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Review

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Pedagogical model and school failure

*Juan Carlos Tedesco**

Although there is a consensus to the effect that the problem of school failure still looms so large in Latin America that it casts a shadow on the successes achieved through the ever-increasing coverage of the educational system, its causes are the subject of ardent theoretical and empirical controversy. The present article examines these causes with the aim of shedding light on the problem, determining the areas in which research on it should be concentrated and helping to orient the measures designed to resolve it along more efficacious lines.

The author divides the causes into various types, according to whether they are exogenous or endogenous to the educational system and relate to material or to cultural aspects. Material exogenous causes are connected in particular with socio-economic conditions and family structure; cultural exogenous causes, with family attitudes and values *vis-à-vis* education, linguistic patterns and mass communication media; material endogenous causes, with school resources and endowments and the organizational modalities of the school system; and, lastly, cultural endogenous causes, with teaching methods, content and orientation and the training and attitudes of teachers.

After reviewing the main research on the subject conducted in Latin America, the author concludes that there is no solid evidence to support the unidimensional predominance of any one of these types of causes, as, *inter alia*, some sociological, biological, psychopedagogical or socio-educational schools of thought assert. He therefore recommends that further research on key aspects of the phenomenon should be undertaken, and that the orientation of policy measures bearing on school failures should be decided upon without *a priori* dismissal of some of the types of causes mentioned.

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Introduction

Diagnoses of the present educational situation in Latin America pivot upon two main axes: quantitative expansion, and the system's low level of internal efficiency. In this connection, there can be no doubt that the last three decades constitute a period in which the effort to expand coverage has outstripped the rate of population growth and brought about a substantial change in the traditional exclusion from education of vast population sectors. On the other hand, it is obvious that inclusion in the system has been characterized by notable shortcomings; according to global estimates, approximately half the pupils who enter the primary cycle drop out of school in a state of semi-illiteracy.¹

These phenomena —expansion of coverage and low level of performance— have generally been analysed separately from each other. Expansion is usually presented as the 'benign' indicator which highlights State effort and the dynamic character of social changes in the region; poor performance, in contrast, is presented as the 'critical' indicator on the basis of which can be postulated the faultiness of the strategy adopted for the distribution of social services, and the need to make even more intensive efforts in the field of education.

However, the situation has now reached a point at which the two problems are closely interlinked. In this regard, it must be recognized that quantitative expansion has altered the traditional terms of the politico-educational debate; today, access to the system is virtually a reality for the whole of the urban and high percentages of the rural population. The central problem at present is that of how to guarantee that the inclusion obtained may be an effective means of access to the domain of knowledge

¹For a summary of the statistical data available on educational expansion see UNESCO, *Evolución cuantitativa y proyecciones de matrícula de los sistemas educativos de América Latina y el Caribe; análisis estadístico*, ED-79/MINEDLAC/REF.2; and also Carlos Filgueira, *Expansión educativa y estratificación social en América Latina (1960-1970)*, UNESCO/ECLA/UNDP, Project on Development and Education in Latin America and the Caribbean, DEALC/4, Buenos Aires, 1977; Luis Rainoff and M. Jeria, *Estado de la Educación en América Latina y prioridades de desarrollo*, IDB, Plans and Programs Department, Sectoral Policies Division, Washington, March 1979.

and of cultural codes. From this standpoint, expansion could be successful only if a change were introduced in the character of the pedagogy applied. As was said in an earlier study, "...access to the system and change within it must be analysed not separately but simultaneously, and the objective consisting in the universalization of schooling would not be plausible unless the structure of the system were adjusted to the characteristics proper to the new public which it is sought to incorporate".²

Stated in these terms, what is in question could be said to be a sort of updating of the

pedagogical view of Latin America's educational problems. But this return to the level of pedagogical analysis should be effected without losing sight of the contributions made during recent years by the social sciences as a whole—especially economics and sociology—to an understanding of educational phenomena.

These contributions are a safeguard against lapsing into the customary dissociations whereby educational issues are considered without regard to structural elements and structural analyses negate the specificity of pedagogical practices.

I

The pedagogical model and cultural marginality

In the past, basic education was regarded as the institution through which the population as a whole would be incorporated into the domain of the predominant cultural codes. In classic capitalist development models, the educational system as a whole was conceived as a scheme for social distribution of knowledge through which the masses would be given access to the elements that guarantee cultural homogeneity (ability to read and write, basic notion of arithmetic and the central values of the social order), while for the élites the way was open to the more academic branches of study and to mastery of the instruments which would permit the creation of new knowledge.

From this point of view, the most important feature of what is nowadays called the *traditional* educational system was coherence, not only between the structure of the system, curricula content, methods used and their institutional definition (school, role of the teacher, etc.), but also between this group of elements and the social structure. Articulation was established

fundamentally around a *cultural axis*. The priority task of education was to *form the citizen* (as leader or as led) within a framework defined by the parameters of liberal democracy. In this sense, the right to education was yet another expression of the right to political participation, and, as such, a product rather of conquest than of concession.

In the course of the transplantation of this model to Latin America, substantial changes took place in some of its basic characteristics. It must be recalled that in the central countries discussion of the traditional prescription pivoted upon the question of hegemony and to whom it would correspond in the integration process. The keynote of this discussion was laicism, since that was the point where the existing cultural differences were to be found. In its transposition to Latin America the debate assumed a notably more limited character, and supplanted discussion of the cultural and ideological options capable of integrating the population as a whole through alternative possibilities that would bridge the real differences existing in the region (indigenous tongues versus the Spanish language, the Catholic religion versus autochthonous cults, etc.).

From this point of view, it can be argued that cultural imposition in Latin America had

²See Juan Carlos Tedesco, "Elementos para un diagnóstico del sistema educativo tradicional en América Latina", in Project on Development and Education in Latin America and the Caribbean, *El cambio educativo: situación y condiciones*, Buenos Aires, Informes Finales/2, August 1981, p. 69.

features very different from those prevailing in the central countries. Vast population sectors had to submit not so much to the imposition of a different cultural code as to the destruction of their own; in terms of 'reproduction theory', these sectors were not regarded as legitimate subjects of the predominant 'cultural arbitrage' and at the same time suffered the destruction of the social and material bases that sustained the development of their own autonomous 'cultural arbitrage'. This cultural exclusion is the equivalent, on the plane of codes of language and thought, of the marginality existing at the level of participation in productive activities and income distribution. How far has the expansion of educational coverage that has occurred in recent decades made a difference to this situation?

It is obvious that vast traditionally marginal sectors are being brought into the educational system, and that in this context schools and teachers are increasingly assuming the role of cultural intermediaries. In the history of many family of popular origin access to schooling is a novelty and the marginal population—marginal in the sense referred to here—would seem to be the object of a work of systematic cultural imposition.

However, the cultural linkage produced within the framework of the school is characterized—as the data on learning performance and continuance in the system show—by its low productivity; in many directions, all that this linkage does is to allow cultural exclusion and rejection to become realities at the school level. For the newly-incorporated population, the commonest experience is, precisely, school failure. Thus, the traditional problem of exclusion holds its ground, since all that is peculiar to the cultural imposition on the popular sectors exercised through the school continues to revolve around the difficulties of attaining the objectives professed.

But the problem is no longer expressed in the same terms as in the past. Nowadays the debate also embraces school pedagogy and its agents: teachers, pupils, State bureaucracy, contents, etc. In this connection, the hypotheses put forward in the recent studies carried out under the DEALC Project have consisted in maintaining that school activity has been

expanded without modification of the requisites insisted on for school performance: requisites designed in relation to the cultural capital of the middle and upper population strata. Furthermore, these hypotheses affirm not only that the former features are preserved, but that in the course of expansion the school has lost the most dynamic features of the traditional model—a loss which is reflected in two fundamental aspects: material and human resources in the first place, and, secondly, the character of the contents disseminated.

As regards the first aspect, all the studies show that educational supply for the popular sectors is characterized by the poverty of the material resources available (teaching material, buildings, etc.), the teachers' instability of tenure and lack of experience and training, and so forth. Educational expansion in Latin America came about when the social role of the primary school teacher had also undergone substantial change. In the traditional model, the teacher held a central place both in the learning process and in the cultural circles of society as a whole. In Latin America, on the other hand, the mass diffusion of basic education is concomitant with a crisis of theories of learning based on the 'directiveness' of the teacher, and with loss of professionalism in the teaching career, which is progressively becoming a road towards higher studies unconnected with pedagogy.

With respect to contents, it must be recalled that the mass diffusion of school culture in Latin America is occurring precisely when that culture is beginning to lose its most dynamic features. In the classic process of educational expansion, the school culture reproduced the ideologically predominant order, but, at the same time, this order represented a substantial modification of the socialization patterns and contents utilized by the institutions formerly responsible for these processes (essentially, the family and the Church). The expansion of schooling represented a conquest—generally won through conflict—of areas of socialization occupied by those agencies. In this struggle, what the school proposed to do was based on secular values, republican principles and a measure of scientific perception of reality which reflected, with a relatively high degree of correspondence, the cultural order reigning in the most dynamic spheres of society

as a whole. From this point of view, the Latin American idiosyncrasy consists in the fact that school culture is expanding when it has acquired the features of an impoverished culture, cut off from the social context, since its norms are fully valid only within the school environment. For this reason, it may be asserted that the cultural models offered to the population newly incorporated into the educational system are not even totally representative of the culturally predominant models.

In this sense, the impoverishment of school culture finds expression in the low degree of

integrating power inherent in its prescription. This implies that the relative ineffectiveness of school action is not to be traced only to the imposition of different cultural codes, but that account must also be taken of the content of those codes and their intrinsic capacity to become a culturally hegemonic prescription.

With these parameters in mind, an attempt will next be made to draw up an integral balance-sheet of existing knowledge on the problem of school failure, in order to derive therefrom a few proposals for future lines of research in this field.

II

The explanations of school performance³

To judge from the available studies on the factors that account for school performance, this is, in reality, a matter of response to a multiplicity of factors that reinforce one another. Briefly, the material living conditions and the socio-cultural characteristics of families of popular origin determine the development of attitudes and expectations which are not favourable to the children's school success. These peculiarities are enhanced by a type of school organization and pedagogical practices that consolidate the low probabilities deriving from social background, so that a causal circuit is formed in which feedback is continuous.

The group of variables associated with school performance can be classified in two major categories: a) firstly, factors exogenous and endogenous to the educational system, and, b) secondly, natural inequalities and cultural differences.

³In this section use has been made of part of the study "Calidad de la enseñanza y procesos sociales", presented at a regional meeting on priorities and programmes for educational research related to the objectives of the Major Project in the field of Education in the Latin American and the Caribbean Region, organized by UNESCO and OREALC, Lima, June 1982.

In accordance with these categories, the available material can be arranged in four broad groupings, by reference to which an account can be given of the existing stock of knowledge and of the most significant problems that may arise in connection with any attempt to determine research priorities:

- a) *Material exogenous variables*: nutrition, housing, socio-economic position, family structure, etc.;
- b) *Cultural exogenous variables*: parents' level of education, attitudes and values with respect to education, language patterns, contact with mass communication media, parental help in school performance, etc.;
- c) *Material endogenous variables*: here two sub-groups must be distinguished:
 - i) material endogenous variables of a physical type: resources and endowment of schools;
 - ii) material endogenous variables of an organizational type: promotion systems, expansion of pre-schooling, etc.;
- d) *Cultural endogenous variables*: teachers' attitudes, training and experience, contents of teaching, methods, etc.

A. MATERIAL EXOGENOUS VARIABLES

A great deal is known about the repercussions of material living conditions as a whole on school performance. Practically all the studies on the subject have demonstrated the existence of close associations between material deficits and low levels of school success. Evidence has also been produced to show that all these variables are intimately interlinked so that the possibility of separating one from another is particularly tricky and theoretically disputable.

Studies on nutrition are a case in point. Nutrition indexes are associated with socio-economic variables (income, housing, etc.), and it is impossible to distinguish precisely whether the traits characterizing malnourished persons are attributable to the malnutrition factor itself or to factors of a socio-economic type. However, as a recent study concisely puts it, "...there can be little doubt that when malnutrition at an early age is serious and prolonged, it may have repercussions on the mental development of a child which are liable to be irreversible".⁴ In less extreme situations, in contrast, the evidence suggests that the problem is much more complex and controversial. In the first place, it is by no means obvious that nutritional deficiencies are inevitably reflected in mental retardment;⁵ secondly, some of the pertinent research has shown that school failure cannot be explained in terms of the pupils' mental retardment.⁶

At a more global level of analysis, various studies have pointed out the high level of correlation existing between socio-economic position and school performance. Indexes of socio-economic status are generally based on

income, housing, education and occupation data, and there can be no doubt that poor performance is concentrated in the lower social strata. At more specific levels of analysis, an attempt has been made to define the incidence of some of these variables more exactly.

As regards housing, for example, a study carried out in marginal urban areas in Buenos Aires found that in terms of correlation between material living conditions and school performance, the closest association was, precisely, with housing. The study suggested that probably this datum reflected not only an improvement in everyday living conditions but also greater concern for the life of the family group on the part of its active members.⁷

Family structure is another of the variables to which special attention has been devoted in this field of research. In the first place, various sociological and anthropological studies have underlined the existence of significant changes in family structure and in socialization patterns, of which too little is known as yet. In this connection, it would seem that in rural areas where the most disadvantaged sectors are concentrated, migration and seasonal occupation phenomena are occurring which essentially affect men. Women and children then come to perform a highly important productive function, and changes take place both in the traditional conditions of the socializing agents and in the very definition of the role of childhood. In the case of marginal urban families, the existing studies tend to discredit the stereotyped concept of a high degree of family disorganization; nor can data on average number of children, participation in the labour market, etc., be generalized for the region as a whole.

As regards school success, however, it would appear that there is a close association between the number of children and school performance,⁸ albeit, in other instances, a

⁴See José M. Bengoa, "Niveles individuales y sociales asociados a la desnutrición", in Fernando Galofré (compiler), *Pobreza crítica en la niñez: América Latina y el Caribe*, ECLA/UNICEF, Santiago, Chile, 1981, p. 177. A further selection of studies on the subject can be found in a special issue devoted to malnutrition, poverty and mental development in *Cadernos de Pesquisa*, São Paulo, Fundação Carlos Chagas.

⁵See José M. Bengoa, *op. cit.*, p. 179.

⁶See, for example, Luis Bravo Valdivieso and Sonia Salas de Bodini, "Características psicopedagógicas de escolares básicos repitientes", in *Revista del Centro de Estudios Educativos*, Vol. 5, No. 4, México, 1975, pp. 23-26.

⁷See Ana M. Eichelbaum de Babini, *La villa miseria y la escuela en Buenos Aires. El medio familiar y el éxito escolar*, Buenos Aires, CICE/Instituto Torcuato Di Tella, 1976, p. 60.

⁸See Luis Bravo Valdivieso *et al.*, "Características psicológicas y socio-culturales de la retención escolar durante

linkage has been found with the total number of family members.⁹

On child labour too, only the scantiest information is available. That obtained through parent surveys tends to show that wage-earning child labour is of very little significance,¹⁰ and that child labour in the home—while on a larger scale—is similarly devoid of such characteristics as can be associated with school performance.

Some doubt may reasonably be felt, however, as to the reliability of these data, since in answering this question parents are generally influenced both by social disapprobation of child labour and by legal provisions that prohibit it. Some studies recently carried out with different methodological approaches lay stress on the considerable magnitude of the problem and the need for further research in this direction. With respect to the rural area of Colombia, for example, a recent study corroborates the hypothesis concerning the significant repercussions of child labour and of seasonal migrations on school performance.¹¹ In relation to urban areas, on the other hand, the lack of information is much greater.

Viewed from a theoretical angle, the most immediate risks attaching to an analytical approach to the school failure question based on material exogenous determinants are those of *biological determinism* and those of *sociological determinism*. If performance is explained by intelligence and this in turn by the nutritional levels prevailing in the pre-natal phase or in very early childhood, by hereditary genes or by any other natural factor prior to schooling, the margin for transformative action open not only to the school but to social stimuli as a whole obviously becomes minimal. When the approach adopted is not biological but sociological, the foregoing argument is regarded as an ideological

rationalization designed to justify the prevailing social order. But the conclusion reached is that the place held by parents in the social structure univocally determines educational process and only with important changes in the social structure could the prevailing social distribution of knowledge be altered.

On the other hand, in the developed countries there has been a recrudescence of interest in recent years in the debate as to the role of hereditary influences versus environmental influences.¹²

In contrast, in Latin America the discussion has taken a different turn. Biologicistic positions have been discredited both by research and by social realities themselves, since, whatever the role of heredity, no one can assert that, save in exceptional cases, the genetic capital of human beings may be an impediment to such elementary learning as is involved in basic schooling.

In the case of sociological determinism, the arguments adduced retain a high degree of validity when the whole group of macro-educational problems is analysed. On the other hand, when the analysis relates specifically to such phenomena as school performance, the schema proves too inflexible and affords no explanation of such significant aspects as, for example, differences in school performance within the popular strata. Moreover, explanations of school performance by virtue of external determining factors afford no opportunity of evaluating the elements that mediate in the process. In other words, it seems obvious that social origin and the set of variables that determine socio-economic status affect educational performance through variables and processes of a cultural type, on which more detailed information is required. In this connection, knowledge on the influence of external factors on school performance has been greatly broadened by the incorporation of cultural variables, of which a partial analysis will be undertaken in the following section.

el primer ciclo básico", in *Deserción Escolar*, year 2, No. 5, Buenos Aires, PROMEP, September 1981.

⁹See Ana M.E. de Babini, *op. cit.*

¹⁰See Ana M.E. de Babini, *op. cit.*; E.R. Espada and S. Vecino, *Los escolares de barrios populares de Bogotá: una reserva de talento*, Bogotá, ICOPE/ASCOFAME/CENDIP, 1974.

¹¹See A. Toledo, H. Clavijo and M.M. de Hernández, "El alumno de la escuela rural como fuerza de trabajo", in *Revista Colombiana de Educación*, No. 5, Bogotá, CIUP, 1980.

¹²See T. Husén, *Influence du milieu social sur la réussite scolaire. Perspectives des recherches sur l'égalité devant l'éducation*, Paris, OECD, 1975.

B. CULTURAL EXOGENOUS VARIABLES

In analysing the impact of the cultural conditions that characterize the popular sectors on children's school performance, a certain de-phasing can be discerned between theoretical postulates and empirical studies carried out to substantiate them.

From the theoretical standpoint, in recent decades the axis around which the whole body of social sciences in the region has revolved has been the problem raised by the exclusion of large masses of the population from access to the various orders of the social structure: attempts have been made to categorize this phenomenon under the head of such concepts as 'marginality', 'structural heterogeneity', 'informal sector', and in lines with each of these postulates numerous studies have been carried out which now make it possible to describe in some detail the composition of those excluded in the sphere of work.¹³ In contrast, knowledge of this problem from the *cultural* point of view is not nearly so exact. In this respect the research conducted has been less, but at the same time it may be said to have been markedly dissociated from educational research.

The importance of cultural variables in pedagogical practices can be examined on the basis of a general hypothesis posited by analyses of the socialization process. According to this postulate, the success of schooling depends upon the correspondence that exists between the patterns characterizing the pedagogical work of the school and the patterns of socialization proper to the family and the context surrounding the child.¹⁴

The correspondence between the social links existing in society and those prevailing in pedagogical activities is a subject that has been little explored in research, although fully discussed in the literature that analyses the social functions of education.

School linkages will be analysed in the forthcoming sections, although it may be stated in advance that the pertinent information existing —while not exhaustive— is, up to a point, convincing. On the other hand, the question as to what are the characteristics of the child socialization process calls for substantial research; on this point, information is not only scarce but does not lend itself to generalization. In contradistinction to certain outlooks which tend to perceive the marginal sectors as homogeneous, a brief weighing-up of the relevant studies confirms that there is a very significant heterogeneity within these sectors which is particularly marked in rural areas.¹⁵

Furthermore, the available studies agree that the situation is not static but that the structural changes which peasant economic units are undergoing —with their repercussions on urban areas in terms of seasonal migrations, etc.— are perpetually modifying the roles of socializing agents and the contents of the socialization process itself. In this framework, a very broad panorama opens out, within which, initially at least, attention may be drawn to the following aspects.

a) *Linguistic patterns*

Not only the studies carried out in the socio-linguistic sphere and in that of the sociology of learning, but also quantitative research in the field of social sciences, point to the fact that school success is linked to the pupil's linguistic capital. Valdivieso, for example, showed that school promotion was associated not with overall intellectual capacity (IQ) but with more specific processes connected with language.¹⁶ Children repeating grades are little able to understand what the teacher is saying in the classroom. This state of affairs reaches a peak in areas with indigenous population where

¹³See the set of studies carried out by PREALC.

¹⁴From the theoretical angle, this hypothesis is formulated in P. Bourdieu and J.C. Passeron, *La reproducción: Elementos para una teoría del sistema de enseñanza*, Barcelona, Laia, 1977; and in P. Berger and T. Luckmann, *La construcción social de la realidad*, Buenos Aires, Amorrortu, 1968.

¹⁵See the Project on Development and Education in Latin America and the Caribbean, *Sociedad rural, educación y escuela*, Informes Finales/1, Buenos Aires, UNESCO/ECLA/UNDP, June 1981.

¹⁶See L. B. Valdivieso, *op. cit.*

teacher and pupil do not share the same language code.¹⁷ Moreover, some studies seem to suggest that the linguistic interaction between parents and children in popular sectors differs in quantity and quality from that existing in the middle strata.¹⁸ Little is known on this subject, however, and probably educational research should, as a first step, make an effort to recover all the information that effectively exists but remains as yet in the ambit of other disciplines and social areas.

b) *Definition of the role of children*

This variable more specifically refers to the way in which childhood is defined in each social stratum. There is a tendency to suppose that a single model of childhood exists, proper to the cultural patterns of the urban middle strata. The studies prepared under the DEALC Project, however, show that in rural and marginal urban areas, children take on productive and domestic work from a very early age, and that in reality one of the few times when they behave (or are required to behave) like children in the conventional sense that the school takes for granted is, precisely, when they are pupils.¹⁹

In this same line of analysis, it must be taken into consideration that one of the cultural factors which affects school performance is the lack of 'preparation' for the role of pupil. Some studies have testified that the parents of pupils whose performance is poor are very ill-informed as to the operation of the educational system,²⁰ while in others it has been shown that going to school is a novelty not only in the child's personal life but in the history of the family and of the social group.²¹

¹⁷See Project on Development and Education in Latin America and the Caribbean, *Proceso pedagógico y heterogeneidad cultural en el Ecuador*, Buenos Aires, UNESCO/ECLA/UNDP, DEALC/22, August 1979.

¹⁸See Ana M.E. de Babini, *op. cit.*

¹⁹See Project on Development and Education in Latin America and the Caribbean, *Proceso pedagógico...*, *op. cit.*

²⁰See Ana M.E. de Babini, *op. cit.*

²¹See Project on Development and Education in Latin America and the Caribbean, *Proceso pedagógico...*, *op. cit.*

c) *Valuation of schooling*

With reference to this variable, it has been maintained that school performance is linked with a number of indicators that reflect the parental attitude towards schooling. Among the best known, mention may be made of associations between school performance and parents' expectations regarding their children's success; the help they provide with respect to the demands of the school; participation and the relations established with teachers, etc. Generally speaking, there is a tendency to assert that children who fail belong to families with low expectations, that adopt a passive attitude to the children's school performance and do not maintain any links with the school.

Other available evidence, however, makes it clear that the situation is much more complex and unexplored.

Firstly, the global studies carried out under the DEALC Project have supported a hypothesis according to which the notable expansion of schooling in recent decades is explicable—up to a point—by virtue of *popular demand for education*. In this connection, it is really little that is known as to the effective role played by popular pressure in the expansion of education. It would seem that in many cases demand does exist although its expression is inorganic and not particularly clear as to the type and quality of educational service most appropriate to its needs.²²

Secondly, not much is known of what sort of strategy is worked out by families in the event of the children's school failure, and of how it is assimilated in the framework of family strategies for survival. In this regard, two major hypotheses might be put forward for study:

i) School failure would appear to be assimilated not as a failure but as the inevitable outcome of an illegitimate aspiration. Here, evidence could be produced to support the contention that school success plays no part or is not accorded priority in family survival

²²See Germán W. Rama, "Estructura y movimientos sociales en el desarrollo de la educación popular", in Project on Development and Education in Latin America and the Caribbean, *Informes Finales/2*, August 1981.

strategies. The family —according to this hypothesis— would 'determine' the school failure of the children through specific processes of stimulation, valuation, etc.;

ii) School failure would seem to be effectively assimilated in terms of failure and would be an outcome imposed upon families despite the strategies devised to prevent it. In this line of

analysis, failure would be a product of objective inequalities and would be virtually unavoidable.

As can be seen, the two hypotheses (although presented as dichotomous alternatives which simplify the complexity of the problem) open up different perspectives in relation both to the explanation of failure itself and to educational policies.

C. MATERIAL ENDOGENOUS VARIABLES

1. *Material resources*

The influence of this group of variables on the school performance of pupils has recently been the object of systematic studies which represent a great advance in knowledge of the subject. Probably the work done under the ECIEL Programme in the framework of the Education and Development Project is one of the most outstanding contributions in this field, and the conclusions reached can be taken as starting-points for other studies at the national level and for analyses of specific problems which the conclusions arrived at in such studies bring to light.²³ Briefly summarized, the findings of these ECIEL studies substantiate the following propositions:

a) The schools' material resources preclude incorporating into teaching the new functions that make for raising the quality of the basic education service offered to the population. Such aspects as sports, health, teaching of art, etc., cannot generally count upon the minimal infrastructure required for their efficacious development;

b) The material endowment of schools does not permit systematic application of non-verbalistic pedagogical styles and practices. The lack or the deterioration of laboratories and scientific instruments and the underutilization of those that do exist are significant obstacles to the diffusion of new modes of learning;

c) Material resources are unevenly distributed among the population as a whole and that of the various regions. Their distribution seems to correspond to two broad and tacit criteria. According to the first, the farther the schools are from the centres of power, the more precarious are their resources; thus, rural and marginal urban schools are subject to significant discrimination where obtaining material resources is concerned. According to the second criterion, the younger the pupil, the fewer resources are allocated to the teaching-learning process.

Thus, the early years of basic education (in which the largest quantity of school population and the highest indexes of failure are concentrated) are those in which least resources are available.

Hence it would be possible to define a specific relationship between the exogenous variables analysed in the foregoing sections and the variables endogenous to the educational system. This relationship would be one of mutual reinforcement, since precarious material living conditions are matched with schools offering a service that is equally precarious;

d) There is no linear correspondence between greater availability of resources in certain areas or social sectors and greater expenditure on education by the areas or sectors concerned. Apparently, those that have most manage to secure bigger shares in the distribution of global resources, whence it is clear that there are complex political mechanisms for access to the sources from which material resources for education can be obtained:

e) Lastly, this group of studies endorses the hypothesis that a higher index of expenditure on education, with its concurrent benefits in

²³See C. de Moura Castro *et al.*, *A educação na América Latina: um estudo comparativo de custo e eficiência*, Rio de Janeiro, FGV/IESAE, 1980.

terms of better physical conditions and better human resources, is associated with higher levels of school performance.

This last hypothesis is obviously the most significant from the standpoint of educational policy options for the region. Within the general framework it affords, however, those material aspects that have most incidence on school performance should be defined more precisely and in closer relation to individual country situations.

Thus, for example, some studies at the national level have been unable to detect any evidence of association between class size and performance. In others, no linkage was discovered between expenditure per pupil and performance, or between performance and teacher certification and training time.²⁴

Over and above any possible observation on the methodological means whereby some of these findings were arrived at, it is important to recognize two aspects of the question:

—In the first place, it seems evident that an increase in material and human resources does not automatically guarantee a positive effect on the quality of teaching. In this connection, there would seem to be a need for more systematic study of the repercussions of material changes on school organization and, through that, on performance. To endow schools with teaching equipment without changing curricula or without training the teachers in its use implies neutralizing a considerable proportion of its effects. And conversely, to implement a teacher-training policy without endowing the schools with the material and organizational facilities whereby the learning process can be turned to good account may produce the same results. In this regard it is possible to postulate the need for a line of research based on analysis of the processes and conditions through which changes in material conditions in schools influence school performance.

Within this approach, a matter of crucial importance for the definition of the *content* of material aspects consists precisely in reassembling findings of studies related to the endogen-

²⁴See E. Schiefelbein and J. Simmons, *Los determinantes del rendimiento escolar: reseña de la investigación para los países en desarrollo*, Ottawa, IDRC, 1981.

ous variables of a cultural type that will be analysed in the following section. A case in point is the problem of supplies of textbooks. While statistical studies have shown that in a great many cases the availability of textbooks has a positive effect on performance, it is obvious that this incidence depends upon the adaptation of the textbooks to the cultural characteristics of the public for which they are intended, and upon their use.

—Secondly, a problem that must be faced is that of the financing of education. In this regard, the region has been swept by a sort of widespread scepticism as to the possibilities of increasing State expenditure on education. Research on this point, however, underlines two essential factors: firstly, there is a serious problem of distribution of the existing resources; secondly, many studies admit this limitation as an assumption which, however, must not necessarily be accepted as such.²⁵

2. Organizational endogenous variables

In this respect, both educational research and the definition of policies have been centred upon two major axes: on the one hand, everything relating to pre-schooling and its effects on school performance; on the other, everything bearing on internal promotion systems within the educational system.

a) Pre-schooling and performance

Little research has been devoted to the subject of pre-schooling as a whole, especially as regards socio-pedagogical factors.²⁶ In this connection, a recent study gives a good description of the findings reached and some of the main problems pending.²⁷ According to these data, which coincide with others deriving from re-

²⁵See Aldo Solari, "Development and educational policy in Latin America", in *CEPAL Review*, First Semester 1977, Santiago, Chile, United Nations, pp. 59-91.

²⁶See J.E. García Huidobro and J. Ochoa, "Tendencias de la investigación en educación en América Latina", *Documentos de Trabajo I*, CIDE, Santiago, Chile, 1978, p. 50.

²⁷See E. Schiefelbein, "Efectos de la educación preescolar en el ingreso al sistema formal", in ECLA/UNICEF, *op. cit.*, p. 325.

search currently under way,²⁸ the effect of pre-schooling on performance and successful completion of the first grade is positive, but needs to be considered with some care.

The study carried out in Colombia, for instance, revealed a manifestly positive relation between attendance at the pre-school level and promotion at the end of the first grade; but if schools are distinguished from one another by socio-economic level of pupils, this relation disappears.²⁹ In Chile's case, the study showed that pre-schooling improved the performance of children of low social origin as far as reading and writing was concerned but did not eliminate the differences between these children and those from other social sectors; moreover, the differences in the result were not recognized by the school, and at the end of the first year children with pre-schooling were seen to have the same marks as children without it.³⁰

Furthermore, studies of pre-schooling also bring to light two features which must be taken into account: firstly, the scanty coverage at this level, and secondly, differentiation of access by socio-economic background. In this respect, the existing data are not sufficient for a precise description, but it is obvious that expansion at the pre-schooling level tends to be concentrated in urban areas and the beneficiaries are preponderantly from middle and upper socio-economic backgrounds. In addition, internal heterogeneity is highly significant, extending from establishments endowed with abundant and 'sophisticated' resources to premises that serve as 'day nurseries' looked after by more or less unqualified personnel and subject to no pedagogical control or supervision of any kind.

This group of elements endorses the suggestion put forward in the study quoted above to the effect that the results of pre-schooling "must be analysed in the light of what really happens in classrooms at the pre-school and primary levels, and of the

environment to which pupils are exposed in their homes and neighbourhoods".³¹

In this context some questions and problems may be posed which educational research ought to examine in greater depth:

i) the existing studies show that in view of the diversity of results obtained as to the effect of pre-schooling on performance and promotion, this argument does not afford an exclusive basis for justifying the expansion of pre-schooling. The problem of the ineffectiveness of basic education is located within the primary school and it is there that it should be resolved. This hypothesis raises a key question in terms of strategies for educational policy, since it may well be asked how far the priority accorded to pre-schooling is only another way of situating the problem outside the school, at the risk of diverting resources and activities from the central objective;

ii) the expansion of pre-schooling may be meaningful in more global terms, linked to the improvement of nutritional, sanitary, recreational and other forms of care, among children from marginal areas where both parents work and/or where the younger brothers and sisters are looked after by the older children. In this connection, research concerned with the incidence of family conditions (number of children, child labour, etc.) on school success warrants the assumption that the expansion of pre-schooling may have significant effects on school success in so far as it improves child care conditions and thus releases children from domestic work;

iii) in its turn, the expansion of pre-schooling poses the question of what type of pedagogical activities is the most appropriate for the marginal population. Here the options pivot either upon a curriculum concentrating mainly on affective and socializing functions or upon a curriculum designed to equip marginal children with a specific set of cognoscitive capacities such as "... thinking, abstracting, categorizing, solving problem and taking decisions".³²

²⁸See J. Filp *et al.*, "Efecto de la educación preescolar formal sobre el rendimiento escolar de niños a fines del primer año básico: un estudio de seguimiento en Chile" (in the press).

²⁹See E. Schiefelbein, "Efectos...", *op. cit.*, p. 338.

³⁰See J. Filp, *op. cit.*

³¹See E. Schiefelbein, "Efectos...", *op. cit.*, p. 340.

³²A.M. Poppovic, Y.L. Espósito, M.M. Malta Campos, "Marginalização cultural: subsídios para um currículo pre-escolar", in *Cadernos de Pesquisa*, No. 14, São Paulo, Fundação Carlos Chagas, September 1975.

b) *Promotion and school failure*

As studies on coverage indicate, the main problem as regards the efficiency of schooling centres upon repetitions.³³

In view of this evidence, the hypothesis was postulated that the evaluation and promotion mechanisms were the factors that explained the high failure indexes. In support of this hypothesis a number of psychopedagogical arguments were adduced, such as the existence of individual rates of learning, the deterioration of the self-image, etc., while at the same time the criteria applied by teachers in evaluating pupils were described as apparently based on subjective and rigid opinions. On these grounds, the prescription for educational policy consisted in the establishment of systems of automatic promotion in the first three grades of the basic cycle.

Little is known as yet of the result of these experiments, or of the criteria by which some

countries of the region have abolished them after having introduced them. A recent study suggests that in countries where they were put into practice "...the accumulation of pupils due to repetition was transferred to the end of the first four-year cycle, or else built up a bigger pile of failures at the secondary level".³⁴

The psychopedagogical arguments, moreover, do not appear to enjoy universal support. As is maintained in the study referred to, respect for individual rates implies a concept of spontaneous, predestined and emergent physiological maturation which does not recognize the importance of educational influences.³⁵

Clearly, to judge from these expressions of opinion, automatic promotion is an issue that has not been sufficiently evaluated, and in any case its introduction, if the other pedagogical variables remain constant, does not resolve the problem, but at best defers it.

D. CULTURAL ENDOGENOUS VARIABLES

The endogenous variables of a cultural type comprise a very significant part of the pedagogical process itself. Accordingly, they could be analysed in terms of their basic components: the teacher, the contents, teacher-pupil interaction and norms of evaluation, promotion, supervision and educational guidance.

As regards the teacher, a sizable body of studies exists on the basis of which the findings and the most outstanding lacunae can be indicated.³⁶

In the first place, it has been maintained that one of the key variables in the explanation of school performance lies, precisely, in the teachers' attitudes and expectations. Following up the classic experiments of Rosenthal and Jacobson in this connection, some studies have

demonstrated the existence of an important correlation between the subjective evaluation of the pupils' learning potentialities and their effective school performance.³⁷

In these studies, in general, it has been possible to show that teachers' expectations were associated with the social origin of the pupil and operated in terms of what is called 'self-fulfilled prophecy': inasmuch as failure is expected and the expectation determines the failure, the results confirm the validity of the prophecy and reinforce it. According to this interpretation, the expectation of teachers are essentially dictated by cultural or social prejudices and are reflected in a

³³See E. Schiefelbein, "Efectos...", *op. cit.*

³⁴Berta P. Braslavsky, *La lectura en la escuela de América Latina*, Project on Development and Education in Latin America and the Caribbean, Fichas/17, Buenos Aires, UNESCO/ECLA/UNDP, 1981.

³⁵*Ibidem*, p. 54.

³⁶B. Avalos and W. Haddad, *Reseña de la investigación sobre efectividad de los maestros en África, América Latina, Filipinas, India, Malasia, Medio Oriente y Tailandia: síntesis de resultados*, Ottawa, Ontario, IDRC, 1981.

³⁷See L.B. Valdivieso and S. Salas de Bodini, *op. cit.* See also E.S. de Sa Barreto, "Profesores de periferia: soluções simples para problemas complexos", in *Cadernos de Pesquisa*, *op. cit.*

fatalistic conception which paralyses any action strategy for improving matters.³⁸

However, a study recently carried out with respect to a sample of teachers in schools with pupils of popular origin in Brazil³⁹ furnished a good deal of evidence which enhances and reformulates the significance of this hypothesis. In the first place, the study in question improves upon the one-track postulates of the preceding hypotheses with regard to the determination of school success by teachers' expectations. According to the findings of this study, teachers form their expectations as to performance on the basis of the real data obtained in their working experience, and they generally see these expectations corroborated because of their own lack of appropriate technical responses whereby they can take action to avoid their pupils' school failure.

In this context, the most important product of the study referred to consists in consideration of the teacher training variable as the junction point of expectations and results in respect of learning.

There are few studies on this subject which analyse the teacher training problem *per se*, much less the problem of the relation between training and the requirements of teaching where the pupils are of urban or rural popular origin.

All these problems open up a broad field of research, in which certain key elements are outstanding.

a) *Teacher training*

The field of teacher training is one of those most neglected by educational research. The studies carried out on the basis of quantitative data suggest complex and even contradictory associations between the different variables. Thus, for example, the above-mentioned *Reseña* relating to the efficiency of teachers⁴⁰ showed

that some studies found positive relations between qualifications and performance only in the early grades. In the description of factors determining school performance, on the other hand, contradictory situations were observable where the links indicated were positive in some studies and in others were of an opposite or insignificant character.

But in this case, just as in the studies on material determinants, it would seem indispensable to undertake a qualitative analysis of contents, modalities, intended recipients, possibilities and conditions for application of what is learnt, etc., in order to be able to evaluate the various kinds of training.

Generally speaking, the questions arising a propos of these problems relate to the degree of adaptation of teacher training—both initial formation and in-service training—to requirements for working in marginal areas and with popular sectors. Some partial evidence suggest that the level of adaptation is very low, both in pedagogical and in socio-cultural respects. The testimonies of rural teachers in some countries of the region indicate scanty preparation for work in single-teacher schools, ignorance of the indigenous language and culture, etc.

Teaching activities in their turn reveal a high level of ignorance of the real social environment and likewise a high level of prejudice.⁴¹

In this regard, it is needful to investigate the process through which these attitudes are formed and what role is played in this process by mere information on the culture and the conditions of the environment. It might be postulated that the levels and characteristics of the prejudices existing among teachers are apparently a factor that must be taken into account in order to design training methods that will make for their modification.

This might be an appropriate context in which to introduce one of the subjects most widely discussed in the pedagogical literature of recent years: the research-action question. A matter that should be studied in this respect is the influence exercised by the study of socio-cultural

³⁸See Juan C. Tedesco and R. Parra, *Marginalidad urbana y educación formal: planteo del problema y perspectivas de análisis*, Project on Development and Education in Latin America and the Caribbean, Fichas/14, March 1981.

³⁹See Guiomar Namó de Mello, *Magisterio de 1º grau: da competência técnica ao compromisso político*, São Paulo, Autores Associados-Cortez, 1982.

⁴⁰See B. Avalos and W. Haddad, *op. cit.*

⁴¹See DEALC Project, *Proceso pedagógico...*, *op. cit.*; J.C. Tedesco and R. Parra, *op. cit.*

conditions in marginal areas through methodologies for research which the teachers themselves are responsible for carrying out, and in which the objective is not primarily the discovery of knowledge that is new from the standpoint of the social sciences, but discovery for the teachers themselves.

b) *The role of reading and writing*

It is common knowledge that the highest figures for repetition and drop-out are found in the first grades of the primary school, a fact which is closely related with learning to read and write. In this connection it would be necessary to look into what actually happens in teacher training as regards specific preparation for teaching of this type. Some studies suggest that there is a tendency to neglect this branch of training, correlative with the raising of primary school teachers to education at the third level.⁴²

This problem acquires still greater importance in contexts where the indigenous population is predominant. The technical difficulties arising in these cases are much more complex, but the most striking thing is that these difficulties have not been seriously tackled in didactic research or in teacher training. According to certain studies based on classroom observations, the commonest way out has consisted in ignoring the problem, and leaving the teacher without any type of technical equipment to enable him to cope with such situations with a certain measure of efficiency. The habitual responses of teachers hover between the use of interpreters (Spanish-speaking adults, children in the upper grades, etc.) and total ritualization of the teaching process.⁴³

c) *Teacher-pupil interaction*

Studies on this subject have increased in recent years, through the use of methodologies based on systematic classroom observation. An initial weighing-up of these studies would seem

to warrant the assertion that there are pedagogical circuits, so to speak, differentiated by social origin of pupils. The needs of pupils of popular origin, among whom the highest level of failure is concentrated, are met through a type of teaching, characterized by a strong element of ritualism, in which teachers tend to interact more with pupils whose levels of performance is high, evaluation is not utilized as part of the learning process, recourse is constantly had to methods based on verbalism, memorization and authoritarianism, and so forth.⁴⁴

Specific studies on the role of teacher-pupil interaction in relation to performance are few and far between, and their conclusions raise a series of questions. The studies on Ecuador and Paraguay,⁴⁵ for example, noted that democratic and permissive attitudes on the part of teachers were associated with better levels of performance. Yet other evidence suggests that in reality the problem is more complex, and that a mere change of attitudes is not enough; the teacher must also be technically equipped to tackle learning problems and resolve them.⁴⁶

Thus, the challenge facing educational research consists in overcoming the present dissociation between psychopedagogical and didactic research and findings on the one hand, and socio-educational research and findings on the other. Psychodidactic research has concerned itself with learning irrespective of the social conditions in which the pupil and the school have to work, while by socio-educational research the specific problem of learning has been shelved. Ultimately, the broadest field opened up in this line of analysis is that of the search for a didactic—in the fullest sense of the word—appropriate for the popular sectors.

⁴²See, in addition to the studies already mentioned on Ecuador and Bogotá, Carlos Muñoz Izquierdo *et al.*, "El síndrome del atraso escolar y el abandono del sistema educativo", in *Revista Latinoamericana de Estudios Educativos*, Vol. IX, No. 3, Mexico, 1979.

⁴³See F. Sweet, *Los factores determinantes de la escolarización y el aprovechamiento en la educación ecuatoriana*, IIEP/PUCE/ECIEL, 1976; D. Rivarola and G. Corvalán, *Determinantes del rendimiento educativo en el Paraguay*, Asunción, ECIEL/CEPES/CEPADES, 1976.

⁴⁶See Guiomar Namó de Mello, *op. cit.*

⁴²See Berta P. Braslavsky, *op. cit.*

⁴³DEALC Project, *Proceso pedagógico...*, *op. cit.*