising and participating in events, formulating synthesising written work (essays, reports, small dissertations, etc.) applied according to a timetable defined by each institution. In general, the norms issued by the CNE and the state education councils are more permanent, with no fixed or pre-determined period for revision, given the general nature of the norms, while in the schools revisions are made whenever there is a suggestion for change from the local community or when the school's annual evaluation results show the need to alter the rules.

9.4.3 Remedial Education

Programmes to deal with age-grade distortion or specific learning problems and curricular adjustments (in the case of pupils who do not reach the evaluation criteria established by their schools), organised in a systematic and wide-ranging way, are more common in primary education, especially as a result of the large age-grade distortion that are still very evident at this stage of education, and because of the greater ease in grouping these pupils as set times, for special attention.

At secondary level, activities of this kind tend to be organised in such a way as to allow variation and flexibility in dealing with different situations since pupils are generally involved in vocational activities attending parallel courses, reducing the chances of systematic organisation. The diversity of secondary education pupils and of school plans also encourages a type of attention and organisation with specific norms that respond to the different situations presented at this level. It is possible to find, for example, situations in which the pupil who is lagging behind at school to have lessons at special times within the school timetable and activities, by means of what is usually called support teaching, in order to re-evaluate his or her performance, and other methods in which the pupil receives guidance in individual study before being submitted to a re-test to discover whether or not he or she has reached the appropriate criteria. There are also cases in which pupils can follow their studies at more advanced levels even when they have shown inadequate performance levels in one or other field of learning, as long as they agree to catch up in this area and bring it to the level of new areas that they will develop, showing improvement within a period set down by the institution, after which they will be once more evaluated in order to continue their school careers. Clearly this is a question of curriculum management linked to school autonomy.

9.5 The Process of Change - Adaptations of educational content

9.5.1 Factors that Motivated the Reform of the Teaching Programmes

The proposal for curriculum reform in secondary education sprang from **an** awareness of the process of change in the field of learning and its impact on the production and social relations in general. During the 1960s and 70s, because of the prevailing level of development of industrialisation in Latin America, education policies gave priority, within secondary education, to the training of specialists capable of mastering the use of machines or directing production processes. In the 1970s this tendency led Brazil to propose compulsory vocational education, a strategy that aimed at reducing the demand for higher education.

In the 1990s the problem took on a different shape. The volume of information produced as a result of the new technologies is constantly being increased, creating new parameters for the training of citizens. It is no longer a case of accumulating knowledge. The pupil's education should have as its main aim the acquisition of basic knowledge, scientific training and the ability to use the various technologies related to specific areas of activity.

Thus for the new education it is proposed to develop general education as opposed to specific training; the development of abilities to research, find information, analyse and select it, and learn, create and design, instead of just testing memory.

It is important to emphasise that the growth in Brazil secondary education in recent years (57% between 1994 and 1999) has occurred as a result, not only of the factors set out above, but also of the growing demand for higher levels of education on the part of the labour market, mainly in regard to skills in communicating, working in teams, co-ordinating groups, taking decisions, interpreting, criticising and adapting to the constant changes that have altered the modes of production. In brief, reform of the secondary education curriculum was motivated by the structural changes of the so-called 'knowledge revolution', which changed the way of organising work and social relations and by the increased growth in the public system, which has to provide levels of quality compatible with the demands of this new society.

9.5.2 Main Participants in the Process of Change

The proposal for curriculum reform in secondary education is based on the permanent dialogue between the directors of SEMTEC/MEC, the team of experts coordinating the reform project and the various sectors of civil society directly or indirectly connected to education.

It was determined that, in order to design a new concept for secondary education, it would be vital to have the participation of teachers and experts from different levels of education.

The first meeting between the directors, the SEMTEC/MEC experts and teachers invited from various Brazilian universities indicated the need to design a proposal which, incorporating the principles described above, and respecting the principle of flexibility that underpins the LDB, should be feasible in all the states of the Federation, bearing in mind regional inequalities.

Subsequent meetings were held with the participation of the team of experts coordinating the project and representatives of all the state secretariats of education, to discuss the texts on which the reform would be based.

The method of working sought to broaden debate both at the academic level and in each state, involving teachers and experts in the field of secondary education. The debates held in the states, co-ordinated by teacher representatives, provided a critical analysis of the material and formulated new questions and/or suggestions for improving the documents.

At the end of this first stage the documents were sent for examination by the state secretariats, in order to obtain new opinions from those who would be implementing the reform in their respective states. The debate was broadened by the participation of specialist consultants in various meetings in the states and by the distribution of texts on which the reform was based.

Simultaneously with the re-design of the theoretical documents, two meetings were held, in São Paulo and Rio de Janeiro, with public school teachers chosen at

random, to check the level of understanding and receptivity concerning the documentation that had been produced.

The project was also discussed in open public debates such as that organised by the *Folha de São Paulo* newspaper at the beginning of 1997, in which teaching unions, the association of secondary school students, representatives of private schools and other sectors of society took part.

The work of designing curriculum reform was finished in June, 1997 after a series of internal discussions involving the directors, the team of experts co-ordinating the project and consultant teachers. The document produced was immediately presented to the state secretariats of education and on the 7th July, 1997, sent to the CNE for consideration and a report. The report (No. 15/98 of the Basic Education Committee - CEB) produced by the CNE was approved on the 1st June, 1998, following the formulation of CEB/CNE Resolution No. 03/98 which finally established the National Curriculum Guidelines for Secondary Education and which, after ministerial ratification, officially started the curriculum changes.

9.5.3 Priority Areas in the Reform

In accordance with the resolution establishing guidelines for the new secondary education, that common national base of the proposed curriculum must be organised in three areas of knowledge, as was explained in the section dealing with organisation of the curriculum: Languages, Codes and their Technologies; Natural Sciences, Mathematics and their Technologies; Human Sciences and their Technologies. Each of these areas of knowledge should lead the learner to one type of competency.

By studying Languages, Codes and their Technologies the pupil should be able to understand and use the symbolic systems of the different languages, engage with opinions and points of view, and analyse and interpret texts. This area gathers different forms of expression in which are included, firstly, Portuguese language. Foreign languages (at least one of them compulsory), the arts, physical activities, computing and any other language, be it visual, aural or any other kind, are also included.

In the area of Natural Sciences and Mathematics knowledge related to physics, chemistry, biology and mathematics are included. The programme does not deal with subjects or disciplines with those names, but with the competencies related to gathering knowledge in those areas of knowledge. In this way the pupil should be led to understand the sciences as human constructs, to understand the relationship between the development of natural sciences and technological development and associate the different technologies to problems and their solution.

In the area of Human Sciences, emphasis is placed on competencies related to knowledge of society and culture, history, geography, sociology, psychology, law, philosophy and anthropology, as well as translating into a personal form knowledge concerning the individual, society, the economy and social and cultural practices.

9.5.4 Strategies for Implementing the Reform

The reform of secondary education is being implemented by the 27 states since, in accordance with the 1988 Brazilian Constitution, responsibility for the provision of secondary education is primarily in the hands of the states (Art. 211 § 3). Nevertheless, this does not mean that the Federal Government has set out the reform for the states to implement. The Federal Government, through SEMTEC/MEC, is exercising a leadership role in the process of changing secondary education. To this end, within six years resources equivalent to one billion dollars, coming from Federal Government, state governments and the Inter-American Development Bank (IDB), will be spent, with the aim of substantially raising the quality of teaching and working for the progressive universalisation of its provision. These resources were linked to the Secondary Education Improvement and Expansion Programme - Young School Project, aimed at:

- guaranteeing that SEMTEC should fulfil its role as a national motivator and coordinator of the secondary education reform, contributing efficiently and effectively to implementing its policies of improvement and growth of provision all over the country;
- distributing financial resources to the federal entities for the implementation of the reform. The Young School Project was further strengthened with funds from the Alvorada Project, which is a presidential initiative to support 14 states with the lowest indices of human development. This strategy takes on the challenge of raising the quality of life of the population and reducing social inequalities. Within the three areas of action of the Alvorada Project, the first is aimed at providing the necessary conditions for children and young people to be able to finish primary and secondary.

These initiatives, together with the expansion of provision and improvement in the physical network of schools, will make possible: the execution of actions for the support and development of the curriculum and of pedagogical projects in schools; the training of staff; the development of studies and research to ensure a pattern of provision suitable for a school for young people and adults; as well as the professional development of its educators, bearing in mind their actual requirements.

Implementation of the Young School and Alvorada Projects has been followed from a technical point of view by a body of specialised consultants and the voluntary participation of Brazilian states in the projects is the strongest indicator up to now of the success of these policies as strategies for change.

It is felt that reform in the states, supported by the additional resources from the Federal Government, will be able to make a decisive contribution to a significant change in this country to decrease inequality and to form a new type of citizen, more aware of rights and obligations.

9.5.5 Results - Problems and Solutions

Although advances in secondary education represented by the policies in place are recognised in Brazil today, it must be admitted that there are countless problems

whose solutions depend upon all those involved. Among these problems the following stand out:

- the present pressure on secondary school enrolments, which falls wholly on the public sector, above all in schools maintained by state governments, which are responsible for maintaining secondary education ;
- In spite of the huge growth in enrolments, the percentage of the Brazilian population aged between 15 and 17 attending secondary education is very low. This percentage has, however, increased (from 22.7% in 1994 to 32.6% in 1999);
- rates of completion are still very low and the age-grade distortion is high compared to other countries. Between 1994 and 1999 the number of those finishing secondary education increased 67.8%, from 915,000 to 1,535,000. Nevertheless, the total number of those finishing secondary education represents only 38% of 17-year-olds, which is the appropriate age for completing this stage.

As well as these problems, one that deserves special attention is that of the conceptual distance between initial teacher training courses and the content of the reform, which hinders implementation of the new principles and concepts being proposed for secondary education.

In the face of these problems, SEMTEC/MEC is developing actions that attempt to ensure growth with quality, such as:

- specialised studies for the design of financial policy;
- definition of strategies to improve the management of systems, schools, the curriculum and classrooms;
- definition and explanation of new models and strategies for initial and on-going training of teachers and administrators;
- definition of strategies, models and actions looking to plan alternative forms of provision such as distance education and provision for differentiated groups;
- identification and definition of strategies to incorporate the use of new technologies in the daily activities of the secretariats of education, schools and classrooms;
- definition of strategies and actions for providing teaching materials to schools, teachers and pupils;
- definition of innovative strategies for enhancing the value of professionals in the educational sphere, such as exchanges and the encouragement of successful experiments.

SEMTEC/MEC is working in all these areas, giving help and channelling resources to the state secretariats of education and directly to schools in order to support them in carrying out activities resulting from the policies being implemented, on the understanding that such activities represent, at the same time, a process of breaking

[11] "In secondary education the increase in enrolments has been dramatic: 57% from 1994 to 1999. In this last year alone growth was 11.5%. The striking growth in secondary education is explained by three main factors: there are more pupils finishing primary education: more pupils are finishing at a younger age and therefore able to carry on studying; and demand has increased on the part of young people for more education if only because of the requirements of the labour market, which is ever more competitive." (speech of the Minister in London, at the Royal Institute of International Affairs, 30/03/00)

with the past and transition to the future. Breaking with the past because they point towards a significantly different secondary education from that which existed until recently, and whose structure needs changes in concepts, values and practices. Transition because the proposed changes will still carry with them for some time knowledge and practices already in place, until the new model is consolidated.

Acronyms and abbreviations used

CEB	Basic Education Committee
CNE	National Education Council
CENPEC	Centre for Studies and Research in Education and Culture
CETE	Educational Technology Experimentation Centre
CONSED	National Council of State Secretaries of Education
DONEME	National Curriculum Guidelines for Secondary Education
EJA	Adult Education
ENEM	National Secondary Education Test
FNDE	National Fund for the Development of Education
FUNDEF	Fund for Primary Education Development and for Enhancing the Value of the Teaching Profession
HDI	Human Development Index
IDB	Inter-american Development Bank
IBGE	National Bureau of Statistics
INEP	National Institute for Educational Studies and Research
INPC	National Index of Consumer Prices
IPEA	Institute for Economic and Applied Research
LDB	National Education Guidelines and Framework Law
MEC	Ministry of Education
NGO	Non-governmental organization
NTE	Educational Technology Nucleus
OECD	Organization for Economic Cooperation and Development
PCN	National Curriculum Parameters
PCNEM	National Curriculum Parameters for Secondary Education
PNAE	The National School Meal Programme
PNLD	The National Textbook Programme
PROEP	Vocational Expansion Training Programme
Proformação	In-Service Teacher Training Programme
PROINFO	The National Information Technology Programme in Education
SAEB	National System for Evaluation of Basic Education
SEF	Secretariat of Primary Education
SEMTEC	Secretariat of Secondary and Technological Education
SIED	Integrated System for Educational Information
SEED	Secretariat of Distance Education
RNF	National Trainer Network
UNDIME	National Association of Municipal Education Officers
UNDP	United Nations Development Programme

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