Educational policies: efficiency and equity issues

Alberto de Mello e Souza*

Summary: 1. Introduction; 2. Human capital findings and misguided policies; 3. Basic education: allocation of resources and performance; 4. The challenges of federal universities: autonomy, financing and management; 5. Conclusion.

1. Introduction

This paper presents some of the major problems affecting Brazilian education, viewed from the existing causes of the large inefficiencies and the pervasive inequalities, which permeate all three levels of education. The discussion centers on how the existing or past educational policies negatively affect the performance of the educational sector, reflected in indicators such as the high repeat rate and the low completion rate of primary education. Suggestions are made to improve these policies, so that the problem of quality of education can be effectively dealt with. The paper is divided in five sections, including this introduction. The next section presents two situations in which policies were adopted against the evidences and arguments based on the human capital theory, with poor results. Then, an analysis is made about the primary education policies, showing how its financing and management cause distortions. The fourth section shifts the discussion to the federal public universities, attempting to demonstrate the nature and need for major reforms. The conclusion sumarizes the main points raised.

2. Human capital findings and misguided policies

In the early 70's, the first studies on rates of return and income distribution were published, raising a controversy about the causes of the worsening of income distribution indicators between 1960 and 1970 and pointing out, quite inequivocally, that the highest rates of return were registered for basic education. The debate on income distribution was centered on two positions: one which perceived the highest incomes as rent related to the shortage of skilled, university trained labor that should disappear with correct policies on the supply of education, and one that asserted that distortions in the labor market, generated by institucional factors and government policies, put a premium on education.

If the priority on basic education, clearly supported on efficiency grounds by the rate of return studies (Castro, 1971) and timidly reinforced by equity arguments, was followed by educational policies, Brazil would not be today at the bottom of the rank of educational indicators in Latin America. Why was attention not paid to those early and unanimous advises? At least four reasons can be formulated. First, there were no pervasive skilled labor shortages that could create pressures by the private sector on government policies. Because the ex-

* School of Education, Federal University of Rio de Janeiro.

isting technologies were not skilled labor intensive and Senai could provide most of the demands for training industrial labor requiring only four years of schooling, the need for additional schooling of the labor force was not perceived as crucial at the time. Also, there were strong expectations about favorable results of the mass adult education programs, such as Mobral, that would result in increased skills of the labor force. The second reason combines the political influence of the middle class in an authoritarian regime whith the goal of the military to improve the efforts related to research and development. The poor population had great difficulties to use the political channels to voice their demands for education, because of restrictions on political rights and the prevailing patronage system. The middle class support of the regime was viewed as indispensable by the military; hence their rapid actions to demobilize the manifestations in favor of an increased number of places in higher education to accommodate the explosive excess demand problem in 1968. The University Reform Law (Law nº 5,940 of November 1968) and the legislation concerning the regulation of graduate studies reflected the perceived need to update the higher education institutions, to increase their efficiency and to facilitate the expansion of graduate programs and, hence, of research capabilities.

The third reason calls attention to the emphasis on the policies that put a premium on the growth of enrollment at the expenses of the quality of education. These policies were supported by the official statistics which revealed extremely high drop out rates and met the preferences of politicians to build schools rather than concerning themselves with the more invisible side of providing acceptable working conditions for the schools. The statistics compiled by the Ministry of Education (MEC) severely underestimated the repeat rate, mainly because of faulty definitions of repetency. This error has been already known for about 50 years and, more recently, has been exaustively discussed (Ribeiro & Klein, 1991). As a result of high repeat rates, the students tend to stay in school for many years and, unable to advance much, leave school before completing basic education. Thus, the emphasis on school construction, on provision of school meals to make the school more attractive and on the reduction of the student/teacher ratio were important features of the educational policies. Aspects such as curriculum development, teacher training, textbooks selection and distribution and school management were severely neglected.

Finally, the resources allocated to basic education suffered from severe inefficiencies and timid concerns with equity. The complexity of the educational system, where federal, state and municipal governments can have their own schools is aggravated by two important distortions regarding excessive centralization and lack of coordination. The MEC is the primary organ for purchasing and distributing textbooks and school meals. These processes are plagued by delays, insufficient quantities, poor choices and high costs. In addition to the negative impact of the inadequate supply of textbooks to the schools on the quality of education, the burden of those tasks has deviated attention from functions such as policy formulation and evaluation, which cannot be performed elsewhere. Only recently has the need to evaluate schools received the attention of MEC; policy formulation is handicapped by factors such as the excessive autonomy of Fundação de Assistência ao Estudante (FAE) and Fundo Nacional de Desenvolvimento da Educação (FNDE), agencies of MEC responsible, respectively, for the educational transfers in kind (textbooks and school meals) and in money to the states. These responsibilities have brought them a great power that interferes with the ability to formulate and implement policies of the Secretaria do Ensino Fundamental (SEF).

Although the educational system cannot be said to be centralized, given the roles of the states and municipalities, one would expect that the resources distributed by MEC would play a significant role towards greater equity. The educational transfers to the states usually obey a redistributive criterion, although the resources thus transferred are patently insufficient to bring about the desired impact (Melchior et al., 1988). The problems are made worse by the losses caused by inflation and delays, related to the fiscal crisis and budgetary rules for disbursements. Part of the money transfers is channeled directly to the municipalities and given without any needs criteria. These transfers reinforce a major source of inefficiency: the dual school networks. Both states and municipalities have their school systems, resulting in duplication and wastage, which is aggravated by the lack of coordination among them. Because MEC does not provide information to the states about the value and purpose of the money transfers to the municipalities, the result is a greater divorce between these systems rather than a needed articulation. Most states do not have a program of transfers to the municipal schools with the objective of reducing educational inequalities among those schools. The conclusion is inescapable: a national or state program dealing effectively with the pervasive educational inequalities does not exist.

In another case, the government has made major changes in the National Education Law, including an increase in the compulsory education from four to eight years. The new law (Law nº 5,692, of 1971) imposed two changes at the secondary level: it unified what were previously two tracks, the humanities and the science, and introduced vocational subjects in the curriculum. It is this later measure that concerns us here. Its justification was based partly on the human capital theory, whose ideas circulated among government officials. The earlier University Reform Law (Law nº 5,540 of 1968) had already mentioned both the human capital theory, as well as the German university of Humboldt, as the pillars of its proposals.

However, in the case of the secondary education, there was a clear confusion between the human resources proponents, embodied by Harbison and Myers, and the defenders of human capital, such as Schultz and Foster (Chagas, 1978, p. 289; Inep, 1982, p. 9). The first, based on simple manpower projections, identified the need for vocational training. The unemployment problem in developing economies was perceived as a result of the "wrong curriculum" (Harbison & Myers, 1964). Foster, on the other hand, saw the preference for academic or general education as determined by the market outcomes rather than wrong choices or insufficient supply of vocational schools (Foster, 1965). Of course, the views of Foster are as valid today as ever (Foster, 1992).

The introduction of vocational subjects in the secondary school curriculum was based on the assumption that planning at the center is better than flexibility at the bottom or the school level. The reliance on the labor market might, in a rapidly growing economy, cause a shortage of skills. Furthermore, the existing schools were able to avoid such excess demand by redressing their curriculum and, hence, the profile of their graduates. Also, the resources needed to introduce such curriculum changes, such as teachers, equipments and facilities, were not only available but their use justifiable. These tenets proved wrong. Public schools, responsible for 2/3 of the enrollment, were not capable of offering vocational subjects because of lack of resources, even though their clientele could profit from such education, due to their modest family background. The private schools, especially those providing services for middle-class students, could adapt themselves to the new law without forsaking their clientele's objectives to go on to the university, by providing vocational subjects related to

them. Because the attempt to introduce a vocational content in the secondary schools failed, the MEC was forced to revise this part of the law in 1982.

The failure of Law nº 5,692 with respect to the introduction of a vocational content in all secondary schools represented a waste of energy and resources. One undesirable consequence is the feeling that the best is to leave the secondary school alone. However, the expansion required to double its actual enrollment rate of around 25 percent in the next years in order to generate the skilled labor required by a competitive economy poses questions of financing, organization and strategies barely considered so far. At present, the states are, practically, the sole responsible for public schools offering general secondary education and maintaining a few vocational schools.

MEC maintains the technical schools, whose graduates often continue their studies in the university. In a few cases, technical schools are being transformed to include undergraduate programs, thus losing almost completely their original role of providing good quality education for those entering the labor market. The evolving nature of the technical schools, their high unit costs of about ten times that of the state schools (World Bank, 1989), and the redistribution of the tax revenues in favor of states and municipalities determined by the 1988 Constitution place into question their objectives and model of financing and management. It is an irony that the technical schools, designed to be essentially vocational schools, had already at the time of the Law nº 5,692 started changing their nature, accepting a growing number of middle class students interested in increasing their chances of being accepted in the most prestigious undergraduate programs.

The Senai schools combine general and vocational education and are financed by a tax on the wage bill of industrial workers. Its strong feature is a management capable of providing sound teaching procedures, careful selection of the applicants and permanent evaluation of the student's achievement on one hand and of assuring a linkage between the labor market demands and the specializations being offered on the other hand. The Senai unit costs are similar to those of the technical schools. The training provided by Senai is mostly general and thus its burden could not be shifted to employers. However, it favors mostly large firms, a bias that is difficult to be corrected (Amadeo, 1992). Other forms of training, such as short courses and on-the-job training are provided by the firms.

From the discussion above, emerges a type of organization of secondary education which places the government responsibility for providing general education. Vocational schools should be mainly under Senai management. The burden of other types of training should fall on the firms. What to do with the technical schools and the definition of the sources of financing for the expansion of general education secondary schools are the major questions demanding clear answers now.

3. Basic education: allocation of resources and performance

Although the inefficiency of basic education, revealed by indicators such as the repeat rate and the number of years of schooling per graduate, has been a major problem for decades, only recently has the discussion about it faced the important issues. There are various reasons for this change. First, presently 95 percent of a cohort enter into school. With the exception of a few places, access is not any more a relevant issue. There is a shift from placing the emphasis on the expansion of the enrollment to facing the problem of quality of education, which can be understood as have the transitions between grades being completed suc-

cesfully, so that basic education becomes universal rather than benefiting only 40 percent of the school-aged population.

Second, the explanations offered to explain the low efficiency were either too general or very specific, not offering clear policy suggestions. Among the more general criticisms were those that put the blame on the authoritarian political regime or on the capitalism. Neither wanted the awareness about political rights, brought about by a literate population, which could disturb the reproduction of social classes. Also, the demand for skilled labor was deemed low and the training needs were supplied mainly by the firms. However, a decade after the demise of authoritarianism, it is plain that the nature of educational problems has not changed. Furthermore, the technological changes coupled with the opening of the economy have increased the demand for secondary education graduates. At present, the shortage of skilled labor, caused by the low number of primary and secondary education graduates, looks like the effective constraint on the growth of the economy. An example of a specific argument is that of the high expectations and inadequate pedagogy of teachers from a middle-class culture having to face disadvantaged children. Repetition was viewed as a consequence of the clash of different cultures.

Third, many sustained that the poor did not demand quality of education. In this view, the government was responsive to the existing demands, as the enrollment expansion in basic education demonstrated. High repeat rates and crowded classrooms were a result of the preferences of the poor or, at least, of their tolerance. The existence of government responsiveness seems to require two conditions. First, that the existing political channels can transmit the demand for education to the policy-makers. Second, that the government will be able to act, i.e., have the resources and the management capacity to deliver the quality of education. The problems facing the State in the provison of quality of education are largely ignored by those holding this opinion.

The early critical view that the State was ruled by the dominant class, i.e., the owners of capital, failed to deal with the complexities of the State and of the society. The authoritarian regime had a negative impact on basic education not because it defended capitalism but because it favored both the middle-class demands and the centralization of tax revenues in the federal government.

The middle-class demands were centered on the subsidies provided by the undergraduate programs of the public universities and the scholarships for those doing graduate studies in these universities or abroad. The magnitude of the subsidies, which benefited mostly those that were at the top of a very unequal income distribution, can be clearly seen as a political gesture towards the middle class. Perhaps of more pervasive and negative consequences for basic education is the Tax Law of 1967. The main purpose of the Tax Law was to concentrate resources at the federal level, so that it could promote economic growth. It is undeniable that investments in infrastructure and fiscal and credit subsidies favored the growth of industrial production and exports. However, in the social sectors, such as education and health, the results were meager and disappointing.

An explanation for the poor performance of the educational sector is the model of allocation of resources that appeared as a consequence of the concentration of tax revenues. The main features of this model perhaps could not be perceived at the time. MEC, having to transfer resources to the states and municipalities, devised along the years the model which still exists today and is responsible for many distortions. First, the clientelism interfered in the central purchase of textbooks and school meals and in the distribution of scholarships for basic education students. Second, initially the financial transfers were given upon the

presentation of projects, hundreds of them, leading to fragmentation. Later, this procedure changed to a few block transfers, decided at the start of the year. But inflation and delays increased the uncertainty about the real values and the timing of the transfers.

Third, until 1984 practically all the financial transfers benefited only the states, without requiring them to include in their planning the municipal schools. The lack of articulation between the state and the municipalities is an important factor contributing to the educational inequalities and, hence, to the unsatisfactory quality of education. The changes since then created a direct channel between MEC and the municipalities, but maintained them isolated from the states. Fourth, the distribution of competencies among federal, state and local governments was negatively affected by the model. MEC was not concerned with the roles of policy formulation and evaluation, as seen before. At the state level, the fact that their role regarding the provision of textbooks is minimum affected negatively other functions such as curriculum development and teacher training, which are essential for influencing the quality of education.

The atrophy of these functions is also related to the large bureaucratic role of the states, mainly negotiating with MEC the transfers and running their school networks. The schools, lacking money to spend and a decision-making role, were dependent from the central bureaucracy for decisions regarding the allocation of teachers, the provision of school materials and the maintenance of the school buildings. The fiscal crisis affected most states, weakening the capacity to deliver services. The pressure for changing the management procedures and supressing sources of inefficiency affected the states unevenly. However, two main trends are visible. Many municipalities, after the Emenda Passos Porto (1983) and the 1988 Constitution, could afford an enlarged role in the provision of educational services. Thus, the states shifted part of their burden to these municipalities, which became responsible for running a number of existing schools or new schools, paying teachers or constructing school buildings. The second trend is the greater autonomy of the school, reflected initially by the election of the schools' director and afterwards by a greater decision-making role, a small sum of resources for their expenditures and the participation of the community in its activities (Souza, 1994).

Those trends are in the right direction but, in most cases, the measures fall short of the needs. This occurs because the short-run political costs associated to the clientelism are more visible than the long-run gains for society. Also, personnel policies are restricted by the corporativism entrenched in the laws and customs. Thus, job stability, wage components unrelated to productivity, paid absences from work and advantageous retirement plans breed clientelism and increase considerably labor costs. Although the difficulties to introduce a system of merit payments cannot be disregarded, many of the existing negative incentives can be removed, generating a desirable combination of reduced costs and improved teacher's performance.

The introduction of incentives is an important way to make far-reaching reforms. Changes in the school management are commonly used for this purpose. The enlarged autonomy of the schools, by and large, favored the improvement in the combination of school resources. However, a major cause of school-based inefficiencies is the large number of teachers. It pays for the school director to hoard teachers because of the unantecipated need to replace those that, for various reasons, obtain a leave of absence or, simply, do not come to work. One way to deal with this problem is to establish schools managed by the community or by a group of teachers. These schools receive monthly a sum of money, which depends on the number of students, to pay the teachers and other personnel, the maintenance

cost and school materials other than textbooks and school meals, which are provided by the government. It is thus similar to the voucher system. The difference is that the voucher system is given to the students, thus assuring the right of school choice. However, since in Brazil the students do not have to go to the nearest school, the differences between both systems are practically negligible. The management incentives are related to the number of students the school can attract and the cost savings obtained by reducing the excessive number of teachers, thus favoring wage increases and a greater commitment of teachers to their job.

Another way to provide incentives is to carry out the evaluation of the schools by identifying, through the use of standardized tests, the learning achievements of the students. The results of the tests can indicate the schools that do not have a satisfactory performance and the need to do something about it. Furthermore, together with the information collected at the schools, they can generate an information management system which is an important aid to the policy formulation of the states and municipalities searching for increased efficiency. Thus, evaluation plays a key role in diagnosing the learning difficulties of the students and in enlarging the administration objectives, to include the results of the education and their relation to the school inputs, rather than just providing these inputs. Furthermore, they are a way to control the schools in the face of their greater autonomy and desired diversity to adapt themselves to local needs. A new concept of public schools, based on differentiation of curriculum and pedagogical methods rather than a set of uniform rules, allowing for greater parent choice, is made viable.

4. The challenges of federal universities: autonomy, financing and management

Higher education institutions are by nature conservative. Innovations are seldom introduced and even minor changes are not conspicuous. However, the restrictions faced by the federal public universities impair their capacity to deal with the problems and favor the existence of pervasive inefficiencies and low morale. One such restriction is that resulting from insufficient autonomy. Public universities comply with legislation concerning the use of their budgetary resources, the academic nature of their courses, the rules governing the relationship with their employees, etc. that causes a high degree of rigidity, a negligible role for incentives and an inefficient use of resources. The size of the budget, for example, is determined mainly by past expenditures in existing programs, favoring their maintenance, independent of their costs or results. The prestige of the rector is the most important factor in determining incremental resources. The fact that MEC does not carry out evaluation procedures for the universities severely limits its leverage in the budget-making role. The budgetary expenditures have to conform with the item in which they are classified. Frequently, there is a conflict between existing priorities and the available resources, impairing for instance the functioning of laboratories. Also, there are no incentives for cost savings, as they lead to a reduction of resources rather than to a redirection of their use.

The public universities rely too much on budgetary resources as compared to those derived from research funding, cost recovery and asset revenues. The public agencies finance research related activities, such as travel, conferences and projects on a competitive basis. However, only a few universities are able to interact with the private sector or the society and profit from their services. Another potential revenue source is the cost recovery from their students. The free tuition policy benefits mostly students that could pay for an impor-

tant proportion of the non-wage costs of teaching. This measure would have a significant and favorable impact on efficiency, by reducing the high evasion rate, and on equity, by reducing the large subsidies to the middle class. Furthermore, it could improve the quality of education if the cost recovery resources were used to improve libraries, equipments and laboratories. Lastly, many assets could generate revenues, such as the rent of unused office space and parking lots. The provision of services in the campuses, such as restaurants, bookshops and banks could also provide additional revenues. Incremental as they may be, the importance of these resources is related to the gains in efficiency, because of the flexibility in their use.

The most devastating effect on the public universities is caused by the rules governing wages, promotion and retirement of its professors. Equal wages is the basic rule for those in the same job position, independently of regional cost of living, labor market demands or ability (although academic credentials such as master or a PhD degree raises the wage). The lack of rewards related to some measure of productivity, together with job stability after five years, lead to a "mediocracy", as opposed to meritocracy. The three main levels are assistant, associate and full professors. Assistant and associate professor levels have each four steps. Since horizontal and vertical promotions up to associate professors are related to seniority and not to performance, all professors are, practically, assured that they will reach the final step as associate professor within a few years.

The rules for retirement are based on the number of working years: 25 for females and 30 years for males. Pension earnings are 26 percent larger than the wage previous to retirement. It is no surprise that federal universities lose their professors when they are at the peak of their careers. Worse still, the payment for retired teachers is larger today than the wage bill, threatening not only the growth of these universities, but also the ability to maintain their present level of services. A competitive public recruitment is required to become a professor or to be promoted to full professor. Time-consuming and with rules that do not assure the choice of the most qualified, the public recruitment is an unsatisfactory procedure, especially for the promotion to full professor, which should be based on merit, revealed by his career. The rules related to personnel management are the main cause of the fact that the student/teacher ratio is eigth, half of that prevailing in the American and European universities.

The management of federal universities suffers from excessive centralization, slow decision-making processes, poor evaluation and lack of cost control. The choice of faculty deans and of directors of higher level units, as well as the rectorship, has been decided, in the last decade, by elections. The right to vote is assured to students, professors and the administrative staff and the weights of the votes for each of the three groups vary by institutions and, in many cases, are the same. As a result of the elections, corporativism and political conflicts became stronger, reducing the scope for change. Centralization is seen in the need for minor decisions to be approved by large consultative bodies placed at the top which are frequently unfamiliar with the problems being discussed. This distribution of resources for office supplies and equipment reveals the preferences of the central administration among the various units and are usually independent of any reasonable criteria.

Loads of paper work, participation of many bureaucratic instances in any decision and the obedience to unnecessary formalities are the most visible evidences of the entrenched Iberical traditions. Evaluation and cost control activities cannot do much to improve the management in a situation of restrictive autonomy. But at least, they could point out distortions and undesirable results. Together with an enlarged autonomy and a greater role for incentives, they are vital for bringing about a new public university. The federal universities

are at crossroads. If they do not change within the next years, the existing competitive edge in relation to the private universities will disappear and their role will be increasingly questioned by the society.

5. Conclusion

The low level of efficiency of the educational sector, as revealed by the various indicators available, is already well established. It is asserted in this paper that important causes of this situation are related to the government educational policies being implemented by the MEC and the states in the last decades. These policies have common features such as: (a) the excessive role played by central bureaucracies in the decision-making process and the restricted autonomy of schools and universities; (b) the lack of evaluation procedures leading to poor information regarding the performance of the schools and faulty policy design; (c) personnel policies devoid of incentives and relying predominantly on seniority rules and (d) rigid budgetary procedures and lack of cost controls. The crisis of the State, reflecting the political impasse in its reform, has accentuated these problems. The existing conflicts have been exacerbated by the forces of clientelism and corporativism.

The inequality of education in the primary education has two major components. The inequality among states or regions remains because the redistributive transfers of MEC have a small impact on it. The inequality within a state is caused mainly by the incapacity of the states to provide funds to the public schools of the poorest municipalities. Another dimension of inequality relates to the subsidies given to the students of the federal universities. Because most of their families are able to pay a share of the cost of their studies, the amount of these subsidies is hardly justified, given the existing inequities within higher education and between levels of education. Inequality of education has two sides. One related to the distribution of subsidies and the other related to the quality of education. Thus, improvement in the quality of education means simultaneously a reduction in the inefficiency and in the inequity of the educational system. The atainment of satisfactory levels of quality of education for all is the main challenge facing the educational policies at present.

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