

DO CLASSROOMS MATTER?  
ACHIEVEMENT  
PASS RATES AND CLASSROOM PROCEDURES: A QUANTI-QUALITATIVE  
STUDY OF ~~UPPER PRIMARY SCHOOLS IN ESPIRITO SANTO (BRASIL)~~

by

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## ABSTRACT

Urban upper primary schools in Espírito Santo are better staffed and equipped than rural schools yet their "pass rates" are lower. Given evidence that: (a) urban areas are more developed than rural areas, (b) development and educational quality correlate positively, (c) school characteristics account for about 80 percent of the variation in pupil achievement in less developed countries, and (d) learning assessment in Brazil is not centralized, the reported "pass rates" are paradoxical and call for clarification. This is the problem this thesis approaches from a quanti-qualitative focus.

Survey data on achievement scores, school results and the correlations between these measures of pupil attainments indicate that "pass rates" enmesh teachers' set learning goals. High school results / lower achievement scores in rural areas, which lack significant correlations, suggest lower quality education geared towards rote-learning. Lower school results / higher achievement scores in urban areas, with weak-moderate positive correlations signal more complex cognitive demands and improvement of educational quality through content understanding. Therefore, "pass rates" have specific meanings and are not suitable as comparison of performance of different schools.

The ethnography of an urban school illuminates the survey findings and unveil the meaning of "pass rates" from the viewpoint of "successful" classroom practices. In a context of similar qualifications teachers share a progressive pedagogical discourse but their classroom practices portray diversity of educational quality and corresponding learning achievement standards. Teaching approaches, displayed in a typology (based in textbook use and pupils participation in the lesson), represent a continuum from rote-learning to the re-creation of knowledge. Options for teaching approaches are compromises between educational ideals and existing constraints. These include teachers' competence (rooted in their background), the ethos and culture of the school, and external demands on schooling. Pupils' responses to teaching approaches embody their appraisal of the process, the subject-matter, and prevailing teacher-pupil affective ties.

Ultimately learning outcomes expressed through "pass rates" represent distinctive teaching practices and learning results.

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## CHAPTER 1

### INTRODUCTION:

### UNDERSTANDING PASS RATES AND PUPILS ATTAINMENT IN THE CONTEXT OF SCHOOLS: THE CASE OF ESPÍRITO SANTO

Chapter 1 aims to present the problem by establishing pass rates reported in statistics for Brazilian schools by establishing relationships between previous studies on school results in the State of Espirito Santo and major findings from international research on academic achievement. It also outlines the structure of the thesis.

Research results show that schools play an important role in explaining differences in achievement. Over 80 per cent of the explained variance in analysis of academic achievement in less developed countries is attributable to school characteristics (Heyneman and Loxley, 1981).

In the State of Espírito Santo (Brazil) staff and school infrastructure differences are vast and the disadvantages of rural areas in relation to urban areas are most vivid. This rural-urban differentiation is much starker than regional differentiation: not only are urban school buildings of better quality and equipment and material more easily available but schools are also better staffed (Gama et al, 1984:226:228, 252).

Moreover, the lack of a system of monitoring and supervision and the absence of any type of centralization concerning "assessment" places total responsibility for the



whole instructional process onto the individual teachers. Academic achievement is expressed in terms of pass rates that are likely to encompass as many different assessment criteria as there are teachers concerned. In this context, the acceptance of pass rates as indicators of the academic performance of the school system is highly challengeable. School results (i.e., pass rates) currently available render such acceptance more controversial. Pass rates for urban and rural upper primary schools show higher rates for the rural segment of the system than for the urban segment, which is better staffed and equipped. Thus the first aspects of the problem to be clarified is that of **the meaning of "pass rates" in the light of standardized achievement tests** suitable for Brazilian upper primary school children.

The review of the literature presented in Chapter 2 indicates that both in less developed countries and in developed countries the importance of teacher qualifications for pupils' achievement increases in higher grades (although teachers' experience is more important in lower grades), and the teachers' mastery of the content and ability to structure a lesson (which are likely to be more satisfactory in qualified teachers) figure among the key issues in influencing students performance.

The "Study of Socio-Economic and Educational Disparities in Espírito Santo" (Section 2.1) shows that differences in the qualification of teachers working in urban and rural areas increase in upper primary schools. In this cycle of primary

education, however, the pattern of positive association established between socio-economic conditions and educational characteristics do not prevail in relation to pass rates. Instead a negative correlation is reported: as socio-economic conditions improve, school pass rates decrease. Therefore, the second aspect of the problem calling for clarification refers to **teachers' attributes and their relationship to learning outcomes**. Issues as teaching approaches, textbook and homework use, the participation structure of the lesson, the assessment structure in relation to the prevailing concept of quality education, on which evidence from existing research is inconclusive, are focal points in the study.

The research has a dual foci: to interpret the meaning of pass rates in upper primary schools in Espírito Santo, in the context of academic achievements, and to understand the relationship between pass rates and classroom procedures which result from specific teachers attributes. This is analyzed in the light of quality education, in order to clarify the paradoxical results which appear to indicate that better instructional conditions and a more qualified teaching force lead to lower pass rates

### Objectives of the Study

The search for explanations which illuminate the problem stated above highlights four areas from which the objectives of the study emerge, namely: (a) the comparability of pass rates, given the decentralization<sup>1</sup> of teaching and assessment

procedures; (b) the adequacy of pass rates to represent the performance of the system as average measures of pupil attainment; (c) the influence of teachers' attributes on the development of the teaching-learning process, and their influence upon pupil attainment; and (d) the interlinkage between teachers attributes, quality education and pupils attainment.

### Practical Relevance of the Study

The study provides the State school network with data so far unknown to them, i.e., achievement scores for students and achievement rates for schools in urban and rural areas. This information in itself will be more representative of the pedagogical effectiveness of the system than the pass results which are now the criteria for the assessment of attainment. It also provides information on average pass marks presently not available to educational administrators.

Data is generated through two methodological stances, firstly quantitative and secondly ethnographic.

In the first case the focus is upon the comparison between pass and achievement rates as a means for a better understanding of the operational conditions of the system. Average pass marks in individual "subject-matter"<sup>2</sup> as well as final scores are correlated with achievement mean scores. Thus, the study identifies the relative strength of content areas, providing the educational system with useful information

upon which to base vital managerial decisions in the area of teacher training and school supervision.

In the second case, the ethnographic study makes available for decision makers and teachers alike a scientifically based analytic description of different learning processes unfolding in the classroom, and their inter-relationship to pupil attainment, and the attributes of teachers most likely to use specific teaching approaches. Such insights (possibly generalizable) provide information on the most vital aspects of the classroom activities, teachers' characteristics and school atmosphere connected with quality education and high educational achievement. Moreover, in the hands of teachers a classroom ethnography centred on teaching approaches and achievement may be the basis for "naturalistic generalizations" thus leading to an individual appraisal of one's teaching potential and ordinarily used teaching approaches that could entail an improvement in teaching practices.

Above all the practical relevance of the study lies in generating data that lead policy makers to a new understanding of the school systems under their control, and a more adequate base for technical decisions in line with advancements made in educational evaluation.

### **The theoretical relevance of the study**

The theoretical relevance of the study lies in expanding the utilization of achievement tests, thus contributing to an

increase in the understanding of academic achievement in Espirito Santo and in less developed countries. This is undertaken in relation to the educational policies of Brazil. Thus, the study adds to the knowledge of academic achievement and assessment procedures implemented without centralized control.

Equally, the investigation fulfils the call made by Avalos and Haddad (1979) for the use of "different methods from those of classic surveys" to examine "the process of teaching". Through this use of ethnographic techniques the question of educational achievement is reviewed from another perspective, revealing the "meaning" of teaching, learning and achievement for those more directly involved in the process: teachers and pupils. Moreover, the use of participant observation techniques highlight the "insider-outsider insights" on the teaching process. This adds a critical dimension to the interpretation of the events offered by the school community, especially in providing a comparison between two levels of reality: the discourse and practice.

An ethnography cannot map out in advance the characteristics around which the core of the observation evolves. They stem from the observation itself as the problem becomes more focused and the path to be followed towards an understanding of the problem is made clear by the combination of in-depth reflexive observation and the continuous comparative method. Nonetheless, a priori knowledge of key issues and variables that need clarification constitute sign

posts for the researcher's reasoning process that leads to vital methodological decisions concerning the investigation. In this case, teaching approaches, the quantity and the use of textbooks, the role of homework, the assessment structure, the prevailing concept of quality education and the relationship between these variables and teachers' attributes, such as qualification and background characteristics, are the areas explored in the ethnographic investigation.

### Conclusion:

The question of understanding the meaning of pass rates in the light of pupils' attainment and in relation to teachers' attributes and procedures is discussed in six chapters and a conclusion focusing respectively:

Chapter 2 : Pass rates and Achievement: An emerging problem in Brazil (Espírito Santo) in the perspective of existing studies on achievement.

Chapter 3 : Methodological issues: The implications of the quanti-qualitative dimensions of the problem.

Chapters 4 and 5 : School Assessment and Achievement in Urban and Rural Upper Primary Schools in Espírito Santo (Quantitative data).

Chapters 6 and 7 : Teaching and Learning in a Successful Urban Upper Primary School: An ethnography.

Chapter 8 : Conclusion : Do classrooms matter?

**Notes to Chapter 1**

1. Learning assessment according to Brazilian education norms is entirely decentralized, lying in the hands of individual teachers. There are no centralized examinations in the country, the procedure more similar to that being the university entrance exam.
2. Subject-matter is the term used throughout this thesis to refer to curriculum content areas labelled in the Brazilian law and educational literature as "disciplinas", following the label used, among others, by Tikunoff (1975) in the Beginning Teachers Evaluation Study (BTES).

## CHAPTER 2

### PASS RATES AND PUPILS' ATTAINMENT: AN EMERGING PROBLEM IN BRAZIL (ESPIRITO SANTO) IN THE PERSPECTIVE OF STUDIES ON ACHIEVEMENT AND QUALITY EDUCATION

The aim of this chapter is to present and explore the problem concerning the interpretation of pass rates in upper primary school in Espirito Santo in the light of notions of achievement, in such a way that: (1) the focus of the investigation is clearly stated; (2) pass rates are analyzed in the context provided by the general results of the study of socio-economic and educational disparities in Espirito Santo; and (3) selected international studies on achievement are discussed, highlighting key aspects of school effectiveness and pupils attainment and serving as a foundation for assumptions about the quality of education to be made.

#### 2.1 The emerging problem in its context

Learning assessment in Brazilian schools - Pass rates are the result of the assessment of learning carried on within schools. However, due to legal instructions<sup>1</sup>, assessment is highly decentralized. In the area of learning assessment and teaching, at the federal and state levels, no centralization exists beyond the enforcement of legal norms which establish a national core-curriculum<sup>2</sup>, define minimum-maximum time allotment limits for each subject-matter, and determine minimum pass grades<sup>3</sup>. Thus the key decisions on what to teach, which learning to assess, and how/how often to assess learning are ultimately in the hands of teachers acting in the classrooms.

In short, teachers themselves decide what achievement will



be expressed through pass rates. And, given the large numbers and consequent variety of teachers, with diverse characteristics and types of training, very different assessment procedures should be expected.

Nonetheless, this diversity is overlooked by educational administrators and pass rates are accepted as the statistical tool for the evaluation of the performance of the system. Its "pedagogical effectiveness" although not actually defined is assumed to be portrayed in pupils' assessment marks, from which pass rates are derived. And the quality of the instructional process mediated by the school is inferred from pass rates in tacit acceptance of a prevailing similarity in learning conditions and assessment demands. Similarly the "efficiency" of the system is considered through the analysis of grades of access, attrition and repetition, i.e., through measures of educational wastage.

#### **2.1.1 The Study of Inter and Intra Regional Educational and Socio-Economic Disparities**

The question of the influence of teachers' decisions on pass rates was raised formally in the "Study of Disparities" conclusions on school outcomes (Gama et al, 1984:100). This study which was carried on by a group of researchers from the Federal University of Espírito Santo, including the writer of this thesis<sup>4</sup> was based on 1980's statistics. It sought to uncover and map existing educational disparities at the state's inter and intra regional levels establishing relationships

between educational and socio-economic inequalities. Data analyses aggregated at regional level considers criteria such as the geographic divisions (i.e., "municipios"<sup>5</sup> and urban-rural settings), the educational sub-systems according to the type of its administration (i.e., federal, state, municipal and private sub-systems), the system's formal structure (i.e., primary and secondary levels, lower and upper primary cycles and within it 1st, 4th, 5th and 8th grades), and the age and type of students (i.e., repeaters and non-repeaters in a given grade), together with information on initial enrolment, drop-outs, pass-repetition at the end of the year, teachers and other staff qualification, school's material conditions plus a few selected educational and socio-economic indicators (e.g., literacy rates, urbanization rate, average family income, economic productivity).

Inequalities are singled out in relation to "means" and "ends"<sup>6</sup> of education. Overall results of the study show that: (a) the state-managed segment of the educational system is most spread but it exhibits less satisfactory characteristics whether the focus of the analysis is on its means, on students' flow or on results; (b) the socio-economic and the educational systems are closely interrelated, therefore the more developed regions have a more "effective" and "efficient" educational system; (c) rural areas are less privileged than urban areas independently of the socio-economic development of the region; (d) yet, paradoxically, state upper primary schools in rural areas<sup>7</sup> present higher pass rates than schools

in urban areas.

### 2.1.2 The research problem.

The "Study of Disparities" points out that poorly staffed and ill-equipped schools in rural areas have higher pass rates than urban schools operating in far better conditions. Such a conclusion constitutes a problem which demands a more thorough and careful analysis.

The educational situation portrayed in data from the Study of Disparities is the following:

Table 2.1 : Pass Rates in Upper Primary Schools in Urban and Rural Areas in Espírito Santo, by Region<sup>8</sup> for State School.

AREA	REGIONS-PASS RATES %						Total
	Coast	Central Mountains	South	North	Sweet River	Metro- politan	
Urban	80.8	84.2	80.9	85.6	80.3	81.0	81.5
Rural	97.5	93.3	95.6	95.9	86.6	87.5	91.1
Total for the State	84.6	86.5	82.5	86.9	80.9	81.3	82.5

cf. Gama et al, 1984:128

Taken as its face value by educational administrators higher pass rates are assumed to represent more efficiency in the operation of the system and more effectiveness in the mediation of instruction. Pass rates are a quantitative representation of educational quality for segments of the system.

However, this interpretation faces two powerful counterparts: the revealing pattern of results from the "Study of Disparities" and findings from other investigations reported in the international literature on academic achievement.

The following pages discuss (a) pass rates in relation to other representative results of the aforementioned study (Section 2.2) pointing out paradoxes which become evident when pass rates are not examined in isolation; (b) selected reports from research on academic achievement in developing and developed countries (Section 2.3) showing an already clearly established relationship between some educational inputs and pupils attainment.

## 2.2 Results from the Study of Disparities

This research report points to a strong positive correlation between the socio-economic level of development and the quality of the educational system (Gama et al, 1984:320-321). As a consequence, the least developed regions (Coast, North and to a smaller extent Central Mountains) and rural areas are overall less privileged than more developed regions (Metropolitan, South and Sweet River). Evidence of this association can be exemplified by data on drop-out and the qualifications of school staff.

Table 2.2, below presents drop-out rates.

Table 2.2 : Drop-out Rates in Upper Primary Schools during the School Year, and from one year to the next one, in Espírito Santo, by Region, for State Schools.

Drop out rate	REGIONS/DROP OUT RATES %						Total
	Coast	Central Mountains	South	North	Sweet River	Metro-politan	
During the school year	18.5	12.6	11.9	16.2	10.5	12.0	11.9
From one year to the next	10.2	13.9	11.6	15.7	10.5	11.2	11.7

cf. Gama et al, 1984:70,87

In less developed regions (Coast, North, Central Mountains) drop out rates are, in general, higher than in the more developed regions (South, Sweet River and Metropolitan). The tendency is for less developed regions to be internally less efficient presenting higher rates of wastage than the average of the State, while more developed regions tend to be more efficient, retaining a larger percentage of students in the system. In this case there is a straight forward relationship between the quality of operational conditions of the schools (e.g., qualification of the teaching personnel and schools' material conditions) and efficiency, as a capacity for retaining the students.

The advantages of urban schools are well demonstrated in the discussion on teachers' qualifications and the availability of technical personnel<sup>9</sup> (Gama et al, 1984:185-220). The latter is seen as an important element for the enhancement of educational quality, as the body responsible for the

pedagogical infra-structure to the development of the instructional process.

In upper primary schools the percentage of formally qualified teachers (i.e., with a university degree) in urban areas is around 63%, whilst only about 28% of rural area teachers are legally qualified. The trend is for rural teachers to hold a "Secondary School Teaching Certificate", which legally qualifies them to teach only at the lower primary school cycle<sup>10</sup>.

The association between the level of development of the region and the percentage of formally qualified teachers repeats, in general, the trend which characterizes drop out rates. However, the disparity between urban and rural areas far outweighs that of regional differences. Table 2.3 below gives the figures for teacher qualification and afterwards figures on technical personnel and headteachers' qualification (another aspect of educational quality) are examined.

Table 2.3 : Teacher Qualification in Upper Primary School in Espirito Santo, for State Schools, by Region, for Urban and Rural Areas.

AREA	REGIONS-TEACHER QUALIFICATION %						Total
	Coast	Central Mountains	South	North	Sweet River	Metro- politan	
Urban	50.8	45.5	75.7	35.6	59.8	69.5	62.9
Rural	17.5	17.3	33.3	20.4	21.6	54.3	27.9

Concerning technical personnel the study shows that while urban area schools hold 97.7% of the qualified Supervisors in the state school system, in rural areas these specialists are not found in the schools themselves but in the Municipal or Regional Centres, and only in vary small numbers (Gama et al, 1984:217).

Data on school headteachers' qualifications shows that about half of those working in urban upper primary schools hold specific qualifications as 'school administrators', and an overwhelming majority of the urban headteachers not specifically qualified for their administrative role hold University Teaching Degrees. In rural areas schools, however, only about 38% of the headteachers hold University School Administrator Degrees, and few of the remaining headteachers have qualifications beyond the Secondary School Teaching Certificate (Gama et al, 1984:211,213).

The evidence on personnel qualification (Table 2.3) and pupils drop-out rates (Table 2.2), just discussed, show that in the least urbanized regions (those identified in the research as the less developed of the State), and particularly in rural areas the school system exhibits higher rates of wastage and lower levels of teachers qualifications. The conclusion that follows is that lower quality education, i.e., mediated by insufficiently trained teachers and incapable of retaining a large percentage of its pupils in the system, prevails in the less developed regions, and in rural areas.

socio-economic living conditions and the quality conditions of the school system found by the study.

However, when pass rates become the focus of analysis (Table 2.1) there is a sharp break in this pattern of the association. Instead of the positive relationship previously found (i.e., higher levels of socio-economic development - better educational conditions) there is a negative association. Namely the more developed areas (urban), and the more developed regions (Metropolitan, South and Sweet River) present the lowest pass rates.

The inversion of the pattern is not yet present as pass rates for lower primary school (1st to 4th grade) are analyzed. The phenomenon is seen only in connection to upper primary school.

Pass rates in lower primary schools (Table 2.4 below), are, in general, higher for urban area schools than for rural schools following the same pattern previously analyzed.

Table 2.4 : Pass Rates in Lower Primary Schools in Urban and Rural Areas, in Espírito Santo, in State Schools, by Regions.

AREA	REGIONS-PASS RATES %						Total
	Coast	Central Mountains	South	North	Sweet River	Metro- politan	
Urban	78.0	80.7	79.4	74.5	79.1	81.1	79.6
Rural	64.1	70.7	71.9	63.7	70.9	74.5	69.2
Total for the State	67.6	73.1	76.6	68.3	74.9	81.7	75.6



The inversion of the pattern is seen only in connection to upper primary school. When pass rates are examined (Table 2.1) it is observed that schools in less developed rural areas which are poorly staffed and inadequately equipped present higher pass rates than urban schools operating under far better conditions, in more developed areas.

Moreover, not only does the performance of rural schools appear to be better than the urban ones, but the less developed urban regions (Coast and North) exhibit slightly higher pass rates than the more developed regions (Metropolitan, South and Sweet River).

The sudden break in the pattern of the relationship socio-economic development - quality of the education system, together with the overall privileged operating conditions of urban upper primary school frames a problem that calls for clarification. Upper primary schools in urban areas are, in general, large institutions in which a variety of instructional resources, in different amount and types, are available for a staff that is far more qualified than that of rural schools. They receive support from specialized personnel (supervisors and student advisors) and frequently from a large administrative body, as well. In this context, how can the lower pass rates in urban upper primary school be explained? Why is the break in the prevailing socio-economic/educational relationship restricted to upper primary school?

It is possible to speculate that the qualification of

teachers is a relevant feature to the phenomenon. In the case of lower primary school in urban and rural areas similarity in the percentage of qualified teachers<sup>11</sup> tends to prevail, whereas diversity predominates when the percentages of qualified teachers working in urban and rural upper primary schools are compared.

The choice of terms "similarity" and "diversity" to characterize the comparison between the percentages of qualified teachers working in urban and rural lower and upper primary schools stresses the quantitative percentage difference that characterizes the teaching force in the two cycles of primary school. But beyond that they emphasize different expectations in teaching ability uniformity as fewer upper primary school teachers share a common base of knowledge.

The specific characteristics of the two cycles add to the uniformity-diversity question. Curriculum content in upper primary schools is more complex and calls for more competence from teachers. Therefore, a prevailing diversity in teachers' qualification leads to more divergent procedures than would be the case of diversity in the lower primary cycle.

Thus, similarity in formal qualification could lead to more uniformity in decisions and actions concerning teaching and assessing learning, especially in relation to the transmission-acquisition of basic skills in reading and numeracy. But differences in teacher qualification in a frame

of diversity may imply the enforcement of very different concepts of teaching and learning in urban and rural schools, and consequently lead to the inversion of the previously established pattern.

Such considerations place the teaching-learning process and teachers attributes, which influence it, at the core of the problem, as key aspects in the understanding of pass rates in upper primary schools.

The discussion on the general results of the "Study of Disparities" in relation to the pass rates for upper primary schools in urban and rural areas, point out that: (1) the lower pass rates of urban schools constitute a break in the pattern of the positive association between socio-economic life conditions of the area and the school system operational characteristics and output; (2) the inversion of the pattern is restricted to the upper segment of primary school and is more clearly represented in the rural-urban areas of the state although also apparent in its regional division; (3) even though there are differences in the percentage of formally qualified teachers operating in urban and rural areas both in lower and upper primary schools more similarity prevails in the lower segment whereas diversity predominates in the upper segment; (4) a wide diversification in decisions on teaching and learning assessment characterizing more qualified urban teachers and less qualified rural teachers may represent distinctive concepts of learning being implemented in classrooms in the two areas; and consequently, (5) teachers

qualification, among other teachers' attributes can be expected to be crucial to the understanding of the pass rates phenomenon in upper primary schools.

In the light of such conclusions the acceptance of pass rates as an indicator of school quality is challengeable. Pass rates appear an unadequate measure to compare results of students performance and school quality.

### **2.3 A Review of the Literature on Quality Education and Pupils' Achievement**

There is a large body of research on pupils achievement in developed countries and a rapidly increasing number of studies in developing countries. Such studies focus on the students' background and the school-based variables that may either promote or hinder pupils attainment. The achievement scores that are at the base of these studies are obtained through standardized testing, a situation that is opposed to the case portrayed in the problem due to the lack of centralization associated to pass rates in Brazil.

Nonetheless it is possible to select existing studies to clarify the importance of school variables, especially those related to teachers attributes, to establish a theoretical frame for the investigation of the present problem of pass rates in upper primary schools in Espírito Santo. Thus, I propose to review selectively (a) studies on the quality of education, as a context in which achievement should be examined (Section 2.3.1), (b) traditional studies on achievement, as the

major body of knowledge on the variables intervening in pupils attainment (Section 2.3.2), and (c) school ethnographies studies (Section 2.3.3).

### 2.3.2 Quality of Education

The identification of high quality in the educational process and the implementation of curriculum change geared towards better quality are timeless concerns for educationists and educators alike. Thus questions on how to improve quality standards once the inefficiency of the process is recognized and the resistance to change are constantly explored in educational research.

In dealing with quality, however, it is first necessary to define clearly terms such as "education", "schooling" and "instruction". They are often used in educational discourse, yet in the context of quality it is important to distinguish between them.

Education, Schooling and Instruction - Education and schooling are frequently used as synonyms (Hawes, 1979) however they are different processes which interplay constantly.

Education is a much broader process that takes place throughout one's life as values, patterns of behaviour and knowledge about the environment are absorbed, through a variety of means. Education is the socialization of an individual into a specific culture.

Schooling is the part of the educational process, carried out by schools. There is a tendency to equate schooling with instruction, and to see it as a major mechanism for social mobility. But despite the fact that schooling is a narrower process, it should go beyond mere instruction. Stenhouse (1975:80) contends that,

"Education as we know it in schools comprise, and necessarily comprise, at least four different processes. I shall call these: training, instruction, initiation and induction. Training is concerned with the acquisition of skills and successful training results in capacity in performance. ... Instruction is concerned with the learning of information and successful instruction results in retention. ... Initiation is concerned with familiarization with social values and norms, and successful initiation leads to a capacity to interpret the social environment and to anticipate the reaction to one's own actions. Induction stands for introduction into the thought systems - the knowledge - of the culture and successful induction results in understanding as evidenced, by the capacity to grasp and to make for oneself relationships and judgements."

Schooling always transcends mere instruction, as the learning of a specific set of norms, values and behaviours is the by-product of the daily living in the school community, for what is in general, a considerable period of time in one's life. Education as a broader socialization process interferes in instruction through the hidden curriculum which attributes different weights to school subjects, privileges culturally accepted norms of speech, and values specific abilities and attitudes, determining, to a large extent, what goes on in the classroom and the school in general. The broader educational system also leads teachers to enter into the domain of induction or to make instruction and training their only concern while they teach, to acknowledge or ignore initiation

and the hidden curriculum, in summary it sets parameters and guidelines to the actions that take place in the classroom.

In analyzing the interplay between education and schooling, it is necessary to consider the effects of schooling in society and consequently in the larger educational system. As mentioned, schooling is an accepted mechanism for social mobility. Job opportunities are frequently dependent of school certificates (Dore, 1976), as are the chances to continue progressing in the hierarchy of schooling up to the highest level. Schooling is an input into the larger educational system as it contributes to the generation of new knowledge. It is from this link between education and schooling, that the important issues of the quality of school education, of teacher effectiveness and student achievement arises. However, as education and schooling are inextricably embedded in a social setting, other issues have to be raised; it is not enough to discuss the quality of education but the overall aims that are guidelines to identification of quality. Teacher effectiveness must be considered in terms of type of learning it promotes - mere instruction or induction? Student achievement must be analyze in terms of knowledge and attitudes, as well as the effectiveness of achievement upon the life chances of the learner.

These are important issues. Some questions have been continually clarified by on-going research but the need remains to study these issues as an integrated whole, since all elements interact in the context of the classroom.

Learning to Be - The Faure Report - How to improve the education offered to children and adults was the overall concern of UNESCO's International Commission on the Development of Education charged with assessing the results of massive concentration of resources and efforts in education during the 1960's. The Commission Report "Learning To Be" (Faure 1972) focused on two central points: equality of access and equality of educational opportunities for all. Recommendations related to access, have to do with the expansion of the system and its openness, providing entry for all children and re-entry opportunity for those who have, at some point, opted out and want to return. The obvious inference is that a high educational system caters for the whole population of a country. For the purpose of this thesis, however, the recommendations related to provision for equal educational opportunities are more important. Equality goes beyond access to school and has to do with the type of learning they mediate.

The major hindrance of educational systems (the Report argues), lies in the lack of integration between social, economic and educational goals.

"Education suffers basically from the gap between its content, and the living experiences of its pupils, between the system of values it preaches and the goals set up by the society, between its ancient curricula and the modernity of science. Link education to life, associate it with concrete goals, establish a close relationship between society and economy, invent or rediscover an educational system that fits its surroundings - surely this is where the solution must be sought." (1972:69).



Moreover, good quality is associated with the system's capacity to cater for different individual needs, and at the same time provide maximum vocational mobility. This should be achieved by broadening general education, by ensuring basic education for all, and by offering vocational training and adult education. Above all, by emphasizing self-learning abilities, thus ensuring that each individual can make use of any and all educational opportunities available. The importance of individualization and self-learning is rendered clear in the following statement:

"Education should be individualized and personalized to the utmost and constitute a preparation for self-learning" (1972:254).

Hand in hand with individualization a true shift from content-centred to learner-centred activities is proposed, allowing for greater freedom to learn, and to grow according to one's own potentialities and wishes. The Commission stresses that, contrary to traditional ideas and practice it is teaching that should adapt to the learner, not the learner that must bow to pre-established rules for teaching (p.220).

Finally, the report identifies in high quality education the capacity to lead the learner to think critically and creatively, thus taking charge of his own life in a process of continuous growth.

"... learning to live, learning to learn so as to absorb new knowledge through life, learning to think freely and critically, learning to love the world and make it more human, learning to develop in, and through creative work" (1972:69).

The emphasis on thinking as an indicator of quality seems to run counter to a satire on the origins of school education known as the "Saber-Tooth Curriculum (Peddiwell, 1939). It points out painfulness as the trademark of the thought process, thus leading the majority of individuals away from it. The story however, makes clear that primitive school curriculum was developed only upon a practical basis. Subject-matter was conceived as a way of acquiring a practical knowledge, that would enable learners to solve life problems by overcoming environmental threats. Learners were not taught to make sense of their environment through thinking, and as the environment changed, the curriculum became obsolete, a fact that was not acknowledged by the Chellean tribe in the satire. The curriculum developed by "New-First-Hammer-Maker" had one of the indicators of quality - it was environmentally based - but it lacked another, a close relationship between learning and thinking. It consisted solely in the mastery of necessary skills, thus it had in itself, from its inception, the seeds of imbalance, that led to its ultimate uselessness. The Faure Report proposes a balanced system with a broad general educational base plus practical and self-education skills that enable learners to understand their social and physical environment and to intervene as suitable. The lead would be to continuous intellectual growth.

These are the same ideas supported by Bruner's (1966) argument that growth depends upon the internalization of events, into a storage system that corresponds to the environment. It also contends that intellectual growth is

characterized by an increasing independence of the response from the immediate nature of the stimulus.

**The Quality of Education in Developing Countries: Beeby** - The acknowledgement that quality in education is associated with its relationship with the development of understanding and the thought process is also found in Beeby (1966). To explain the changes in the educational systems he puts forth a hypothesis on educational stages where the change in quality is seen as a continuous progress from learning by rote (the Dame School and the formalism stages) towards insightful learning (the transition and the meaning stages). The key to the progress through the stages is the teachers' self-confidence, itself a function of their general and professional education. Teachers in the Dame School stage are ill-educated and untrained, therefore a teaching style that is "formalistic in spirit without having form" (p.59). In the two following stages teachers are trained, but they differed in their level of education, hence and improvement, from one stage (formalism) to another (transition), in the teachers' confidence. This becomes evident in the teachers' increasing independence from the text books and other written guidelines, in the way they handle the students' questions, and allow a search for meaning to start. Nevertheless, only with the predominance of well-educated and well-trained teachers, modern education enters the stage of meaning and "attempts to give each child a deeper and wider understanding of the symbols with which he works" (p.65). The author also points out as the second characteristic of the stage of meaning that "the child is encouraged to think for

himself" (p.66).

Beeby's (1962-1966) hypothesis was widely accepted into the educational literature as a much needed attempt to create a comprehensive theory of classroom practice (Griffiths 1967, Elvin 1967, Medlin 1968). Subsequently it has been used as a model for the analysis of educational systems and classroom practices in different developing countries (Castle 1972, Griffiths 1975, Arnold 1973 and Dakin 1976, Meadmore 1978).

Beeby's ideas have been positively reviewed with few exceptions (Vaizey 1966, Guthrie 1980), criticism falling mostly upon the proposition of evolutionary change, through stages and over-generalization from the South Pacific school system with its British tradition foundation. Nevertheless, critics acknowledged the importance of the work in generating growing concern with quality in developing countries. So far their whole preoccupation has been centred on quantitative expansion. Guthrie also accepted Beeby's emphasis on teacher education and the frame of analysis he proposed, despite challenging the straight association between teachers qualifications and teaching style.

"The continuum of general and professional education which underlie the teaching styles provide useful hypothesis for empirical analysis of the relationship between teacher education and classroom teaching style, but the association of this education with certain types of teaching style needs careful examination" (p.411)

and,

"... The importance of teacher education is just like the role of the classroom teacher in promoting or resisting change, an undisputable educational axiom" (p.430).

Guthrie's doubts about the direct relationship between teacher education with classroom teaching style, are reflected by Brooke and Oxenham, 1980's comparison of quality of education in rural Ghana and Mexico, which argues that a more detailed analysis of the applicability of progressive educational models in developing countries is necessary. Brooke argues that factors such as a centralized examination systems and teachers' disharmony with rural life are critical in terms of the decision of one's teaching style and the quality of education achieved.

It appear implicitly undisputable that good education is a process that transcends the mere transmission - recall of information and the acquisition of certain basic skills. The considerable amount of idealization which feature clearly in Beeby's stage of meaning and that permeates "Learning To Be", seem to be under attack. Factors such as adequacy of standardized materials for different areas in the country, the belief that attributes like curiosity and problem-solving ability are irrelevant to success either in secondary school or urban jobs, the lack of interest and enthusiasm, and the passivity and introversion of the pupils are mentioned by Brooks as influencing teachers' decision in favour of traditional methods.

The idealization does not lie in the association between education and the development of the thought process of the students, but in the area of the teachers' ability to cope with external pressures, and the lack of required materials, and

also in their professional capacity and willingness to give of their time to lesson preparation, i.e., in their professional commitment. The idealization lies in the high level of demands placed on teachers when little is given them in terms of social and financial recognition. Those are issues from quality of education which concern the teacher's professional qualifications and the development of a teaching style geared towards thinking and understanding.

Education for Liberation: Freire - Freire (1972, 1973, 1985, 1986, 1986a) examines another dimension of the linkage between the quality of education and conceptualization about the thinking process that is, individual freedom, in a frame he calls "education for liberation".

Freedom to Freire, is the result of a process of intellectual growth centred in the awakening and development of a critical consciousness about one's environment and one's own humanity. His reasoning is focused on the philosophical, social and political aspects of thinking as differentiated from the technico-scientific. He is concerned with the "ontological vocation" of man. Education for liberation opposes education for domestication, which is an instrument for oppression, and aims to enable the learner to become 'fully human' by taking charge of his own life, through 'reflection and action' - the two dimensions of the word.

Freire associates education for domestication and education for freedom with two types of classroom practices,

based respectively in "banking" and "problem-solving" as concepts of education. According to Freire the banking concept of education is characterized by knowledge imparted through a narrative form and 'stored' by the learner, despite the fact that it does not relate to his life-experience, nor does it help him to make sense of his environment.

"The teacher talks about reality as if it were motionless, static, compartmentalized and predictable. Or else he expounds on a topic completely alien to the existential experience of the students. His task is to 'fill' the students with the content of his narration - contents which are detached from reality, disconnected from the reality that engendered them and could give them significance. Words are emptied of their concreteness and become a hollow alienated and alienating verbosity. ... Narration leads the student to memorize mechanically the narrated content. Worse yet, it turns them into 'containers', into 'receptacles' to be 'filled' by the teacher. The more completely he fills the receptacles, the better a teacher he is. The more meekly the receptacles permit themselves to be filled, the better students they are." (1972:57-58)  
[Emphasis mine]

The problem-posing concept of education, is characterized by the establishment of true communication between teacher and learners (a dialogical relationship) and consists of acts of cognition, i.e., a constant unveiling of reality which will bring about the awakening of a critical consciousness embodying both reflection and action.

Dialogics is at the core of the problem-solving concept of education. It entails attitudes of respect from one another as individuals, and partnership, hence teachers become 'teachers-students' and students become 'students-teachers', engaging themselves through dialogues,

"... in critical thinking which discerns an indivisible solidarity between the world and men and permits no dichotomy between them - thinking which perceives reality as transformation rather than a static entity - thinking which does not separate itself from action but constantly immerses itself in temporality without fear of the risks involved." (1972:81)

By communicating, instead of "issuing communiques" teachers move away from the path of adaptation and adjustment, to existing norms and existential situation to the path of reflection, creativity and critical intervention in reality.

Through problem-posing education,

"men develop their power to perceive critically, the way they exist in the world with which and in which they find themselves." (1972:70)  
[Original emphasis]

Freire proposes a revolutionary education, its quality is to be assessed, through the teachers' ability to be dialogical as much as their capacity to select an educational content that stems from the learners' 'limit-situations' (i.e. the nuclei of contradictions that mark one's relationship with the world). The aim is to enable individuals to set themselves free from oppression, and to grow through an ever-increasing capacity, to see the world, to understand it and to act, transforming reality in a creative and humanising way. This is a revolutionary education, inasmuch as it is seen as a tool for changing the prevailing social order, from a relationship between oppressors and oppressed, to a relationship among equals.

The difficulties of implementing an educational programme as the one he envisages are not overseen by Freire. He



discussed problems that have to be faced by teachers, not the least of them being the strategies required for devising an educational content, based on the identification of the learners' limit-situation (pp.86-118), not to mention the external pressure to be faced. The feasibility of such a programme has been demonstrated in practice, both in the adult literacy campaign in north-east Brazil (Freire, 1973), and in the development of a complete primary education curriculum for Guine-Bissau (Freire, 1977). In both cases, however, there was both consistency between the educational and the government's social goals, and a true commitment from the educators involved.

Freire's concept of good education as associated with the thought-process and based on problem-solving methods, is therefore not new. It embodies ideas that are present in Faure's report, as it strives to find guidelines for educational systems to overcome identified deficiencies and in Beeby's argument on the stages of educational development and the quality of education in developing countries. Old ideas, that go back to a time when the focus of the educational process was shifted from the content to the learner. With different emphasis they are the same ideas developed by Dewey (1938) as he fought for an education, based on the learner's life experiences and geared towards understanding instead of factual recollection.

The Meaning of Quality in Education - The few discussions of indicators of quality of education in Less Developed

Countries are mostly recent (Fuller, 1986, Heyneman 1986, Fuller and Heyneman, 1988) and stress the need to know more about the use of instructional materials within the classroom as a result of culturally defined rules which legitimize teaching acts. Neither are there many discussions on what constitutes relevant learning or the criteria to be used in assessing quality (Heyneman 1987, Heyneman and Fagerlind 1989). There is also little agreement on the type of teacher education-training that is conducive to a relevant school education. There is an agreement on issues such as the close relationship between the educational content and the learner's life experiences, in the use of teaching methods that stimulate divergent thinking, creativity, initiative and action, and in the development of skills for self-learning.

Many schemes have been considered and tried, in attempts to relate the design of basic education to the needs of learners and their communities, making full use of existing educational resources and opportunities (Sinclair and Lillis, 1980). Nevertheless, after the initial enthusiasm teachers tend to return to traditionally accepted content and methods. Maybe, this is because relevant education calls for resources not easily available in less developed countries, and require far more from the teacher than traditional methods. Thus in these specific contexts traditional content-methods are more rewarding.

There are arguments that the pressure from centralized examination stimulates rote learning but they can also be used

to boost pupils' attainment (Dore 1976, Somerset 1986, Oxenham 1981, 1984). It is also discussed that it is the lack of pedagogic training and low levels of self-confidence deriving from a weak general education base that tie teachers to the use of instructional processes centred in the memorization of factual information. If this is the case what are the explanations for the prevailing use of rote learning in educational systems where the teacher is adequately educated and trained, and is free from the pressure of centralized examination as, for instance, in the case of Mexico. Brooke and Oxenham, (1980) points out cultural differences, and disharmony between teachers and the community as possible causes. The argument from the sociology of education is that schooling plays a role in the reproduction of the economic, social and cultural patterns of a society. Thus, while any drive away from a traditional academic curriculum leads parents to believe their children will be deprived of opportunities for social mobility through further learning, or non-manual jobs, the elite uses traditional academic education as a mechanism for alienation and further oppression of the lower social strata (Bourdieu and Passeron, 1977). The mere fact discussed in many studies that rural communities and labour-class families hold to a traditional form of schooling instruction is a result of their internalization of the elite values.

An emphasis on the understanding of one's environment, in the search for solutions to daily problems in the areas of one's social as well as physical environment seem to be a way to achieve a standard of education that can be relevant for

all. In this sense the criteria for "good education" would be its capacity to lead learners to observe and understand the meaning, to make use of stored information to find solutions, to seek new information if that is necessary, and to act.

This is a type of knowledge that is only acquired through a very open instructional process, one that stimulates curiosity and search for understanding, creativity and the initiative to act. A process that requires student freedom as well as individual attention in the classroom. To mediate such a process the teacher needs a confidence that stems out of technical competence, an ability that results from pedagogical competence, and a perception of learning as the search for individual growth and freedom that is enmeshed in a specific ethos.

The two former competences are developed through educational programmes, and are easily researchable provided a long-term commitment to educational goals prevails. Because, as pointed out by Griffiths,

"The teacher who can skilfully combine the teaching of the basic skills ... with a stimulating forward looking, intellectually stringent treatment of his pupils is usually a person of considerable education. Normally he needs to have been through the kind of education in depth that is given in the late adolescence and early manhood at post-school certificate level and the university."  
(1968:28)

Furthermore it is necessary to observe that the higher the level of schooling, the more difficult it appears to become for teachers to go beyond the factual information, into a real comprehension of the facts transmitted. Comprehension should

be sought through the analysis of knowledge's inherent characteristics, the linkages among its distinctive aspects, as well as its relationships with the students' physico-geographic and social environment, and the use of that specific knowledge to deal with existing "limit-situations."

Even in the absence of centralized examinations, teachers' concerns seem to lie in the intrinsic value of knowledge in their area of studies, and the passing of judgment of other/future teachers to select content based primarily on suitability to a specific group of students. The "need" to go through the syllabus, even in the absence of centralized control, determine a speed that rules out real understanding through reflection and application of knowledge. Other factors to consider are a need to keep order in the classroom and, in many cases, the passivity of the students or their complaints, as well as that of their families, about the type of learning that is taking place in the classroom. Authority in the classroom and judgment on the value of academic knowledge are at stake. The resulting outcome is pointed out by Freire, a "ready-to-wear approach (that) serves to obviate thinking" (1972:63). Therefore,

"... The students soon discover that in order to achieve some satisfaction they must adapt to the precepts which have been set from above. One of these precepts is not to think." (1972:153)

and concludes,

"Hence in the name of the 'preservation of culture and knowledge' we have a system that achieves neither true knowledge nor true culture." (1972:69)

More difficult than the acquisition of suitable professional abilities and capacities, is the development of an outlook of life, an ethos that encompasses equality and sees schooling as part of a large process of "humanization", as a true cognition of the world through unveiling the meaning of the social and natural phenomena. The problem in achieving this aim lies in the educational and the socialization process that teachers undergo, as stated by Bordieu,

"Teachers are the product of a system whose aim is to transmit aristocratic culture, and are likely to adopt its values with greater ardour in proportion to the degree to which they owe it their own academic and social success."  
(1966:225)

This is a major issue. Where to break the circle? How to develop this ethos that is at the same time an outlook and a social competence? The answer lies in a true learning of one of Freire's lessons,

"Knowledge emerges only through invention and re-invention. through the restless, impatient, continuing, hopeful inquiry men pursue in the world with the world and with each other." (1972:58)

### 2.3.2 Achievement and Teacher Effectiveness

Ongoing research on student achievement and teacher effectiveness has provided policy makers with a vast amount of information. This research is extensive and includes a comprehensive comparative study (21 countries) sponsored by the International Institute for the Evaluation of Educational Achievement (IEA). However, the focus of research has shifted and results are not always conclusive. Indeed many issues arise in the research on "achievement" and "effectiveness".

Achievement is a construct based on the assumption that learning is the acquisition of knowledge and cognitive skills that can be measured by the retention of specific subject matter through standardized tests. In practice, very frequently tests do not include higher cognitive processes such as abstract reasoning, problem-solving and creativity (Klein 1971). Moreover, investigations on achievement seldom bother to question the level of cognitive knowledge represented in achievement scores. In other words, the association between achievement and a recognizable standard of educational quality is rarely focused on in the research. Rather it is implied that there is a consensus on the desirable outcomes of school learning. This criticism to studies in school effectiveness and pupils' achievement is highlighted by Vulliamy (1987), as he points out that learning outcomes depend on the wider social setting in which schools are enmeshed.

Studies on achievement are largely correlational and aim at establishing statistically significant relationships between achievement rates and exogenous (i.e., related with the student and his family background) and endogenous (i.e., school based) variables.

Studies on teacher effectiveness, despite being part of the endogenous variables are often privileged and carried out in isolation (e.g., observational studies). This is due to the fact that teachers are responsible for the instructional process in the classroom, and also because the majority of the resources allocated to education are spent in paying the

teaching force. Observational studies aim at the identification of positive characteristics in the behaviour of teachers, but few of them try to link specific types of teacher behaviour with desirable students' outcomes within a rationale of quality of education.

Data on student achievement and teacher effectiveness is more abundant in industrialised countries than in less developed countries. However it is difficult, to say the least, to use data from the United States and developed European countries as a base for decision-making in Third World countries. In these the variability of school conditions, of teachers' qualifications, and of technical-administrative infrastructure supporting the educational system, which sometimes include the absence of a centralized examinations system, make for quite diversified educational settings. Overall conditions differ from those prevailing in developed countries, thus hindering the use of the data available and making research, which is generally scarce, even more necessary.

Exogenous variables - Large educational studies using computers and associated with the work of sociologists and economists appeared around the 1960's, overcoming the psycho-pedagogical tradition that had so far prevailed in that area of enquiry.

Those studies include out-of-school variables with potential for influencing learning, together with school



variables and through multivariate analysis proceeded to determine the relative importance of different factors influencing learning, within the frame of the economic concept of 'production function'. The result shows that exogenous variables related to the students' family background and personal characteristics were by far more important in determining the educational outcome (academic achievement) than variables connected with school life and experience.

In the developed countries studies such as those of Coleman et al. (1966), Jencks et al. (1972), Bowles and Gintis (1976), clearly show that the cultural, economic and political structure of society as reflected in the students' background markedly determined their school achievement.

The evidence presented by Jencks shows that the variance in the learner's achievement would be largely reduced if personal and family differences were eliminated.

"The available data suggests that:

1. If we could equalize everyone's genes, inequality in test scores would probably fall by 33 to 50 percent.
2. If we could equalize everyone's total environment, test score inequality would fall by 25 to 40 percent.
3. If we merely equalize everyone's economic status, test score inequality would fall by 6 percent or less."

On the other hand, he proceeds,

- "6. Equalizing the quality of high schools would reduce cognitive inequality by 1 percent or less.
7. Eliminating racial and socio-economic segregation in schools might reduce the test score gap between black and white children and between rich and poor children by 10 to 20 percent.
8. Additional school expenditures are unlikely to increase achievement and redistributing resources will not reduce test scores inequality."

In synthesis, what Jencks is suggesting is that schools are responsible, as they are operating now, for only 1 percent of the variation in achievement. And if all segregation were to be eliminated inequalities would, at a maximum, be reduced by 20 percent.

On the other hand, an equalization of the learner's total environmental experiences (i.e., their background) would reduce inequalities by 40 percent.

Results from research conducted in developing countries (Simmons and Alexander 1975; Schiefelbein and Simmons, 1981) as well as studies comparing developing and developed countries (Peaker 1975, Heyneman and Loxley 1981, Fuller 1986) bring to the fore very interesting conclusions, as follows:

1 - Overall achievement rates are lower in countries with low GNP per capita;

2 - The influence of exogenous factors, namely family background, especially their socio-economic status, is less marked in less developed countries than in the industrialized countries, as very clearly shown in the IEA and other studies using similar design;

3 - In developing countries family background variables, despite lacking the weight they have in industrialized countries still account for more variance in achievement than endogenous variables. Schiefelbein and Simmons state,

"Students traits are significant in the expected direction in 47 cases, while no impact or an opposite result are found in only 17 cases. Results are especially consistent across students for variables such as socio-economic

status of parents, repetition, malnutrition, health and pre-primary education." (1981:11)

This follows the presentation of a table showing that the percentage of the number of observations statistically significant in the school attributes, teacher attributes and student attributes groups of variables are respectively: forty-eight, thirty-six and seventy-five percent;

4 - The importance of home background variables diminishes as the student moves upwards in the school.

Heyneman and Loxley (1981) analyze three differing explanations for the variance in the importance of exogenous variables between developing and developed countries: (a) a lack of variance in pupils socio-economic status in low income countries; (b) pre-selectivity of low socio-economic status pupils due to high drop-out and repetition rates in low income countries, and (c) high levels of multicollinearity between socio-economic status and school quality in low income countries.

Endogenous variables - The school influence on academic achievement includes directly indicators of the school's physical facilities, and teachers' quality, and indirectly the pupils' attitudes. The latter was labelled by the IEA study as 'kindred' variables, as they could either be a cause or a consequence of the schooling process.

According to the major input-output studies previously mentioned, the proportional participation of school-based variables in the total variance in achievement that was explained through multiple regression analysis was not high.

The IEA and studies using similar designs (e.g., Heyneman 1976 - Uganda; Castro et al. 1984 - Brazil, Argentina, Bolivia, Colombia, Mexico, Paraguay and Peru; Simmons 1972 - Tunisia; Ortar 1976 - Israel; Youdi 1971 - Congo; Schiefelbein and Farrell 1978 - Chile; Beebout 1972 - Malaysia; Heyneman and Loxley 1981 - review of studies in twenty-nine countries), tried to overcome the limitations of earlier studies with respect to the limited range of cognitive abilities measured, and either used the results of school leaving certificate (e.g., studies in Kenya and Uganda) or specially designed tests covering different subject-matter (IEA).

These studies also extended the investigation to developing countries to find out how far research results from the USA and Western Europe could be used to guide educational policies in the former countries. This was a chief consideration for funding agencies investing in the area of education, including the World Bank.

The findings of these studies, along with those of Rutter, Maughan, Mortimore, Ouston and Smith (1979) redirected the evaluation of the influence of school on the variation of achievement scores. It became clear that not only the importance of school experiences tend to outweigh that of pre-

school (i.e., family background) but also that the contribution of school in the western countries had been underestimated in the earlier studies. Rutter says,

"not only were pupils influenced by the way they were dealt with as individuals, but there was a group influence resulting from the ethos of the school as a social institution." (1979:205)

The differences between the results of earlier studies and the more recent ones can be possibly attributed to the scope of the tests, and maybe to the research design itself. Cuttance (1980) mentions that former investigation had failed to account adequately for school effects on students' performance, whereas Rutter had "explicitly attempted to view behaviour within the context of the social organizational aspect of school" (p.273). Nevertheless the change in balance between the influence of the school and the family though sizeable did not amount to a reverse in the position of the two blocks of variables as predictors of achievement. Extra-school factors remain the most important determinant of the students' success or failure in industrialized societies.

The IEA study of achievement in science education (Coomber and Keeves 1973) illustrates quite well the position of school variables in explaining the variance in student achievement. The mean proportion of the total variance explained is thirty-six, while the mean proportion of variance explained by school effects is only nine and the mean proportion of students' attitudes (indirect school effects) is twenty-five. Differences between the 18 countries included in the study can

be examined in the table 5 that follows.

Table 2.5: Total variance, proportion explained by school effects, and the proportion within the explicable variance attributable to school effects in 18 nations.

	Proportion Total Variance Explained	Proportion of Variance explained by school effects	Proportion within the explicable Variance attributable to school effects
Uganda	10	3	31.7
India	24	8	33.3
Iran	17	9	52.9
Belgium (Fr)	26	12	46.2
Thailand	37	23	62.2
Italy	24	6	25.0
Chile	25	6	24.0
Hungary	31	5	16.1
Australia	39	11	28.2
New Zealand	45	8	17.7
F.R.G.	34	14	41.2
Sweden	36	7	19.4
Netherlands	49	10	20.4
Finland	44	10	22.7
U.S.A.	36	7	19.4
England	52	7	13.5
Japan	40	4	10.0
Scotland	55	9	16.4
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Mean	36	9	25.0

Cf. L.C. Coomber and J.P. Keeves, *Science Education in 19 Countries: An Empirical Study*. Stockholm, Almqvist and Wiksell, 1973, p.261.

However, data from the study undertaken by Heyneman and Loxley (1981:32) makes evident that among the thirteen developed countries studied there were two - Italy and Belgium (both the French and the Flemish-speaking population) - where the impact of school on student performance outweighed the influence of extra-school factors.

This is also the case for the large majority of the developing countries. The study just mentioned includes data from fifteen developing countries and in only two of them - Paraguay and Uganda was the proportion of the variance in achievement explained by school and teacher quality below 50%. Variations among countries and the relationship between the blocks of variables are shown in table 2.6 that follows.

Table 2.6: Influences on academic achievement in twenty-nine countries

	National GNP per Capita (US\$1971)	Variance Explained by Pre- School Infl. (%)	Variance Explained by Program Track (%)	Variance Explained by School & Teacher Quality (%)	Total Variance Explained (%)	Proportion of Variance Explained by Col.5 (%)
India	110	2.7	.3	27.0	30.0	90
Uganda	130	5.8	-	5.4	11.2	46
Botswana	160	6.3	-	13.9	20.2	69
Bolivia	190	11.4	0	24.0	35.4	67
Thailand	210	6.0	0	25.0	31.0	81
Egypt	220	6.3	0	13.6	19.9	68
Paraguay	280	23.4	0	16.4	39.8	42
El Salvador	320	4.2	0	11.9	16.1	72
Colombia	370	1.8	0	17.3	19.1	88
Iran	450	8.0	0	9.0	17.0	53
Brazil	460	4.6	0	20.0	24.6	81
Peru	480	15.4	0	16.6	32.0	52
Mexico	700	11.7	0	14.5	26.0	55
Chile	760	8.0	6.0	20.0	34.0	59
Argentina	1230	8.0	.4	13.5	21.6	62

Cf. Data from S. Heyneman and W. Loxley - The Impact of Primary School Quality on Academic Achievement Across Twenty-nine High and Low Income Countries. Paper presented at the Annual Meeting of the American Sociological Association, Toronto, August, 1981, p.32.

(1) School Physical Facilities - A number of variables related to school facilities were studied in an attempt to identify those positively related to student performance. Among those

the most observed were the number of students per class and the availability of textbooks.

Class size figures in fourteen out of the twenty-six studies reviewed by Schiefelbein and Simmons (1981), besides been the object of a special research review by Haddad (1978). The emphasis placed on the investigation of this variable is possibly a result of its considerable importance in relation to the cost of education. Moreover the traditional belief that work with small groups yields better results is in itself a call for research. Yet this was not to be proved by the investigations mentioned. The findings suggest that larger classes are either associated with higher student achievement or do not affect it.

An analysis of the research designs makes clear that three major problems were: (a) a quantified definition of 'small' and 'large', (b) a focus on the methodology of instruction used and its relationship with the class size, and (c) the type of knowledge prevailing in the achievement test used and its suitability to 'smaller' or 'larger' instruction groups.

These failures hinder what ever outcomes of the studies leading Haddad to declare,

"The considerable amount of research ... does not warrant any definite conclusion regarding the relationship between class size and different variable in the educational process." (1978:12)

The study of textbook availability has been a concern in twelve less developed countries (Heyneman and Farrell 1978).



As the investigations present some methodological differences it is difficult for some much needed specific conclusions to be drawn. This is the case of the identification of a quantified critical mass of textbooks available before the increase in achievement rates takes place. Overall what seems to stem from the findings is that the textbook is the factor that relates positively with academic achievement in a greater percentage of cases, notwithstanding that the influence of textbook availability on achievement is not uniform. It appears that the impact is stronger on students from lower socio-economic status. This is easily explainable in view of the scarcity of reading materials in households within the lower income brackets, and also given the family dependency of school help for the acquisition/ownership of textbooks. It is also suggested that the most effective use of the textbook by the teachers is as a guide for classroom instruction. They should be owned by students, thus giving teachers freedom to explore other forms and styles of teaching (p.39). However, this is an area where more research is required before unequivocal conclusions can be safely stated.

The research on textbook ownership and use is still scarce and, given the trends made evident, especially through results from well structured studies carried out in Chile (Heyneman and Farrell, 1978) and Uganda (Heyneman and Jamieson, 1980), this is an area that requires further exploration.

Heyneman's study of Ugandan primary school facilities (1977) analyses other characteristics of schools trying to

establish which and whether differences in facilities are related to school academic achievement. Besides observing the importance of the ratio of books per grade and per pupil the other findings of the study are inconclusive. However, the analysis of ownership of duplicator machines (a positive correlation with mean school achievement -  $p < .001$ ) led Heyneman to consider the school initiative generally associated with the increase in the availability of instructional materials. The conclusion is that ownership of materials as a proxy for school initiative is definitely associated with school academic achievement.

(2) The Schooling process. Within the observation of the school process two variables have been the object of some investigation in relation to school academic achievement: the use of homework and the effects of repetition.

Homework figures in eight out of the twenty-six studies reviewed by Schiefelbein and Simmons (1981). Despite the fact that they are few in number, these studies were carried out in Africa (1), in Latin America (4) and in Asia (3), and in six of them students who have homework tend to perform better. The positive correlation suggests that homework could be an important factor in a policy to increase achievement. However, as stressed by the reviewers (p.24), it requires further investigation as homework may be a proxy for the length of time a student spends studying, teacher training or teacher motivation, and it may have negative effects, as in the case of students who do not have enough time for them between their

work obligation and the time spent in the school.

A review of the research on the effects of repetition on student achievement is part of a broader study on promotion and repetition by Haddad (1979). The findings suggest consistently that repetition was more likely to lower standards than to raise them. This is clearly stated by Saunders<sup>12</sup>, as quoted by Haddad

"Children do not appear to learn more by repeating a grade but experience a less growth in subject-matter achievement than they do when promoted" (p.19)

(3) Teacher characteristics. As already discussed, the earlier studies on achievement presented evidence supporting the conclusion that effects of teaching characteristics and behaviour were minimal whereas that of the student's background was of paramount importance, as Jencks argues,

"... our research suggests, however that the characteristics of the school's output depends largely on a single input, namely the characteristics of the entering children. Everything else - the school budget, its policies, the characteristics of the teachers - is either or completely irrelevant" (1972:256).

Since that time other studies, especially those coming from low income countries, have led to far less deterministic conclusions. As shown in the previous section schools do make a difference, and so does the teacher acting in the classroom.

To investigate the characteristics of teachers and the behaviours as they relate to students' performance, in a large comparative scale, is a difficult enterprise. Schooling is a

cultural component of life and as such reflects values and aims that not only differ from one country to another but also that frequently, inside the same country, point to opposite directions, leaving the teachers to face conflicting decisions: (a) What are the real goals to be achieved? (b) What are truly the desirable behaviours and instructional practices?

It is in this context that it is necessary to attempt to make sense of data obtained through distinct research designs and using different variables.

The importance of clarifying the relationship between teacher characteristics and students' outcomes, and the concern to establish a solid base for policy decision at an international and national level, is highlighted through the commission, by both the World Bank and Educational Research Review and Advisory Group (funded by the International Research Centre -IDRC), of reviews of the available research on teachers<sup>13</sup>. It is also significant that the twenty-six studies reviewed by Schiefelbein and Simmons (1981) include information on sixteen dimensions of teachers' characteristics.

It can be argued that teachers' characteristics affect students' achievement but it is difficult to generalize given cultural differences<sup>14</sup> in the research geographical areas. Cuttance (1980) observes the positive correlation between teachers' characteristics and achievement leads to the inference that they are at least marginal to success.

Given that the variations in teaching force are far wider in less developed countries, it seems more interesting to focus only on research results from those areas. The studies always include variables on teacher education and experience, together with other locally suitable indicator(s) of teacher quality. For instance, African studies are more turned towards salary, tenure and proficiency in English, whereas Latin American cases are more likely to focus teacher upgrading, authoritarianism, use of innovative teaching methods, and Asian investigations tend to include motivation, preparation of lessons, teacher's sex and age (Schiefelbein and Simmons 1981:26).

The variables studied more frequently are certification, experience, and years of training. However the results are mixed. Certification presented more positive correlations in Latin America and Asia (over 50% of the cases) than in Africa (less than 25% of the cases), some studies indicating that unqualified teachers do as well, or better than qualified teachers. Nevertheless, there is enough evidence to support Saha's conclusion that,

"... The better trained teachers produce better results. While there may be evidence to suggest untrained teachers can effectively teach children literacy and numeracy, the cumulative findings in these studies strongly support the notion that trained teachers do make a difference for more advance grades, especially for more difficult subjects" (1983:79)

Teachers' experience is frequently intertwined with age, and as pointed out by Farrell and Schiefelbein (1974), and Husen (1977, apud Husen et al 1978), it is a proxy for tenure, salary and career commitments and is an important determinant

of student achievement. It appears that "at least towards the end of primary and secondary, older teachers are more successful than younger ones" (Husen et al 1978:17). Paradoxically however, despite acknowledging the indisputable importance of teachers' experience to achievement it is reported (Husén et al 1978:27) that "it is more important for lower grades and least in upper grades". On the other hand, Beebout (1972 apud Avalos and Haddad 1979) points out an interplay between experience and qualification observing that the effects of experience decrease as qualification increases and vice-versa. Thus, despite the fact that these variables are amongst the most observed, there is not sufficient evidence on how they are interrelated, hence their equivocal results regarding their correlation with achievement.

The increase in the amount of teacher training (in years) is not related to higher student achievement (Schiefelbein and Simmons, 1981:11), but so far, there is not enough research to enable decisions on an optimum length of training or the most adequate type of training (Avalos and Haddad 1979:20). However, as mentioned by Husén this is a very sensitive area in developing countries where there is a shortage of good teachers in all levels, and where the type of training offered is under question.

Sex is another variable that has been investigated. But the results still require more multivariate analysis before they can be conclusive. So far it is possible to say that there seems to be a correlation between the student grade and

the sex of the teacher, but it is difficult to establish a pattern. Tentative conclusions are that: (1) male teachers achieve better results when dealing with more structured subjects and in upper grades (e.g., IEA achievement tests in Mathematics in 5th and 8th grades); (2) women teacher obtain better results in lower grades (Ryan, 1974) or when teaching subjects like languages and history.

The effect of teacher expectations on students' performance has also been a focus of investigation. Reviewing the existing research, Husén states that "teacher expectations of students are among the most consistently important variables in the achievement literature" (p.38). A point that is confirmed by Avalos as she declares,

"Several studies point to the negative effect upon achievement of pre-judgement of students, previous knowledge of their ability, subjective evaluation of their intelligence, and other similar evaluations." (1979:34)

Other relevant characteristics of teacher behaviour affecting achievement come to the fore through experimental and observational studies. They have been reviewed by Avalos and Haddad (1979) together with the correlational studies by Rosenshine (1971).

This type of study is very much framed according to the interaction analysis method designed by Flanders and subsequently refined by Flanders and Amidon (1963).

Rosenshine points out teachers' behaviours positively

related to achievement: the orientation of teacher talk to achievement, the frequency of teacher-student interaction, constructive criticism, the use of students' ideas, warmth and enthusiasm, the organization and structuring of teaching, clarity in the exposition of content.

Avalos stresses the importance of this last aspect especially in relation to deprived students. Furthermore, the teacher's verbal ability, revealed through a logic and understandable exposition of content, can be associated with the "English language competence" mentioned by Heyneman (1976) as the only positive correlation between teacher characteristics (among the six investigated) and student achievement. Finally Guthrie (1970, apud Husén et al 1978) following Coleman in the study of effects of school and teacher characteristics on achievement, mentioned clarity in communication (an ability to communicate the lesson to the student) as being a variable consistently and unambiguously correlated with achievement.

A number of studies focus on teaching styles and teaching methods, attempting to prove the advantage of modern teaching techniques (e.g., discovery methods, teaching for understanding) and the superiority of the indirect teaching style, as conducive to higher levels of cognitive skills. Twelve experimental/quasi-experimental studies were carried out investigating the discovery/inquiry method (Avalos and Haddad 1979:64), but except on teaching through behavioural objectives, found to have an effect on lower levels of



cognitive achievement, the results were said to be scattered (p.35). As for the few studies on modes of interaction the results are said not to be clear. To sum up, a teaching style and techniques widely acclaimed as effective still needs full proof of its effects.

The review of the literature on the impact of exogenous and endogenous variables on pupils achievement carried on in the section represents selected surveys and scheduled observation studies in industrialized and developing countries. It becomes clear that family background variables once accepted as the most powerful predictor of pupils achievement, although still acknowledged as a strong influence on attainments in developed countries have a far lesser effect upon pupils in developing countries. In these nations schools and teachers play a vital role in determining students attainments. As Heyneman and Loxley concludes,

"However ambiguous the efficacy of school facilities and teachers may appear as a result of some surveys no such ambiguity exists in low income countries. The proportion of explained achievement variance due to school and teachers is 90% in India, 88% in Colombia, 81% in Thailand and Brazil." (1981:21)

The elements that constantly appear to have a major impact on pupils achievement, according to a review of research done by Fuller (1986) are instructional materials, library size and activities, teacher quality (especially training, verbal proficiency, and social class background), teaching practices such as the length of the instructional programme, homework frequency, teachers' expectations on pupils performance,

teachers time spent on class preparation, and expenditure per pupil.

Previously, Schiefelbein and Farrell (1978) used a compound indicator, they referred to as "pedagogical excellence" (i.e., the size of the school and the existing learning facilities) to assess the value of school as a predictor for pupils attainment. They concluded that pedagogical excellence along with the availability of textbooks "appear to have a direct or indirect impact upon the educational destiny of children, especially lower status children" (p.83), in Chile.

A call for new methodologies: The confirmation by Fuller (1986) of previous findings stressing the importance of instructional material and the use made of it by teachers brings to the fore the need to reframe investigation questions in the area of academic achievement following Husén et al (1978) and enquire; "How and because of what qualities, in which context do teachers make a difference?"

This means a shift from macro to micro studies, from surveys to the observation of classroom situations. This claim recently made by recent reviewers of achievement studies (Fuller and Heyneman, 1988), had already been made by Meyers (1981) in the forward to Schiefelbein and Simmons' review of the research in Third World countries, as he calls the attention to

"the importance of treating results of EPF research with care, and of complementing such research with observational studies." (p.6)

Avalos and Haddad (1979) is more radical, as she argues that,

"To some extent at least, a different type of research is needed. Macro-studies of the effects of the educational system that follow the pattern of the input-output model probably are not adequate and cannot yield more information than already exists. Insight into the teaching process and the interaction of its variables can probably best be gained by structured and non-structured observational techniques." (1979:61)

Avalos claims that researchers have neglected to look into the actual teaching process, making clear not only the relationship between variables but among the set of variables and the social context. There is a need to bring to the open the hidden curriculum so alive in every classroom as teachers and learners interact generating academic knowledge, and which acts reinforcing values or changing attitudes. She goes on to say,

"These should be studies performed at the classroom or community level, using different methods from those of the classic survey. Experiments, case-studies, observations and ethnographic techniques might lead to more profitable results." (p.44)

And concludes,

"Looking then towards the future this review points to the need for research that examines as suggested above, the process of teaching." (p.61)

This call for a change in the methodology used in achievement studies might have acted as a reinforcement to promote the use of ethnographic techniques which have been spreading and enjoying popularity since the beginning of the 1970's. Spindler (1982) one of its forefathers argues,

"It is a rare research project today that does not have somewhere in the table of operations at least one ethnographer and somewhere in the research design some ethnographic procedure." (p.1)

Avalos' emphasis in the change from the classical studies standpoint made it clear that in order to proceed it is necessary to find answers to sets of questions which emerged from the classroom and could only be answered in its own context. Classroom ethnographies drawing together sociologists, psychologists, anthropologists as well as educators could place old problems under a new perspective, asking new questions and bringing at least some understanding to questions so far unsolved.

### 2.3.3 Educational Ethnographies and the Teaching-Learning Process

Ethnographies explore a wide variety of aspects of life within classrooms but there are very few specific studies on achievement itself. Nonetheless, indirectly classroom ethnographies point out to dimensions of schools' and classrooms' life that play a vital role in influencing achievement. According to Delamont (1976) such influence can be elicited through the observation of four settings, the temporal, the physical, the institutional and the educational itself.

The temporal setting involves the investigation of the effects of a teacher's age and experience over classroom procedures. It becomes alive in the interplay between the teachers' self-images, felt-identities and styles of life, and

their official position in the school as it affects their teaching behaviour. The existing differences among the teaching staff lead to the argument presented by Delamont

"The conceptualization of classroom life as the generation of shared meanings, a temporal understanding of the development of such meanings is an essential prerequisite for the comprehension of much of what one observes in the classroom." (1976:31)

The physical setting includes three aspects: the location of the school, the spatial relationships between the classroom and the rest of the school and the layout of the classroom. Delamont maintains that the physical setting contains messages about the teachers' perspective of their subject (its relevance and boundaries) and their role as educators.

The institutional setting is provided by the broader school context, of which the classroom is an integral part. Delamont sees the school, for analytical purposes, according to the model proposed by Strauss<sup>15</sup> "as organized round a set of on-going negotiations, resulting in policies, which are constantly reaffirmed, altered or 'lived-with'" (p.39), given that it is impossible to cover every detail of daily events in a set of formal policies. Therefore it is in the institutional setting that the area of control appears prominently through the teachers' roles as bureaucrats, custodians and instructors.

Control is exerted not only through the teachers' roles, but by the school itself, as curriculum provisions are concerned. The model Delamont proposes for this analysis is that of Bernstein (1971)<sup>16</sup>, and she concludes, that schools can

be differentiated both by the nature and extent of their institutional control and through the way they deal with the classification and framing of educational knowledge.

The educational setting is the whole educational system (school, state or local and/or national levels) that provides the set of norms, that rule the classroom. However, not all the norms are manifest, some are latent (hidden), and consciously or unconsciously, are brought into operation determining the direction of the process frequently generating conflicting goals and attitudes.

It is possible to conclude that from these settings emerge, openly or covertly, attitudes and beliefs that either favours or hinders specific individual perceptions of teaching actions and correspondent types of pupils' attainment.

Among the large amount of classroom ethnographies<sup>17</sup> available the studies of Tikunoff, Berliner and Rist (1975) in the United States and those of Delamont (1973), and Hammerley (1980), in Britain, unveil some of the characteristics of observed classroom teaching process linked to pupils' achievement.

Tikunoff et al (1975) report on a multi-site quantitative investigation aiming to reach a better understanding of the teacher-pupil relationship, in the context of achievement in order to develop adequate training schemes for beginning teachers. The ethnographic study concentrated

in the extreme teaching types: more effective and less effective<sup>18</sup>. Both teaching types were observed by each one of the researchers<sup>19</sup>, continuously for one week. Even though observations were carried on throughout the school day Reading and Mathematics classes were more closely scrutinized. The observers' major focus was set on teachers' interaction with two identified groups of students: those doing well and those having problems.

Each ethnographer produced a formal (for Reading and Mathematics lessons) and an informal (all other observations) protocol developed as a "summary-profile" of each teacher according to the format provided by Henry's (1967) "A Cross-Cultural Outline of Education". Subsequently, data analysis generated sixty-one dimensions classified into four groups, classroom climate, teachers' instructional moves, teachers' behaviour control moves, and teachers' characteristics. Dimensions were also signalled as positive, when expected to occur frequently in classrooms with more effective teachers, negative when expected to occur frequently in less effective classrooms and neutral. Data analysis was concluded by rating teachers' profiles in a 1 to 7 scale.

The resulting findings of the study, besides the identification of useful indicators of effective teaching in reading and mathematics, suggest that:

(a) in effective classrooms a family-like atmosphere prevails, there is mutual respect and classroom interactions are characterized by conviviality, friendship and cooperation,

and

(b) The effective teachers who promote higher achievement are attentive when pupils express their ideas, monitor progress and adjust instruction accordingly, structure learning well, are highly responsible and spontaneous, are consistent in their attitudes and decisions, are more accepting of students' behaviour and feelings, are more optimistic and exhibited a greater knowledge of the subject-matter.

(c) Knowledge of the subject-matter and structuring lessons are the only dimensions (among the 21 identified) that are important across subject and grade levels.

Contrary to the wide scale of Tikunoff's investigation both Delamont's (1973) and Hammersley (1980) studies are based in a single group of students, reduced by the former to one classroom and enlarged by the latter to include the whole school. But like Tikunoff's researchers team they too devote much of their time to the observation of pupil-teacher interaction.

The context of the two studies are very different and so is the methodology they follow, yet they end up stressing that pupils' attainment is positively associated with their academic conformity.

More centred around the relationship between teaching style and learning style, Delamont's (1973) study presents evidences that this relationship is rather complex and the match-mismatch between a teaching and a learning style does not



lead necessarily to over or under achievement. Each individual teaching style is underlied by unspelled rules and pupils' calm acceptance of them is always positively seen, if not openly praised. Ultimately, pupils' ability to grasp the unspoken rules and abide by them is always a key factor in determining their achievement scores.

Hammersley (1980) stresses pupils' conformity both in the area of classroom order and instruction. In the context of a socially deteriorating school neighbourhood a once academically oriented student body changes exhibiting a disruptive behaviour. This leads to the prevalence of a discipline-based teaching in which, he argues, there is very little space for pupils' display of intelligence. Conformity is the acceptance of teaching as a display of teachers' knowledge, the readiness to search in the teachers' questions the clues to find the answer that satisfies them. This requires a specific "classroom competence", a set of social conventions based on the "correct" reading of the teachers implicit messages.

The final message of both studies is that in the eyes of the teacher the "good" students are those who conform. They receive a differential treatment, open recognition and tend to be achievers.

To sum up, the ethnographies reviewed, except to some extent the Beginning Teachers Evaluation Study (BTES), do not focus directly on the dimensions of classroom life pointed out as crucial by the surveys. Nonetheless, they offer a

contribution to the understanding of pupils achievement. They reveal that the atmosphere which prevails in the classroom is as important as teachers' competence to structure lessons will and their verbal ability to present lessons clearly. They also stress that conformity not curiosity tends to be rewarded in the classroom.

#### 2.3.4 Major Issues from the Review of the Literature

The ethnographic studies reviewed show that the major focus of classroom ethnographies is seldom directly on the relationship between teaching practices and the pupils achievement. Their interest lies rather in interpreting the teaching process itself, the perspectives of those participating in the process and the shared meaning of actions which take place in the classroom. Nevertheless the few studies turned towards achievement add to findings from surveys and scheduled observation investigations.

Traditional type studies point out that school variables make a decisive impact upon pupils achievement. Whereas in 1975 Nollen denied the importance of school saying,

"Research to date has found nothing in school resources that consistently and unambiguously makes a difference to outcomes such as achievement. Once widely-held beliefs about the overriding importance of school and teacher quality have been called into question, if not refuted."  
(p.56)

Nowadays, research has amply shown that school is indeed important in determining differences in achievement (Rutter et al, 1979). It can either maximise or minimize the influence

of social economic background variables.

Nevertheless, it is true that the more abundant research results are brought to the fore, the more the diversity of teacher quality, and the inefficacy of assessment procedures are questioned.

Over and over, research has demonstrated that teachers do make a difference, specially but not exclusively, in the context of less developed countries. And, at approximately the same time that Nollen was calling into question the importance of teachers, the results of the Beginning Teachers Evaluation Study conducted in thirteen school districts in California showed that the contribution teachers can make to achievement is related to their knowledge of the subject - their ability to structure their lessons logically and clearly, their pedagogical capacity to monitor the students and keep instruction in pace with learning progress in the classroom, their optimism and enthusiasm, for teaching accruing from a sense of job satisfaction, their consistency in keeping declared policies administering rewards and punishment accordingly, as well as their ability to generate a positive classroom climate, with a family-life quality.

Therefore it is not the general influence of teachers that is questioned but rather the types of teacher-training in use. This is specially the case of developing countries (Husén, 1978). Thus more suitable programme must be developed with a foundation in solid research results, so that the adequate

skills are part of the training. It goes without saying that such schemes must be tested carefully before dissemination. It is also worth remembering Griffiths's (1967) warning that a self-confident and competent teacher is one 'well educated' as much as 'well trained', and that is time-consuming. Consequently, any real exploration on the potentialities of teachers in providing a more relevant contribution to learning implies commitment and long-term plans. I would also say that such schemes must necessarily include a sound academic education in the subject-matter area(s) chosen by the teacher, a thorough study of the socio-economic conditions of the country insofar as they affect learners, and pedagogical training. The intention is to develop technical and professional competence together with a commitment to teaching reflected in a consciously perceived philosophy, that acts like a socio-political competence. I am inclined to believe that such a teacher would embrace school education as comprising instruction, training, induction and initiation, as postulated by Stenhouse (1975). To date research has shown that no matter what type of teaching approach the teacher is supposedly implementing (direct or indirect teaching) the core of the management of classrooms, about fifty percent of non-instructional time, is spent in much the same way: statements of authority, orderliness and task orientation (Le Compte, 1978).

The evidence of the ethnography mentioned in page (Tikunoff et al, 1975) add to Rosenshine's review of studies on systematic observation of teachers suggesting that changes

in training schemes should aim not only to subject matter competence and verbal ability but also to interpersonal relations in the classroom.

Survey studies (Husén et al 1978 and Beebout apud Avalos and Haddad, 1979) suggest that teachers' experience is more important in initial grades but competency in the area of content outweighs experience in the final years. Nonetheless it is also stressed that there is still not enough support to establish a clear association between teacher training, experience and students' achievement (Avalos and Haddad, 1979).

Schools have been observed to be an important element, insofar as achievement is concerned, in terms of their size, the learning facilities at their disposal (the pedagogical excellence factor named by Schiefelbein and Farrell (1983), and also the internal motivation that leads them to search for new paths to provide for their own needs (Heynemann, 1977).

It is shown that the importance of the school diminishes as pupils' progress through the school system. And it is pointed out the far reaching effects of school upon pupils achievement in less developed countries.

The home background with its inherent attributes does affect a child's capacity to perform through malnutrition, unfamiliarity with the culture favoured and reproduced by the school (given their parents' own education, occupation and social milieu), lack of adequate conditions, books and

materials or time to study at home. However, the selectivity processes in operation since the earlier grades of primary school, soon drives away those pupils less able to cope, and differences in school quality become more important than home background as predictors of pupils achievement.

The comparison between differences of school influence on pupils achievement in high income and low income countries has been the object of much speculation. However, for developing countries this question is far less crucial than the knowledge that schools do make a difference, being capable of boosting or hindering pupils attainment.

It follows that establishing a straightforward relationship between school variables and student outcome becomes a vital task. It would: (a) enable policy decisions on allocation of resources to be made in a way that most positive teaching/school characteristics would be promoted without wasting the existing scarce resources; (b) clarify which learning outcomes could be expected from specific teaching paths; (c) ensure a maximization of the human resources available in a country through a fuller development of students potentialities; and (d) consequently lead to more equality of educational opportunities.

Moreover to tackle the problem of achievement from the viewpoint of the school system, despite its numerous inherent difficulties, appears more handable and far less revolutionary than attempting to compensate for home originated inequalities

or to change the social setting which is required to deal with the core of the background variables.

The focus on school variables in several survey studies (Schiefelbein and Farrell, 1978, Heynemann, 1978) have highlighted the importance of the availability of instructional materials, books in general and textbooks. They are elements of school organization that are consistently related to achievement in developing countries. But it is necessary to find out differences across subject-matters and teachers as to their actual use in the classroom, and the relationship between different uses and pupils achievement.

Textbooks are a very important element given the central place they have in the teaching-learning process. Nonetheless research has revealed little as how teachers and pupils use them, despite the suggestion by Heyneman and Farrell (1978) that their best use is as resource material for students. This usage would leave teachers free to explore more creative teaching styles.

From this suggestion one infers that achievement would be promoted, in this case, both from the direct use of the textbook by pupils and through the diversification of the teaching process. However, it has been pointed out in several experimental/quasi-experimental studies (Avalos and Haddad, 1979) that the effect of modern teaching methods upon achievement is scattered, except in the case of teaching through behavioural objectives and in the lower levels of cognitive ability. Such a controversy evidently calls for a

clarification through new research, and some light on the subject may be thrown by the ethnographic investigations of Delamont (1973) and Hammersley (1980) which stressed that teachers tend to reward academic conformity. There seems to be no point in imparting skills in discovery-like methods and indirect approaches to teaching if a deep conviction in such techniques is not developed along with the skill to use them. Is this contradiction that prevails and leads to the inconclusive research results reported by Avalos? This is obviously an area where more investigation is needed before any solid conclusion may be drawn.

The relationship between homework and achievement is also insufficiently clear even though the association exists. Its impact may be either a proxy of the amount of time pupils spent studying or a result of highly motivational teaching (Schiefelbein and Simmons, 1981). More evidences are also needed to foster the understanding of the impact of homework on academic achievement.

On the other hand the power of teachers' expectations as a predictor of pupils' achievement is not questionable. Husen et al (1978) pointed it out as the most consistently important variable in the achievement literature. Positive expectations lead to high achievement scores and negative expectations lead to low achievement scores. Repetition, as a variable reported to be directly associated with low achievement (Haddad, 1979), can be seen as a case of negative teachers' expectations.



The studies reviewed establish a linkage between school based variables (endogenous) and achievement. They are valuable as they indicate key issues to be acted upon through teacher training schemes and management policies to promote academic achievement. Nonetheless, they fail to relate the discussion on achievement with quality education, as if measures of achievement are always points in a quality education scale. This is not the case.

Achievement tests, as discussed by Klein (1971) are more frequently concerned with academic learning. And more often than not they tend to ignore higher cognitive abilities, rather concentrating in the types of learning associated with the lower cognitive categories according to Bloom's (1956) hierarchy of knowledge.

Studies in examination reform (Heyneman and Fagerlind, 1989, Somerset, 1986, Lewin, 1980, 1987, Oxenham, 1984, 1988a) have shown that there is increasing concern with the expansion of the range of cognitive abilities measured, but up to 1975 the predominance of "knowledge" and "comprehension" was overwhelming. For instance, results of Malaysian Integrated Science Examination (1975) for the Lower Certificate of Education show that classifying questions according to Bloom's taxonomy into "Knowledge" "Comprehension" and "Application and Higher" the percentage was respectively 51%, 32% and 17%. The pattern is the same if Sri Lanka exams (1972) are analyzed. Learning in the area of affective behaviour and highly complex cognitive skills are not included in examination papers.

This is certainly not the type of achievement that should be considered if the concept of quality education discussed earlier in this review (Section 2.3.1) was present in the minds of the educators preparing the examination papers.

Raven (1982) calls for a broadening of the basis for educational assessment. But at the same time he points out that teachers are unwilling to move into the area of affective behaviour as

"most teachers do not know how to foster these qualities, this demands a knowledge of each individual child's values, interests and abilities and responsive education ... most of these qualities which teachers would like to foster are heavily value-laden and teachers are extremely ambivalent about seeking to influence pupils' values explicitly. ... (and) they face a dilemma when confronted with an individual pupil whose future might be jeopardized if they spent time helping him to develop such qualities as initiative. ... Teachers do not know what the consequences of fostering these qualities would be for the individuals concerned and for the society in which they live." (p.342)

It would be necessary to change the very nature of assessment and re-establish teaching on a different basis as well. The question is not the feasibility of these types of assessment in schools but rather their acceptability.

The ideas fostered by Raven go hand in hand with Freire's proposition. However what he is presenting is rather a philosophy that has been put into practice in very specific contexts (e.g., adult education in northeast Brazil and Chile, and Guiné-Bissau), under very favourable socio-political conditions. From these examples the reactions of parents and

society at large can hardly be anticipated if the proposed curriculum practice and school assessment were to be reorganized on those assumptions.

In Vulliamy's (1985) study of Papua New Guinea reform in secondary education, I find these same elements that lead me to conclude that neither the instructional practices based on life-problem situations, and the development of attitudes, knowledge and skills to solve them, are accepted by teachers as equivalent to academic knowledge, nor would their teaching be accepted by families if they were not reassured that the time spent in these activities would not jeopardize their children's future chances. I refer to the creation of 'outstations' attached to the structure of secondary schools in Papua New Guinea, as a device to relate education to the life experiences of students and to give them a practical base on which to organize their lives in their native villages if job opportunities do not materialize after the conclusion of secondary education.

There is a difference in using school education as an instrument for social mobility, based on meritocracy, and maintaining the status quo, and in school education as a tool for a reorganization of society. Heyneman and Loxley (1981) state that in low income countries, there is a more relaxed acceptance of educational achievement as a criteria for mobility, and a more uniform aspiration to utilize schooling as a vehicle for social mobility, and go further, saying,

"In reality in no continent do peasants view educational institutions as instruments of the elite bent upon the

social subjugation of peasants offerings" (p.24)

The anthropological assumptions that school, as an integral part of culture, acts to preserve the fabric of society, even when it is necessary to call upon a mystification of the role of the school, in a way explain the peasant's position. However, more understanding is reached if elements from Bourdieu and Passeron's theory of reproduction, and Freire's distinction between a critical and a naive consciousness are examined. Without the advantages of the elite, in terms of overall educational opportunities, limited in their view of the world, integrally inserted into a paternalistic structure the peasants in less industrialized countries are so completely dominated that they are not able to perceive the domination. Hence their acceptance of whatever benefits they are offered, such as mobility through academic achievement in a cultural context that is alien to them, but whose advantages they aspire to.

What follows is either a somewhat useless education - hence token - if job opportunities in the administrative and bureaucratic area are not available, or even worse, especially in cases where schools are not subject to centralized monitoring and control, a simulacrum of that tokenish education with an emphasis on success, which only serve to create the illusion of success. This last aspect is the sad conclusion of an ethnographic enquiry in remedial reading class (Miramontes 1984).

"Our observations and subsequent analysis made it

increasingly clear that two levels of reality were operating within the instructional setting. One reflected an uncoordinated classroom program with virtually no instruction. The other reflected what everyone (including the teacher, school administrator and students) hoped (and believed) was happening." (pp.356-357)

### 2.3.5 Summary and Conclusions of the Review of the Literature

To sum up the review of the literature points out that:

1. School has a decisive impact on academic achievement, especially in developing countries and after the initial years of schooling;
2. a number of school variables such as teachers expectations, teachers verbal ability, the structuring of lessons, repetition, school pedagogical excellence are directly linked with pupils attainments but in other variables such as textbooks, homework, the amount and type of teachers training, teachers approach to teaching and modes of interaction more research is needed since their relationship with academic achievement is undeniable the pattern is yet remain unclear;
3. there is a call for observation and ethnographic studies instead of the macro survey type investigations more in use, up to present, to gain insight into the interaction of the variables as it occurs during the teaching-learning process;
4. ethnographic studies and quanti-qualitative investigations can throw light and add new dimensions to variables extensively studied through conventional methods;
5. the students' background variables have an effect upon achievement but it is more observed in industrialized

- countries and is not so vital as once accepted;
6. achievement measures tend to focus on the instructional cognitive aspect of schooling, stressing lower cognitively complex types of knowledge such as "knowledge" and "comprehension" in detriment of more reasoning demanding questions related to the higher levels of Bloom's hierarchy of knowledge;
  7. studies on achievement more often than not fail to discuss the type of academic competency they have measured enabling the assessment of pupils attainment and the predicator value of the variables observed, in the light of quality education;
  8. quality education demands induction and initiation to be part of the schooling process alongside with instruction and training, being part of learning assessment;
  9. so far the school community has not accepted the non conventional types of learning in equal terms with traditional instruction and training, and in the developing world where schooling is a mechanism for social mobility any increase in instruction and training that is restricted to the lower stratus of society may mean a hindrance;
  10. academic achievement as presently measured appear to go counter the postulates of quality education which thus becomes more an ideal than the ultimate goal of school education.

In this interpretative overview of the major issues from the literature I have deliberately stressed the controversies

rather than the advances already made through the studies reviewed. They indicate the gaps in the knowledge on students' attainment and the variables influencing it, to which the present investigation proposes to make a contribution. It intends to follow the line of a quanti-qualitative study. Qualitatively it will focus in depth, through ethnographic observational techniques, classroom procedures like teaching approaches, textbook use, and the participative structure of the lesson both in the context of pupils achievement and quality education. Quantitatively it aims to establish achievement scores that will serve as a base for the interpretation of pass rates currently accepted as a comparable measure of students attainments and an indicator of the school system effectiveness.

This chapter discusses the problem of pass rates in upper primary schools in the State of Espírito Santo, in the context of their acceptability as an indicator of the effectiveness of the urban and rural school network, and a comparable measure of pupils attainment, i.e., as a measure of the educational quality of the state school system. It explores the general results of the "Study of Disparities" from which the problem arises, analyzing pass rates, drop out rates, the percentage of qualified teachers and qualified specialized school technical and administrative staff in a way that leads to a clear statement of the problem. It demonstrates that whereas social-economic variables are always positively associated with indicators of quality of the school system (i.e., access to school, students flow, results and material and human

resources) this pattern is broken and reversed in the case of upper primary schools. At the core of the problem, thus, lies the understanding of the meaning of lower pass rates reported by urban schools operating under more suitable conditions and higher pass rates reported by rural schools operating under conditions of deprivation.

Selected studies on quality of education and educational achievement are reviewed in this chapter bringing to the fore relevant issues. Quality educational is seen as a mediation of learning experiences that transcends the mere memorization of factual knowledge. It is concerned with the development of the pupils' thinking process, generating growing awareness and comprehension of one's environment, the world, life and sciences. Pupils' achievement is examined in relation to endogenous and exogenous variables, considering research undertaken in both industrialized and developing countries. Results of the selected studies point out that school-based variables explain a larger proportion of the achievement variance in low income countries especially in the final years of schooling. Within the school such factors as textbook, teachers competence as expressed through years of training, verbal ability and capacity to structure the lesson well, homework, length of instruction, and per capita expenditure appear as reliable predictors of pupils achievement. The advances made in the identification of achievement predictors and the lack of knowledge about the management of the instructional resources available within schools led scholars to propose a shift in the focus of future research and a change



in the methodology used so that the new knowledge generated clarifies aspects of the teaching-learning process unfolding in the classrooms.

## Notes - Chapter Two

1. The characteristics of the Primary and Secondary school system in Brazil are established in law 5.692/71. Primary school is said to be compulsory for children between 7 and 14 years of age. Its structure comprises 2 cycles: lower primary school (1st to 4th grade) and upper primary school (5th to 8th grade).  
Law 5.692/71 establishes all the general rules for the functioning of Primary School, leaving some power of decision in the hands of each "State Educational Council." Secondary School, however, is further regulated by another federal law.
2. The national core curriculum for upper primary education is integrated by the following content areas: Portuguese, Mathematics, Social Sciences (History and Geography), Natural Science, Civic Education or Brazilian Social and Political Organization, Art Education, Practical Arts or Vocational Orientation, Physical Education and Religious Education. However, only in the first four of them (5 if Geography and History are accepted as distinctive) students failure to reach an accepted minimum average grade leads to failure and subsequent repetition of a grade.
3. In the State of Espírito Santo the minimum pass grade is a 5.0 average, in a zero to ten scale, in the 5 bimester's learning assessments.
4. The structure of "The Study of Disparities" foresaw the investigation of the educational system through focus on: access to school, school flow, school results and educational means. Operationally, specific researchers were responsible for each area of the investigation. The writer of this thesis was in charge of the investigation on results.
5. "Municípios", and within them "distritos" are the geo-political divisions of Brazilian states. Each "município" has a capital-city which houses a locally elected Council, a city hall and a mayor.
6. The "Study of Disparities" defined such terms as: (a) "Education means" as the conditions of the school system and society, that directly or indirectly may be related or affect educational results (Gama et al, 1984:17). The educational means variables considered are found in three areas: educational system means, socio-economic means and demographic means, and (b) "educational-ends" as the aims and objectives of education in relation to: access to school, progress through the school system and school outcomes. (Gama et al, 1984:15)
7. In rural areas there is only one federal upper primary school and no municipal or private schools. Therefore the responsibility of providing upper primary schooling for

rural children lies entirely in the hands of the state sub-system of education.

8. The state was divided in six homogeneous regions, of which the Metropolitan (around the capital-city of the State) the "Rio Doce" (along the major river in the state and economically dependent of coffee cultivation), and the south (a mostly grain cultivation and cattle raising area), were the most developed concentrating the most important towns in the State. The Central Mountains (in the high lands of the southwest, mostly populated by descendants of German and Italian immigrants depending on the cultivation of fruits and vegetables in small farms) though less developed than the previous regions was better off than the Coast (the oldest towns in the State living mostly from fishing) and the North (the most recently settlements in the State where old forests are being explored and replaced by extensive cattle raising in large estates), the least developed regions. Rates of urbanization appear as the most suitable indication of the level of socio-economic development of a region.
9. According to law 5,692/71 schools should be staffed with a Supervisor (Supervisor Escolar) and a Student Advisor (Orientadora Escolar) with responsibilities in the area of curriculum management and pupils' counselling.
10. A provisional permission for holders of "Secondary School Teaching Certificate" to teach at upper primary school is granted by the Secretary of State for Education, nonetheless they are paid according to the degrees they hold and not the level of schooling they are working.
11. The percentage of qualified teachers working in urban schools is 86.6, and in rural area schools it is 67.8% (Cf. Gama et al, 1984:198).
12. Saunders, C.M. Promotion or Failure for the Elementary School Pupil? New York, Columbia University, 1941.
13. Husen, T., Saha, L.J. and Noonan, R. (1978), Teacher Training and Student Achievement in Less Developed Countries; Avalos, B. and Haddad, W. (1979), A Review of Teacher Effectiveness Research in Africa, India, Latin-America, Middle East, Malaysia, Philippines and Thailand: Synthesis of Results.
14. A good example of the effect of cultural differences affecting the relationship teacher characteristics - student success, is the sex of the teachers and the grade of the student. Results point positively to female teachers in some cases and to male teachers in others, in lower or upper grades. This diversity is possibly related to the children and adolescent cultural association of sex roles with either authority or friendship.

15. Strauss, A. et al Psychiatric Ideologies and Institutions London, Collier-Macmillan (apud Delamont, 1976).
16. Bernstein, B. On the classification and framing of educational knowledge, in M.D.F. Young (ed) Knowledge and Control (op.cit.)
17. A review of the literature on ethnography of schooling in the USA is provided by Wilcox, K., Methods and Issues; A Review. In G. Spindler (1982) (op.cit.) pp.455-488. In Britain, a summing up of ethnographic investigation is presented by Delamont, S. (1983) All too familiar? A Decade of Classroom Research. Educational Analysis 3(1):69-83.
18. The identification of the extreme teachers' type was a result of a study on pupils residual gain scores. High residuals and low residuals were respectively associated to more and less effective teaching according to the type of measurement used. However such categories are not accepted as examples of good/bad teaching practices.
19. The study involved 12 well-trained ethnographers.

## CHAPTER 3

### THE QUANTI-QUALITATIVE DIMENSIONS OF THE PROBLEM

#### AND ITS METHODOLOGICAL IMPLICATIONS

This chapter discusses the methodological approach to the problem under three major headings: (1) the reasons underlying the choice for a quanti-qualitative investigation, (2) the characteristics of the quantitative study, and (3) the development of the school ethnography. This organizational structure highlights (a) the fit of the chosen approach to the investigation to the problem, (b) the differences between quantitative and qualitative dimensions of the research, and (c) the inter-complementarity of the two research poles leading towards a more complete clarification of the problem.

#### 3.1 The Option for a Quanti-Qualitative Approach

The need to use a quanti-qualitative focus to investigate the question of pass rates in upper primary schools in Espirito Santo is related to the nature of the problem itself.

As a consequence of law 5.692/71, in 1987 upper primary schooling was extended from four to eight years, and education was made compulsory for children in the 7 to 14 age cohorts. The expansion of the system, however, started in urban areas where qualified personnel and instructional materials were more easily available and the demand for education was more strongly expressed. Even now in the upper primary school cycle, in rural areas, there are few opportunities and the resources available to school are fewer in quantity and poorer in quality as compared with urban upper primary schools. Nonetheless, as pass rates are analyzed, it is seen that rural schools pass rates are higher than those of urban schools. In this context,

the questioning of the characteristics of classroom life in urban and rural schools which led to this paradoxical outcome is as vital as the issue of the actual comparability of pass rates.

The question of the comparability of pass rates is crucial and basic. As discussed in the statement of the problem (Section 2.1), it arises from the legal frame of the Brazilian educational system which places the assessment of learning within the full responsibility of individual teachers. Thus it becomes necessary to ask: what does learning signify in different schools, to different teachers? How can be pass rates compared under these circumstances?

Hence the two foci of the problem: on the one hand it calls for a confirmation of pass rates as a valid, comparative indicator of the quality of schooling, on the other hand, it requires that the actual existing differences in pass rates that privilege the most deprived learning milieu are understood.

The validation or rejection of differences in pass rates which favours rural schools has to be undertaken in the context of comparable academic achievement scores, given that pass rate is a measure that incorporates several concepts of learning represented in differently set learning objectives. In this case "pass rates" are the mean percentage of students whose grades in teachers-designed assessment tests are above the legally established minimum pass grade (i.e., 5.0 in a 0-10

scale), while "academic achievement" is defined as students' attainment levels measured through an externally designed standardized cognitive test. Therefore, achievement mean scores are a comparative measure of outcomes from the school learning process.

This is the quantitative pole of the investigation and, at its roots, is the determination of achievement scores. Such scores provide a cognitive context for the analysis of pass rates, and make it possible for a comparison to be drawn between the performance of urban school pupils and that of rural school pupils. The quantitative dimension of the study provides a measure of school quality expressed through school learning outcomes. It provides an evaluative overview of the system that clarifies the meaning of pass rates. However, it does not offer explanations about the mechanisms which, operating at classroom level, lead to the lower and higher pass rates associated respectively with urban and rural schools in the "Study of Disparities".

This is an aspect of the problem which requires an investigation that transcends the availability of educational materials and staff qualifications. It reaches the sphere of the use made of the existing potential for quality education, (i.e., the schools material resources and the staff competence) in the light of teachers' own definition of quality education. This is, ultimately, the guiding principle which orients the teaching-learning process establishing its aims and means, i.e., determining what is taught, how it is taught and which

learning competencies are assessed. Such features are only alive in the natural setting of the classrooms and are more suitable to qualitative styles of investigation.

To sum up, the problem demands firstly an understanding of the meaning of pass rates and secondly the establishment of the relationships between classroom instructional procedures and both pass rates and achievement mean scores. These relationships, underlie the paradoxical pass results found by the "Study of Disparities". While the first aspect of the problem calls for a quantitative survey-type study, the latter is essentially qualitative. The research problem is a singular one in the overall pattern of socio-economic and educational interplay in the State of Espírito Santo. A better understanding of the case is significant not only for those involved in the planning and implementation of educational policies in the State but it also reaches the country at large, and the study of it may help to shed light on the question of the relationship between classroom procedures, teachers attributes and students achievements at a theoretical level.

### **3.2 The Quantitative Dimension of the Study**

The quantitative pole of the investigation represents a macro-level of understanding the question of pass rates in the context of academic achievement.

The study is conceived as a descriptive survey with the purpose of: (a) establishing achievement scores, (b)



determining average pass grades<sup>1</sup>; (c) associating pass and achievement mean scores, and (d) comparing urban and rural school outcomes.

To sum up, the aim of this research is to establish a relationship between school results and academic achievement to gain a better understanding of the outcomes of the school system.

### 3.2.1 Definition of Terms

A number of terms are used throughout the study and require an accurate definition to ensure a shared understanding of the problem as follows:

**Achievement Scores** - output of a standardized test in reading comprehension measured in a zero-100 scale (external measure of attainment).

**School Results** - Yearly mean evaluation of students attainment in each subject-matter, expressed in grades attributed by teachers, within a zero-100 scale (internal measure of attainment).

**Final Results** - General evaluation of students attainment in all subject-matter<sup>2</sup>, expressed through the average grade.

**Pass Rates** - Percentage of students considered able to enrol in the next grade or the school level for the following school year, on the final enrolment, as follows

$$P.R. = \frac{\text{No of successful students} \times 100}{\text{No students in the final enrolment list}}$$

Qualified Teacher - Teachers holding the legal qualification to teach in upper primary school, i.e., a university teaching degree.

Pupils' in the Proper Age Bracket - Pupils whose actual age corresponds to the grade he/she is enrolled or depasses it by no more than one year, e.g., 10-11 or 12 years old in the 5th grade.

Older Students - Students outside the legal proper age bracket for enrolment in upper primary school, i.e., 10-14 years of age.

Beginners - Students enrolled in the 5th and 6th grades.

Seniors - Students enrolled in the 7th and 8th grade.

### 3.2.2 Sampling

The study was carried out across the state through testing and collecting information on a sample of students.

The sampling was selected randomly in each school<sup>3</sup> but a previous option for grades and regions determined its shape.

The Metropolitan Region was chosen to represent urban areas considering factors such as: (a) the association established in the "Study of Disparities" between the socio-economic development of the area and the quality of the school system (Section 2.2); (b) the specific characteristics of the research problem which stressed that pass rates did not follow the ordinary pattern of the aforementioned association, (c) the concentration of upper primary urban schools in the

Metropolitan Region<sup>4</sup>, and (d) the sharp contrast between the region's pass rates and the percentage of qualified personnel which are respectively among the highest and the lowest in the State.

Rural areas were represented by all regions, except the Metropolitan. The sampling was also selected to represent the extreme points of the upper primary school cycle, namely the beginning (5th graders repeating the year or just promoted to 6th grade) and the end (8th graders recently promoted or 7th graders repeating the year). Such an option was in line with the timetable set for testing the students (i.e., five weeks after the beginning of the school year) and the strategy proposed for sampling selection (i.e., schools were to use enrolment lists from the last bimester of the previous year).

The sampling was made up of 2,492 students<sup>5</sup> out of which 60 per cent represented urban schools and 40 per cent represented rural schools. Details of the sampling distribution are shown in Annex 1.

### 3.2.3 Instrument

Three instruments were used to collect the data required: a School Information Form, a Student Information Form and a Reading Comprehension Test.

The first two instruments were designed chiefly to obtain information on the students: their grades in the end of the

preceding academic year, their age and sex. They were very simple instruments. The last was the standardized test which would provide a comparable external assessment of the students' attainment.

The instrument chosen to determine the pupils' achievement scores was a Reading Comprehension Test formerly developed by the IEA (International Association for the Study of Educational Achievement) and used in twenty-one developed and developing countries (Walker, 1976, Thorndike, 1973).

The option for this specific test was made considering the scarcity of this type of material in Brazil as well as on the grounds of the advantages it presented, such as: its validity and reliability, its availability in Portuguese, and the area of content it covered. The IEA test had been carefully designed and extensively used, therefore its worldwide acceptability. Both the easier and the advanced versions of the test had been adapted for Brazilian students by the ECIEL (Programa de Estudos Conjuntos de Integracion Economica de Latino America) team, and used successfully in a few studies (Castro et al, 1984, Spagnolo, 1976), with 4th, 6th and 8th graders.<sup>6</sup> The low scores obtained by the Brazilian students, especially those in the 4th and 6th grade, as reported by Castro and Spagnolo, led to the decision of using the easier version of the test with 5th graders just turning 6th graders or repeating the grade, and the advanced version with 7th graders just turning 8th graders or repeating this grade. The idea of measuring pupils' attainment through their achievement

in reading comprehension was appealing considering that the capacity to decode a written message and to understand its explicit and implicit meaning, is at the root of the learning process. Reading comprehension affects the students' ability to learn any subject-matter, as much as it interferes with their capacity to cope with life in an environment, such as ours, dominated by written symbols. It could be argued that school education has two aims. On the one hand it envisages the preparation of the students for leading profitable and enjoyable lives. Comprehending what one reads in newspapers, books, advertisements, T.V. etc ... plays an important role in making a productive and pleasant life possible. Reading opens the doors to western culture as a whole. On the other hand, the school has a responsibility towards the world of work and scientific progress where modernization and industrialization play an integral part, and reading comprehension is a key issue in preparing pupils not only to cope with the demands from these areas but to carry them a step further. Such reasons underlie the choice of the area to be tested and led to the choice of the IEA test, in their ECIEL version to determine students' achievement scores.

#### 3.2.4 Investigation Questions

The study attempts to throw light on three sets of questions related respectively to: school results, achievement scores and the correlation between these two measures of attainment. And in each case the framing of the questions considered: (a) the need to compare the performance of rural

and urban area students/school; (b) the focus on beginners and senior students; and (c) characteristics such as age and sex as natural descriptors of the school population. Specifically, in the case of achievement scores, a focus is set on the level of cognitive complexity of test items, using Bloom's taxonomy of educational objectives, (Bloom, 1956) and in the case of school assessment results, subject-matter are analyzed both individually and grouped.

### 1. Achievement Scores

- 1.1 What are the students' mean achievement scores for urban and rural areas for beginners and senior students?
- 1.2 What are the students' mean achievement scores, for urban and rural areas, for beginners and senior students, considering their age groups?
- 1.3 What are the characteristics of students' mean achievement scores for urban and rural areas, for beginners and senior students, considering the classification of test items according to Bloom's taxonomy of educational objectives?

### 2. School Results

- 2.1 What are the characteristics of students' learning assessment results in different subject-matter for rural and urban areas, for beginners and senior students?
- 2.2 What are the students' mean average school results for urban and rural areas, for beginners and senior students?
- 2.3 Are there differences in mean average school results for urban and rural areas, for beginners and seniors when the

age groups differences of the students are considered?

3 - Correlation Between External and Internal Measures of Students' Attainment

3.1 Is there a correlation between achievement scores and school results in urban and rural areas, for beginners and seniors students?

3.2 What are the characteristics of the correlations established?

To provide an answer to these questions standard statistics procedures, as mean average, analysis of variance, cross tabulations and Pearson correlation are used, through the Statistical Package for Social Sciences (SPSS).

Summing up, the quantitative dimension of the investigation under the form of a survey, seeks to establish average pass rates, to determine mean average achievement scores and to find out existing correlation between the former, an internal measure of pupils' attainment with the latter, an external measure of pupils' attainment, describing the nature of the conditions uncovered through the research findings.

The survey compares the performance of urban and rural pupils represented in a random sampling of urban schools from the Metropolitan Region and rural schools from all regions except the Metropolitan. Students are selected to represent two segments of the upper primary cycle, namely beginners (5th/6th graders) and seniors (7th/8th graders).

Achievement scores were determined by using an IEA developed test on Reading Comprehension already extensively used and adapted to Spanish and Portuguese speaking Latin American students by the ECIEL, the choice of this area of knowledge deriving from its importance both for school learning and for life in a western developing country as Brazil. Mean average school results for each subject-matter and overall results were established based on the schools' information on the sampling pupils' grades. Other conditions considered in the description of the case on these external and internal measures of students' attainment were the cognitive complexity of test items and the students age group and sex.

The investigation questions framed focused on achievement scores, school results and the correlations between such indicators of performance for beginners and senior students in urban and rural area schools. Ultimately, the survey seeks to provide answers to the question of the suitability of the use of pass rates as an indicator of school effectiveness in Espirito Santo, given the thorough decentralization which characterizes learning assessment in Brazilian schools.

### **3.3 The Qualitative Study: Ethnography as a Method of Enquiry**

Qualitatively the problem is approached through an ethnographic enquiry based in the observation of selected classrooms. This method is used in accord with the recommendations from reviews of the research on teacher



effectiveness (Avalos and Haddad, 1979) and on quality of education (Fuller, 1986). It is, also suitable to deal with the specific characteristics of the research problem in question which calls for clarification on classroom procedures and teachers' characteristics associated with controversial students outcomes, i.e., lower when measured by teachers themselves and higher when measured by an external standardized test, in the case of urban schools, or the opposite, in the case of rural schools.

The possibility of gaining access to classroom life, participating in it<sup>7</sup>, and observing the actions developing freely of pre-conceived categories and criteria (unlike Amidon and Flanders, 1963, Galton, Simmon and Croll 1980, Bennett, 1976 and Aitkin, Bennett and Hesketh 1980) appeared most suitable, as the relevant linkages between classroom practices - teachers characteristics - pupils' achievement would emerge from classroom life rather than from pre-established viewpoints.

### 3.3.1 The Transition from a Macro to a Micro Level of Understanding

Whilst the survey is a wide study, based on a sample which represents the whole upper primary school system, the qualitative ethnography is the study of one school. Therefore the results from the former are generalizable to the whole system but only naturalistic generalizations<sup>8</sup> can be drawn from the latter.

The transition from a macro to a micro level in understanding the problem is made through a focus in "quality" which narrows the scope of the research. Instead of comparing the outcome of pupils in urban and rural schools, and describing the relationship between two measures (external and internal) of pupils' attainment, the ethnography seeks to understand this relationship in the context of classroom procedures and teachers' attributes through in-depth observation of selected classroom(s) in a school, which offers "quality education".

The focus on quality eliminates the entire rural school network from the selection of the case-study schools. Urban area schools are the ones which receive the better inputs (i.e., more qualified staff and materials), and present higher achievement rates (i.e., comparable outcomes), even though showing lower pass rates (i.e., outcome from schools' own assessment). Furthermore the use of "quality schooling" as a criteria for the actual selection of the case-study school, leads to a major consensus amongst consulted educational officers/specialists. In this case quality is associated with institutional prestige, a consequence of the "success" of the school through the deeds of its pupils.

It can be argued that "quality-success" as a criteria for the transition from a macro to a micro level of investigation while leading to a narrow research focus (a) stresses the overall concern of the study with quality education, (b) brings to the fore the guidance of the instructional process by the

more qualified urban teachers, which was implied to be less effective than that of the less qualified rural teachers, in the original statement of the problem; (c) directs the study to the observation of teaching practices mediated by more qualified teachers, therefore to a context in which quality education can be expected to prevail; and (d) guides the drawing of naturalistic generalizations to be made from the standpoint of what constitutes quality education.

### 3.3.2 Identifying the Case-Study School

The identification of the case study school was made using the "extreme case" criteria (Patton, 1980, Guba and Lincoln 1985:201) focusing on successful schools.

The notion of success as a positive critical approach has both a pedagogical and a practical impact. From the viewpoint of the former it brings to the fore the best of classroom procedures those practices most likely to be associated with quality education. From the practical standpoint it could facilitate access to schools and their classrooms as the personnel would know they were being seen positively. It proved to have been a wise decision when entrance to the schools was being negotiated and also when the first contacts with teachers and their schools actually took place.

The identification of successful schools<sup>9</sup> was made by means of a questionnaire answered by university lecturers working in the area of teaching practice at upper primary

school level, and educationists (administrators, supervisors and inspectors) from the State Secretary of Education and Regional Education Centres. Though in a small number (34 respondents) they had contact with schools throughout the state and were in positions where judgment on the education offered by the schools was required.<sup>10</sup>

The questionnaire, personally presented to the respondents with information about the objective of the request, was short consisting only of three items asking specifically: (1) for the naming of up to five successful upper primary schools, in hierarchical order, with their geographical location; (2) for them to relate each school to the factual evidence that had led to their choice; and (3) for commenting briefly on the sources of their information, such as first hand professional information, parent-school relationship or information obtained from teachers, pupils and their families. The questionnaires were either answered on the spot or collected later as agreed.

The analysis of the data provided showed that most of the evidence was first hand professional information supported frequently by headteachers' and teachers' information, and in a few cases, first hand professional and parent school relationship reinforced one another.

Schools were named mostly on the grounds of "the quality of its instruction", "the pedagogical support offered to teachers by the 'Supervisor' and the 'Student Advisor',<sup>11</sup>", "the overwhelming demand for places in the school", "the results

obtained by its pupils in secondary school selection", "the characteristics of the teaching body" and "the continuity it offers to lower primary school".

The questions on the source of information and the evidence underlying the naming of schools had been framed to help respondents to consider their choice objectively, rejecting outright unfounded preferences and hearsay choices. And the critical analysis of answers to these questions led to a more sound role of successful schools as it was possible to exclude from the list any school that could not be related to an evidence for its success or schools listed only on the grounds of second-hand information.

The list of successful urban schools (chosen only among those in the capital of the state and its surrounding area) indicated a consensus in relation to 3 schools.<sup>12</sup> They were named in 85% of all questionnaires and one of them was named in all questionnaires among the first four choices. It was obvious that those three schools, each of them in a different Municipality<sup>13</sup>, were seen as the most successful around the state's capital-city, and they were contacted to sound their receptivity for holding a participant observation classroom investigation.

### 3.3.3 Centering the Observation in Selected Grades

Upper primary school consists of four grades (5th-8th), but it can be argued that the first and the last play a

decisive role in the life of students. Fifth graders face significant changes in the school life: several teachers instead of one, more self-responsibility in the place of a careful teacher follow up of learning tasks, more authority replacing friendliness, and frequently a move from a small to a large institutional with its own set of norms and behavioural rules. It is not surprising that pass grades from 5th to 6th grade are the lowest in upper primary school<sup>14</sup>. Eighth graders confront a different challenge. They are preparing to enter secondary school, which frequently entails selection exams, or to assume either new or more demanding working responsibilities. Their familiarity with the school environment and the teachers can be expected to be counteracted by the teachers' feeling of urgency to prepare them the best they can to face a new phase in their lives.

While 5th graders face changes and have to adapt and 8th graders are getting ready to change, 6th and 7th graders are merely expected to grow, responding positively to the already familiar demands placed upon them.

This mixture of facts and speculation led to the decision to observe the teaching-learning process in the grades that were more likely to demand more of the teachers and to represent a challenge to students - the initial and the final year of upper primary school.

#### 3.3.4 Negotiating Entrance to Appointed Schools

The successful identification of prestigious schools did not lead directly to the investigation. Entrance and willingness to participate had to be gained and the degree of freedom of the research within the school had to be determined. These are key issues in any ethnography as the "foreign visitor" will hardly have access to the information sought if he/she is not absorbed by the community and together, researcher and researched, discuss daily occurrences unveiling the meaning attached to them.

In the negotiation of entrance the criteria for the selection of the schools proved its worth. Headteachers and teachers alike were proud to have the quality of their work recognized by their fellow teachers and administrative superiors. This added to their self-confidence while the acknowledged positive character of the observation/questioning dismissed possible fears of external evaluation.

The right to investigate any of the appointed urban schools seemed easy to obtain as all headteachers, when visited and informed about the study and the indication of their particular school, were quite interested in granting their participation in the project. The decision to select the mostly well accepted school was a logical and natural one, even though the terms of the access that was negotiated there were more restricted than it appeared in other schools' propositions.<sup>15</sup>

In the selected school acceptance of the study was decided upon without consultation with the teaching staff, as the headteacher stated "some will say I'm as authoritarian as ever, but they won't mind your presence in the classroom, they're used to being observed by student-teachers and to having the university personnel around." Nonetheless, he was careful to define the researcher's territory carefully. Informed that the study centred around 5th graders, as they were just beginning upper primary school coming from several lower primary schools scattered around the city, and 8th graders as the most senior students, about to leave the school, the Headteacher proposed the younger group of 5th graders, organized as they were in the school according to their age, and a group of 8th graders that had studied in the school since their 5th grade and had never experienced repetition as the classrooms in which to base the investigation. Any visit to another classroom, if desired should be further discussed. Given that the criteria of grouping students was that ordinarily used by the school, that teaching tasks had already been assigned, and being informed that the reason for the choice was related to classroom order this decision was accepted. The school doors had been opened: it remained in the hands of the researcher to gain acceptance from the teachers, the technical personnel, and students to whom she would be presented only in the first and second day of the term. The negotiation meeting ended with a visit to the school building as existing facilities were pointed out proudly and maintenance standards<sup>16</sup> were emphasized.



The choice to focus the positive characteristics of school learning, observing an identified successful school yielded good results. From the beginning of the study the school's and its classrooms' doors were opened to the investigation. Success ensured willingness to cooperate and openness in the discussion of sensitive issues. The quality criteria was further refined by the Headteacher who added his own higher achievement expectation turned towards younger and non-repeater students, to the characteristics already picked out by the educational officials. Successful practices and high achievement were indeed to be observed!

Access to the urban school was indeed easy, granted as it was by the headteacher. However his authoritarian way could have hindered the investigation if not for the self confidence of the teachers, the positive approach used to select the school and the researcher's care in establishing a positive rapport with the school staff.

The criteria used to select the case-study schools (1) made clear the perception of educational officers about "good" schools, (2) facilitated access to the schools, and above all (3) made a positive contribution to ensure the worthwhileness and trustworthiness of the investigation as it brought forth willingness to participate from the school community.

### 3.3.5 Conducting the Field Work and Reporting Back<sup>17</sup>

Ethnographies are time-consuming studies besides being

dependent on the researcher's ability to establish a "rapport" with the community he/she intends to understand, being capable of grasping the "multiple reality"<sup>18</sup> that unfolds as different perceptions of events are elicited from community members. The deceiving simplicity of the approach hides, among others, problems of ensuring credibility, transferability, dependability and confirmability<sup>19</sup> to the study as it is reported, which adds to former difficulties in gaining entrance to the research site and willingness to cooperate from the community, and the anxiety of dealing with a research design that only emerges as it unfolds through the critical participant observation of the research.

The length of the study, the type of relationship established by the researcher with teachers, students and administrators within the schools are aspects which confer trustworthiness to the study. The credibility of the interpretations, checked with the school community members throughout the study either informally or by triangulating<sup>20</sup> using specific techniques/instruments was further verified with a formal discussion of a report of the findings presented to the school, which signals the member check phase of the study.

The original research plan called for one semester of field work. However the period of study was marked by a long teachers strike (over 60 days) over pay increases which started when the case-study was under way. The strike extended the observation schedule and provided insight into another aspect of school life.

The participant observation of classroom life in the urban school which had started on 17th February 1987 was interrupted on the 23rd of April<sup>21</sup> to start again on 26th June ending on 10th September after a between term break.

The participation of the researcher in school life and indeed in classroom life was full and intense: asking questions, presenting different/new materials to teachers, helping students with their work, being present in meetings and celebrations. Time was set aside for her to talk to small groups of students privately or in their classroom. Nonetheless while in the urban school it was felt that from a somewhat bothersome feature in the back of the classroom she became accepted as "a colleague with whom it is interesting to have a chat as much as to discuss a teaching problem" (History teacher) and so well integrated that it was said "5A will not be the same without your presence" (Science teacher).

The richness of the experiences shared in the schools make it difficult to select examples and to restrict the analysis into the frame of a thesis<sup>22</sup> without losing the vivid colour of the school life bursting activity, the flavour of teenagers speeches, the frequently picturesque quality of teachers language.

The field work was organized according to the accepted three phase structure: overview, observation and member check (Wilson, 1977, Guba and Lincoln, 1985).

During the overview phase the researcher became thoroughly familiar with the school environment, searched specific information on pupils in the selected classrooms (a specially designed questionnaire) and on teachers and the school staff (consulting the school archives), besides using all opportunities to hold informal talks with pupils and teachers to establish a friendly relationship with them. The observations and findings of the phase of the study are the basis for the "thick description"<sup>23</sup> of the school and its community. This contextual description must provide future readers with a picture image of the setting, as it was seen and sensed by the researcher. Its function is to lead them to a "vicarious experience"<sup>24</sup> upon which naturalistic generalizations can be sought and drawn.

The more substantive data comes from the focused observation phase of the study its design emerging step by step guided by continuous reflections and tacit knowledge<sup>25</sup> concerning systematic observation carried on and followed by constant comparative analysis. This process revealed patterns of teaching, learning assessment common procedures and assessment instruments used. The observations were supplemented by informal questioning of pupils and teachers, semi-structured interviews and the use of specially devised instruments<sup>26</sup> to validate both findings and interpretations by means of "member check" or "triangulation".

Theoretically the study aimed to enhance the understanding

of the relationship between teachers attributes, their teaching approach and the type of learning they tended to promote. The use of textbooks, the participation structure prevailing in the lesson and the cognitive complexity which characterized assessment texts and learning were at the core of the investigation.

The aspects of the methodology aforestressed become apparent in a research report that is initially contextually descriptive but that becomes more analytical as classroom procedures are discussed. The case-study is reported in the narrative form that characterizes ethnographies<sup>27</sup> and is illuminated by "vignettes" with an aim transcending the display of some of the evidence at the base of the analysis, from which grounded theory evolved. It seeks to share with readers the experiences lived in the classroom thus providing them with a vicarious insight of teaching and learning in a successful upper primary schools in the capital-city in a small southeastern state in Brazil, while attempting to understand and compare the relationship between classroom procedures and students achievement.

Summing up, the objective of the qualitative study was to clarify the relationship between classroom procedures and student achievement comparing two teaching procedures used in 5th and 8th grades in a successful school located in the capital-city of the state. Success was defined by educational officers themselves by means of a questionnaire and was perceived as the quality of the education provided by the

school. It is attributed to the standards of the teaching staff and the type of the pedagogical support available to them. The choice of successful school as a extreme case criteria for the selection of the case-study school yield very positive results. It facilitated entrance and ensured teachers willingness to participate in the study discussing openly their practices. Thus it was a major issue towards the trustworthiness of the study. Trustworthiness as a criteria for the acceptability of the study was further ensured by the length of the study, the constant informal/semi-formal checking or interpretations of events during the study, the final open discussion of the research report in the schools, as much as from the friendly rapport established between the research and the school community.

The report of the case-study is narrative and illuminative, as is characteristic of ethnographies. It results from in-depth observation and is based in the constant comparative analysis of data carried on throughout the research. Its intention is to provide for naturalistic generalization as well as to develop grounded theory.

### Summary

Chapter 3 discusses the methodological foundation of the investigation. It starts by pointing out the dual nature of the problem represented by the need to determine the suitability of the use of pass rates as an indicator of the school system effectiveness, and the search to relate school

outcomes with classroom procedures and teachers' attributes. While the search for answers to the first aspect of the case requires the use of quantitative measures, the latter is more conveniently addressed through a qualitative study, namely a direct observation of classrooms. Therefore, the two dimensions of the research case call for a quanti-qualitative type of investigation.

The quantitative study proposed: a survey, aims (a) to establish achievement scores, based on standardized testing; (b) to determine mean school results based on teachers' assessment of learning and to correlate these two measures (external and internal to the system) of attainment. The survey uses the IEA Reading Comprehension test in its ECIEL Portuguese version as the instrument to establish pupils' achievement scores. The sampling, which represents 70 per cent of the upper primary schools in the state, includes only urban schools in the Metropolitan Region as representatives of the urban area school network, while rural schools from the other 5 regions represent the rural school network. The students in the sample were randomly selected and stand for the 2 segments of the upper primary cycle-beginners (5th/6th grades) and seniors (7th/8th grades). The investigation questions framed covered the areas related to the research's aims: achievement, school results and the correlation between the former two areas. Mean average scores in general, in relation to age groups and to sex, as well as in relation to the level of cognitive difficulty of test items (achievement) and different subject-matter are used to portray the existing situation, using the

student as the main unit of analysis. Overall the quantitative dimension of the investigation searches to throw light on the question of the suitability of pass grades/rates as a comparable indicator of the quality of the education provided by the state school system.

The qualitative study is a school ethnography which furthers the case of understanding pass rates. It seeks to clarify, under the light of classroom procedures and teachers' attributes, the relationship between high achievement rates and low pass rates. The transition from the macro level of understanding provided by the survey to the micro level of understanding of the ethnography is made through a focus on quality/success which is at the base of the option for urban area as the site of investigation and the actual choice of the case-study school. The positive approach to the ethnographic study facilitated the access to schools and classrooms and stands for to the trustworthiness of the findings. Trustworthiness is further accounted for through (a) planning for and carrying on in-depth, prolonged on the site observation, (b) the provision of a thick description of the context, (c) attention to negative-case analysis, and (d) constant triangulation of findings and interpretations, which culminate with an open discussion (member check) on the report of the findings to the school staff. The research plan allowed for the design to emerge through a phase of observation and overview in which the vital features of classroom life in respect to students' achievement (teachers' approach to teaching and teachers' affective relation with the students)



came to the fore through careful observation, hard thinking, the use of tacit knowledge and constant comparative analysis. The report of the findings uses the narrative form favoured by ethnographies and provides the basis for naturalistic generalizations to be drawn.

The discussion of the major methodological issues in relation to the contributions they made towards a clearer understanding of the stated problem constitute evidence of the intercomplementarity of the quantitative and the qualitative studies.

Notes Chapter 3

1. Pass grades are kept in the school archives and are recorded in the pupils primary school certificate. No summative results are known even at the school level, hence the need to determine average pass rates.
2. The subject-matter included in the upper primary school curriculum are: Portuguese, Mathematics, Geography, History, Brazilian Socio-Political Organization, Civic Education and Arts.
3. The strategy used to select the sampling was based in the support of educationists working in Regional/Municipal Educational Centres.
4. The Metropolitan Region, the most developed in the State and although formed only by 6 out of the 63 "Municipios" in which the State is divided it concentrates around 30% of the urban upper primary schools run by the State.
5. In each school beginners' and seniors' groups were represented respectively by up to 15 students.
6. The easier version was used to test 4th graders, and the advanced version was used to test 6th and 8th graders.
7. Participant observation as a research technique calls for the active participation of the researcher as full-fledged member of the group. In this investigation participant observation developed as the researcher was accepted by teachers as a colleague, and actually taught History classes, occasionally, and took an active part in all classroom events.
8. Naturalistic generalizations according to Stake (1980) are derived individually and arise from the harmony between the person's own experience and the contextual characteristics of the case-study.
9. Even though the study was meant to be carried on in an urban school, it was considered advisable to use the opportunity to identify "successful" rural school(s), to continue the study, later on, in another stage.
10. For university lecturers knowledge and assessment of the state school system was necessary due to decisions to be taken on schools and teachers to be approached concerning their students' teaching practice. Educationists not only had an overall impressionistic view of the system, based on the local prestige of the schools and their academic reputation among elite secondary schools, but had frequent contact with key personnel in the schools discussing their needs and strengths in order to develop

and implement educational plans to improve learning conditions in the State.

11. According to Brazilian law, schools should have a technical body constituted amongst others by a "Supervisor" (Supervisora Escolar) and a "Student Advisor" (Orientadora Escolar). Their function is respectively that of offering technical support for curriculum development and special guidance for students in need. Even though their function do not correspond exactly to that of their British counterparts they are mentioned throughout the thesis by the English term for the sake of readability.
12. The questionnaire approach was less useful in the identification of successful rural schools. The majority of the respondents (60%) answered that they had no knowledge of rural "good" schools, and no school was named by more than two persons.
13. The area surrounding the capital city of the state is called "Grande Vitoria". It is formed by 5 "Municipios" or counties.
14. The results of the Study of Disparities in its report (Gama et al, 1984) deal only with aggregated pass rates for upper primary school, but partial results show that mean pass rates which are around 80% for 5th graders, increase steady getting over 90% for 8th graders.
15. Two other schools had been frequently named by teachers and specialists and had been contacted by the researcher. Both Headmasters had accepted to participate in the study pending staff consultation. An unconditional agreement to participate in the study resulted from this consultation but by then the case-study school had already been selected.
16. As financial resources at the disposal of schools are very limited and maintenance repairs are centralized in the competent sector in The Secretary of Education cannot be counted upon, it takes creativity, initiative and boldness to keep a school operating in its best conditions, hence the unabashed statement of the headmaster.
17. The length of the observation is a key issue in the use of the ethnographic approach to schools/classrooms investigation. There is an emphasis on the observation of a complete cycle of activities and well known studies, such as Becker and Geer (1968), Smith and Geoffrey (1968), Levy (1970), Lacey (1970), Goodlad and Klein (1970), Hargreaves (1972), Delamont (1973), Hammersley (1980) and Ball (1981) have covered an academic year. Others have developed through two separated periods of observation (eg. Vulliamy 1985), or have relied on several observations carried on simultaneously (eg. Stake and Easley, 1978). Conversely there is wide criticism

of what is called by Rist (1975) "blitzkrieger ethnography".

18. Guba and Lincoln 1985:37.
19. These are the criteria proposed by Guba and Lincoln (1985) to ensure trustworthiness in ethnographic enquiries.
20. Triangulation following Guba and Lincoln (1985:109) is the cross checking of data and interpretations through the use of multiple data sources and/or data collection techniques.
21. Visits to the school and contact with the staff went on throughout the strike.
22. The experience of participant observation in the school was the object of a report presented to and discussed with the staff. It was written in a narrative form, with several vignettes and followed the outline (a) the school culture; (b) students in their classrooms; (c) teachers approaches to teaching; (d) assessing learning in the classroom, and (e) students view on learning and the school. The title of the report was Education and Instruction: Life in a Traditional School.
23. Geertz (1973) coined the term "thick description" and after him Guba and Lincoln (1985) used the term referring to a way for ensuring transferability. Stake (1985) further stressed its importance as the basis for the readers' "vicarious experience" and consequently their naturalistic generalizations.
24. Stake, R., 1985:32.
25. For Stake (1978:6) tacit knowledge results from experience with events, with propositions about events, and "rumination".
26. A wide variety of instruments was used according to the situation in case. They range from short description of teaching styles presented to and discussed with teachers to "Kelly's Triad".
27. Stake (1985) stresses the importance of the narrative form -colloquial discourse type of ethnographic reports, with the aim to place its content within the grasp of the "ordinary reader" and to convey the atmosphere that characterizes the setting of the investigation, as well as the researcher's own feelings and impressions.

## CHAPTER 4

### THE QUANTITATIVE STUDY: SCHOOL RESULTS AND PUPILS' ACHIEVEMENT IN URBAN AND RURAL UPPER PRIMARY SCHOOLS - PRESENTING THE FINDINGS OF THE INVESTIGATION

This chapter presents the findings of the survey by focusing the three axes of the investigation, as defined in the methodology, (a) achievement scores, (b) school results, and (c) the correlation between pupils attainments as measured internally through school assessment and externally through a standardized (IEA - ECIEL) Reading Comprehension test. The discussion of these results is carried on in chapter 5.

The survey was structured to determine both pupils achievement scores (using the IEA/ECIEL Reading Comprehension test) and school results (by collecting data on pupils' grades in all subject-matters), as a preliminary step to explaining the problem and then correlating these two measures of attainment. The correlation was to be the key issue leading to a clarification of the meaning of pass rates as a suitable comparative indicator of the quality of outcomes in the urban and rural segments of the upper primary school network. The collection of data was planned (Section 3.2) to enable a description of the characteristics of the school population considering its age group, and the schooling context (i.e., subject-matters and levels of cognitive complexity), as it pertained to pupils' attainment. The general results of the findings are presented in 7 tables, referring specifically to achievement scores (tables 4.1 to 4.3), school results (tables 4.4 and 4.5), and the correlations between the two established

measures (tables 4.6 and 4.7). The grouping of pupils as beginners (5th/6th grades) and seniors (7th/8th grades) is considered in all cases.

#### 4.1 Achievement Scores

Mean achievement scores were obtained for urban and rural area students, for students in the six regions of the State<sup>1</sup>, by age group, and considering the cognitive complexity of the test items.<sup>2</sup>

##### 4.1.1 General Achievement Scores

The overall results show that achievement scores are higher for beginners (50.9) than for seniors (46.8) and higher for urban students in both grade groups. Urban students mean scores are respectively 52.8 (beginners) and 49.0 (seniors). Rural students' mean scores are 46.7 and 43.2. This difference is small but statistically highly significant ( $p < 0.0001$ ).

Table 4.1 below shows the general results according to region considering urban and rural areas.

The table also shows mean achievement scores by region, and demonstrates that the highest mean achievement score is that of pupils from the Metropolitan Region, which had been signalled by the lowest pass rates.

Table 4.1 Achievement Mean Scores by Grade Group, Region and Area of the Schools

Region	Area	Grade Groups		Grade Groups	
		beginners	seniors	beginners	seniors
		$\bar{X}$	N	$\bar{X}$	N
Metropolitan:	<u>Urban</u>	52.8	754	49.0	741
Coast		51.2	048	44.3	029
Central Mountains		51.3	069	48.8	049
South		47.9	089	42.9	055
North		44.7	181	40.9	150
Sweet River		48.3	177	43.6	150
	<u>Rural</u>	46.7	564	43.2	433
	<u>Total</u>	50.9*	1,318	46.8*	1,174
	Eta <sup>2</sup>		0,0181		0,0391

\*  $p < 0,0001$

#### 4.1.2 Achievement Scores by Pupils Age Groups

The age of students is frequently observed in relation to their academic achievement (Heyneman, 1976, Haddad, 1979, Heyneman and Farrell, 1978, Heyneman and Loxley, 1981, Schiefelbein and Simmons, 1981, Castro et al, 1984). In this study differences in pupils actual age was not a useful criteria for grouping the sample in distinctive categories with statistically significant different achievement scores<sup>3</sup>. However, age as a proxy for repetition was a valid criterium to describe the sample. Repetition as discussed in other studies in Brazil (Brandão et al, 1983), and in other developing countries (Schiefelbein and Simmons, 1981), is a strong predictor for students achievement. Therefore, the fit between the students actual age and the age which corresponds

to the grade he/she is enrolled, gives origin to two categories: students in the "proper age-bracket" and "older" students (Section 3.2.1). The second category signals the possibility of previous repetition.

Observing the distribution of students in these two groups it was found that while in urban areas the group of students "in the proper age-bracket" tended to be larger than the group of "older" students the situation was reversed in rural areas.<sup>4</sup> It was also seen that in urban areas there is an increase in the percentage of students in the "proper age-bracket" and a decrease in the percentage of "older students while in rural areas there are but minor changes in the distribution of students according to their age-bracket.

Results presented in Table 4.2, that follows, show that differences in achievement scores between the two groups of pupils are statistically significant for both beginners and seniors in urban and rural areas.

The table shows that students "in the proper age-bracket", that have enjoyed a smooth schooling process, get higher achievement scores both in the urban and rural areas, and both in the case of beginners and seniors.



**Table 4.2: Achievement Mean Scores by Age-bracket, Grade Groups and Area of the Schools**

	Beginners			Seniors		
	Urban	Area Rural	Total	Urban	Area Rural	Total
Proper age bracket (N)	54.6 (340)	50.4 (328)	52.95 (668)	51.2 (401)	43.7 (181)	48.9 (582)
Older (N)	51.5 (366)	46.6 (232)	49.3 (598)	44.95 (310)	40.5 (215)	43.1 (525)
Total (N)	53.1 (706)	48.3 (560)	51.1 (1,266)	48.5 (711)	41.95 (396)	46.15 (1,107)
Sig Eta2	0,0118 0,0086	0,0082 0,0132	0,0001 0,0117	0,0000 0,0574	0,0147 0,0150	0,0000 0,0428

Comparing results from tables 4.1 and 4.2 it is seen that scores for urban students in the "proper age-bracket" are above the overall mean achievement results (i.e., the mean score for beginners in the proper age-bracket is 54.6, while mean overall result for the same group is 52.8; mean score for seniors in the "proper age-bracket is 52.95, while mean overall result for the same group is 49.0). But whereas as this trend prevails for rural beginners in the "proper age-bracket" (mean scores are respectively 50.4 and 48.3), there is no difference between the two scores for rural seniors (mean scores are respectively 43.7 and 43.2).

In general the division of pupils in age groups demonstrates that there is a tendency for pupils in the "proper age-bracket" to score higher than "older" pupils. This trend is more strongly felt for seniors than for beginners. It is also less evident in rural areas than in urban areas where a

sharp increase in the part of the variance in scores that can be explained by age-group differences (i.e.,  $\text{Eta}^2$  value for beginners and seniors are respectively 0.0086 and 0.0574), is observed.

#### 4.1.3 Achievement Scores According to the Cognitive Complexity of Test Items

The classification of the IEA-ECIEL test items according to Bloom's taxonomy of educational objectives makes it possible to assess pupils' capacity to deal successfully with diverse levels of cognitive complexity.

In the easier version of the test its items were classified in the categories "Knowledge", "Comprehension", and "Analysis". In the advanced version "Synthesis" and "Evaluation" were added to the previously mentioned categories. However, given the small number of test items in the "higher" categories<sup>5</sup>, there was a further breakdown of "Comprehension" into its sub-scales: "Translation", "Interpretation" and "Extrapolation".

Table 4.3, following shows that urban pupils scores are statistically significantly higher than rural students in all but two scales, i.e., analysis (beginners) and synthesis (seniors). Nonetheless, the differences between the scores are small, especially in the higher levels of the hierarchy. Indeed, results show that more variance between the outcome of urban and rural students is explained in the lower levels of the hierarchy than in its higher ones.

Table 4.3 -Achievement Mean Scores and Mean Values for Components making up IEA Reading Comprehension Test According to Bloom's Taxonomy, by Grade Groups and Area of the Schools

Grade Groups	Area	Achievement $\bar{x}$	Test Components according to Bloom's Taxonomy						
			Knowledge	Translation	Interpretation	Extrapolation	Analysis	Synthesis	Evaluation
Beginners	Urban (N)	52.8 (754)	9.41	3.17	3.61	2.00	2.27	-	-
	Rural (N)	48.3 (564)	9.07	2.94	3.22	1.93	2.02	-	-
	Total (N)	50.9* (1,318)	9.58*	3.07**	3.45*	1.97	2.16**	-	-
	Eta2	0.0181	0.0155	0.0056	0.0147	-	0.0083	-	-
Seniors	Urban (N)	48.5 (741)	5.03	4.02	1.81	2.51	3.52	0.82	1.65
	Rural (N)	42.7 (433)	4.42	3.01	1.51	2.28	3.29	0.78	1.47
	Total (N)	46.4* (1,174)	4.81*	3.76*	1.70*	2.43**	3.44**	0.80	1.59**
	Eta2	0.0391	0.0302	0.0359	0.0201	0.0078	0.0059	0.0078	0.0080

\* p < 0.0001

\*\* p < 0.005

From the analysis of table 4.3 accrues five major points concerning pupils performance in the reading-comprehension tests:

1 - Urban and rural beginners and seniors score significantly different except in Extrapolation (5th/6th graders) and Synthesis (7th/8th);

2 - The proportion of the variance that is explained is very small except in few cases referring to categories in the initial steps of the hierarchy.

3 - Beginners' scores in "Knowledge" and "Interpretation" account for the largest variation that can be explained by the geographic setting of their schools.

4 - Senior scores in the categories "Knowledge" and "Interpretation" are significant but the largest part of the variance explained is found in the category "Translation".

5 - The ability to translate, e.g., understand the use of synonyms, becomes the most important capacity distinguishing the outcome of urban and rural pupils in the end of primary school whereas it explained only a minor part of the variance for beginners.

Therefore, the classification of test items according to Bloom's hierarchy of knowledge shows that although the performance of urban and rural students is statistically significantly different, and favours urban pupils, the power of the geographical settings of their schools to explain the variance in scores is only relatively sizeable in relation to categories in the first levels of the taxonomy.

#### 4.1.4 On achievement scores:

The survey carried out among upper primary school students (beginners and seniors) in urban areas (Metropolitan Region) and rural areas (all other regions) in the State of Espirito Santo determined their achievement scores using an IEA-ECIEL test in Reading Comprehension. The exploration of the differences between urban and rural pupils focused on age as a proxy for repetition, and on their competence to deal with questions presenting distinctive levels of cognitive complexity. Overall results are around 50.0 (0-100 scale) and favour urban area and beginner students. These results are statistically significant but the proportion of the variance that is explained is small, especially in the case of beginners. Thus it can be argued that learning experiences developed during upper primary school are more important in differentiating urban and rural pupils achievement scores, than those associated with their earlier lower primary education. Sex does not appear to have a relevant effect upon achievement, even though it has a small impact upon beginners in rural areas. However, the age of the students, when considered in relation to the fit age-grade, which can be seen as a proxy for repetition, does influence pupils achievement scores, especially in the case of seniors and in urban areas. Overall the performance of students in the "proper age-bracket", who have not experienced repetition, outweighs that of "older" students. It is observed that the participation of students in the "proper age-bracket" increases in urban area sampling is accompanied by a larger power of the age-grade fit criteria

to explain the variance in achievement scores. The level of cognitive complexity of test items, which is determined through the use of Bloom's taxonomy of educational objectives, shows that there is less differentiation between the scores of urban and rural students, beginners and seniors alike, in the "highly complex categories" (e.g., analysis, synthesis and evaluation). But in the lower steps of the hierarchy (i.e., knowledge and comprehension-translation) the location of the schools attended by the students is as a predictor of achievement scores, yields results which are in general statistically highly significant, showing that urban beginners and seniors perform better than rural school students. The more substantial gain apparently made by urban students is the ability to decode a message conveyed through different means, as reported by the increased in the variance explained in the category comprehension-translation.

#### 4.2 School Results

School results are ordinarily reported and analysed in Brazil as pass rates, i.e., the percentage of students with teachers learning assessment grades, equal or above 5.0 in a zero-10 scale<sup>6</sup> in relation to the number of students enrolled in the end of the year. The actual output of the school-based assessment, i.e., students' grades, is not considered. Nonetheless, as this is the school's own measure of their pupils' achievement, is important to establish whether rural schools, besides obtaining a higher percentage of students with pass marks, also register higher mean average scores in their

assessment of students' learning than do urban schools. Furthermore, mean school results represent an internal (i.e., school based) measure of pupils attainments, which is at the root of a comparison between achievement scores and pass rates.

School results were computed based in the information provided by the schools through a specially designed form, on the bimonthly learning assessment grades of the sampling students in each subject-matter (i.e., Portuguese, Mathematics, Science, History, Geography, Civic Education, Brazilian Socio-Political Organization and Art Education). Information concerning pupils' age is used to describe the sampling school results, following the same pattern established when dealing with achievement mean scores.

#### 4.2.1 Overall School Results

The results presented in Table 4.4, that follows, show that final results (i.e., the compound school learning assessment results) are statistically significantly higher for rural beginners and seniors, even though differences are seldom significant when subject-matters are considered individually.

The table shows that the only subject-matter in which differences are statistically significant are: Geography and History (beginners) and Art (beginners and seniors), and the proportion of the variance that is explained in any of these cases is very small.

Table 4.4 School Average Final Results and Mean Results for Individual Subject-matter  
by Grade Group and Area of the Schools

Grade Group(s)	Area (N)	Subject-Matter							Final Result
		Portuguese	Mathemat.	Science	History	Geography	C.Ed./OSP	Art. Ed.	
Beginners									
	Urban (N=733)	60.0	60.5	62.8	62.9	62.0	67.0	71.1	64.4
	Rural (N=527)	60.4	61.0	62.4	65.2	64.5	68.0	68.6	69.5
	Total (N=1,260)	60.1	60.7	62.6	63.9**	63.1**	67.4	67.4**	66.6*
	Eta2	-	-	-	0.0041	0.0043	-	0.0047	0.0301
Seniors									
	Urban (N=734)	59.7	59.9	64.1	64.9	64.6	71.3	75.4	66.2
	Rural (N=394)	61.2	62.0	64.4	66.3	66.8	69.2	72.2	71.5
	Total (N=1,128)	60.3	60.7	64.2	65.4	65.4	70.5	74.2**	68.0*
	Eta2	-	-	-	-	-	-	0.0061	0.0610

\*  $p < 0.0001$

\*\*  $p < 0.05$



But as final results are considered the proportion of the variance explained grows to 0.0301 and 0.0610, respectively for beginners and seniors. Thus, overall the two groups are different in relation to school results as they were in relation to achievement scores but whereas in relation to the latter scores rural pupils marks were lower in the case of school results their mean average marks are higher, following the pattern of pass rates.

Even though differences in school results by subject-matter are rarely statistically significant and differences, when recorded they explain only a small part of the variance, major characteristics of existing differences between the groups of pupils must be highlighted:

1. Portuguese and Mathematics are the subjects which present the lowest average school results in urban and rural areas, for beginners and seniors;

2. The highest average school results are found in Civic Education O.S.P.B. and Art Education in both areas and both grade groups;

3. There is a considerable difference between the highest and the lowest average school results (Art Education and Portuguese) in all cases but it is wider for seniors (urban and rural), and for urban area students (beginners and seniors);

4. Average school results in Science, History and Geography are very similar for urban area beginners and seniors whereas for rural area students Science results are lower than those in History and Geography;

5. The only scores which favour urban students are those

in Art Education and Civic Education, and the difference in results in Civic Education for both beginners and seniors is not significant;

6. The difference between mean average school results in Civic Education between urban and rural students is smaller for beginners and favours rural students but it increases for seniors and becomes favourable for urban students;

7. For seniors in urban and rural areas the difference in Portuguese and Mathematics school results is larger than that of the beginners' but is still not statistically significant;

8. Considering final results the difference between mean average scores for urban and rural students is smaller for beginners than for seniors;

9. The difference between average results for beginners and seniors in urban areas is smaller than for rural areas;

10. Portuguese and Mathematics present the only mean average school results that are lower for seniors in the case of urban students;

Summing up, final school results obtained by computing marks attributed to school based assessment tests show statistically significant differences between urban and rural beginners and seniors. However the difference is seldom statistically significant when subject matters are considered individually. The differences between the two groups grow during the upper primary cycle, so that in a way that the part of the variance that can be explained for seniors more than doubles that which can be explained for beginners. Overall school results are higher for rural pupils than for urban

pupils. Despite the fact that differences by subject-matter are mainly not significant statistically the major issues arising from the comparison of the marks obtained by the two groups of students are outlined, leading to the framing of questions that are to be addressed when the data is analysed in the next chapter.

#### 4.2.2 School Results by Pupils' Age Group

The age group of the students has a decisive impact upon their school results in the beginning of the upper school cycle. But the importance of differences in age diminishes during the cycle, and for senior students it is only statistically significant when final results are observed.

Table 4.5, below shows that age, as a proxy for repetition, has a stronger impact on beginners (urban and rural) than on senior pupils and on urban rather than rural pupils. In all cases students in the proper age-bracket exhibit higher scores. For beginners the proportion of the variance in final results scores explained by the age group of the pupils is very similar in urban and rural areas, as seen through  $\text{Eta}^2$  values (around 0.0300). For seniors, however, age appear not to influence school results for rural pupils but it has a highly significant impact on urban students.

Table 4.5 School Average Results for Individual Subject-Matter and Final Results by Age Groups, Grade Groups and Area of the Schools

Grade Group	Area	Age Group	S u b j e c t M a t t e r								Final Results
			Portuguese	Maths	Science	History	Geography	Civic Ed.	Art Ed.		
Beginners	U	proper age (N=369)	62.7	63.4	65.6	66.7	64.0	70.2	72.6	66.6	
		older (N=363)	57.2	58.3	60.5	60.3	59.8	66.1	69.3	62.1	
		Eta2	0.0410(a)	0.0228(a)	0.0276(a)	0.0337(a)	0.0214(a)	0.0192(b)	0.0117(d)	0.0356(a)	
R		proper age (N=226)	63.7	65.4	64.8	68.1	67.4	70.6	72.2	70.1	
		older (N=276)	59.0	58.6	62.3	64.4	63.5	67.8	67.4	66.5	
		Eta2	0.0182(a)	0.0316(a)	0.0041	0.0083(e)	0.0100(e)	0.0054	0.0151(d)	0.0331(a)	
T		proper age (N=595)	63.2	64.2	65.5	66.9	65.7	70.3	72.5	67.9	
		Older (N=639)	58.0	58.5	61.3	62.1	61.4	66.8	68.4	64.0	
		Eta2	0.0278(a)	0.0260(a)	0.0136(a)	0.0178(a)	0.0143(a)	0.0109(b)	0.0135(a)	0.0303(a)	
Seniors	U	proper age (N=396)	61.6	62.1	66.4	67.2	66.8	72.9	78.7	68.2	
		older (N=310)	57.6	57.8	61.8	62.9	63.9	66.9	74.5	64.1	
		Eta2	0.0240(a)	0.0161(c)	0.0272(a)	0.0247(a)	0.0110(b)	0.0133(d)	0.0212(a)	0.0396(a)	
R		proper age (N=162)	60.8	61.5	62.7	64.7	64.9	68.6	71.2	71.7	
		older (N=203)	63.4	64.4	67.8	69.8	70.3	72.4	75.0	71.6	
		Eta2	0.0043	0.0051	0.0146(e)	0.0142(e)	0.0153(e)	0.0074	0.0071	0.0000	
T		proper age (N=558)	61.4	61.9	65.3	66.4	66.3	71.6	76.4	69.2	
		older (N=513)	60.0	60.5	64.2	65.7	66.5	70.9	74.7	67.6	
		Eta2	0.0019	0.0016	0.0009	0.0005	0.0001	0.0004	0.0022	0.0111(b)	

Statistical Significance

(a) p < 0.0001; (b) p < 0.0005; (c) p < 0.001; (d) p < 0.005; (e) p < 0.05

Assessments in individual subject-matter show that in urban areas the effect of repetition on school results is more strongly felt in Portuguese and History, for beginners and in Science, History and Portuguese for seniors. However, the amount of the variation explained in the more significant cases at the end of the primary cycle correspond to the cases where the effects of repetition are not so extreme at the beginning of the cycle, i.e., Science, Maths, and Geography ( $\text{Eta}^2$  values around 0.0250). Science is the only subject in which the power of repetition to explain the variance in results is constant at the beginning and at the end of the upper primary school. In rural areas the effects of repetition on school assessment are felt more strongly in Mathematics and Portuguese, but it operates only in the beginning of the cycle and explains only a small part of the score variance.

Thus, it is possible to argue that "repetition": (a) explains more variance in scores in the beginning of the upper school cycle than at the end; (b) has a stronger impact on urban students than on rural students; (c) that repetition influences similarly the difference in scores for urban and rural beginners; (d) has a different impact on each subject-matter in the two segments of upper primary school, and that (e) the effects of repetition on the internally and the externally set attainment assessment in the two segments of upper primary school differ they are stronger for beginners in the internally set assessments tests and are weaker for seniors, but they are stronger for seniors in the externally set assessments and weaker for beginners.

#### 4.3 Correlations between Achievement Scores and School Results

The correlation between achievement scores and school results facilitates the understanding of differences in pass rates between urban and rural areas. The rationale underlying the correlation is that observing the strength of the association between achievement scores and school results and its direction would provide the clues for interpreting "pass rates". Positive and statistically significant associations between the two scores, for urban and rural area schools alike would imply that pass rates were comparable and acceptable as an indicator of the quality of the education provided by the two segments of the school system. A refusal to admit pass rates as a suitable indicator of comparable quality of education would follow in the case of statistically significant negative correlations, or in the absence of significant correlations.

Pearson correlations between the two attainment scores, presented in Table 4.6 and 4.7, following, show that final results for urban area beginners and seniors the association are statistically highly significant. Results for the association between each subject-matter and overall achievement scores are also significant with different strength, except in the case of seniors Art Education, as are the correlations between school final results and the categories in Bloom's hierarchy of knowledge (except in the case of synthesis for senior pupils). However when rural area beginners and seniors are considered the associations between final school results

and achievement scores are not statistically significant, neither are the correlations between school results and the categories of knowledge (except "Knowledge" and "Translation" for beginners). For seniors the association between individual subject-matter and achievement scores are not statistically significant, either (except in the case of Art Education) but for beginners they are significant.

The direction and the strength of the statistically significant correlations indicate that for urban students correlations tend to be positive and moderate to weak. The highest values for Pearson's coefficient of correlation are related to beginners, and are found in History ( $r = .35$ ), Science ( $r = .33$ ), and Geography ( $r = .30$ ). For rural students the significant association found, are for beginners those between school results in individual subject-matter and overall achievement scores (Portuguese,  $r = .18$ , Civic Education,  $r = .15$ , Geography,  $r = .13$ , History and Science,  $r = .11$ ) and for seniors the correlations between individual subject-matter and the category "Interpretation" (Art Education,  $r = -.19$ , Civic Education,  $r = -.18$ , Science,  $r = -.17$ , History,  $r = -.16$ , Portuguese,  $r = -.15$ , Mathematics,  $r = -.14$ ). As seen in the correlation coefficient these associations tend to be respectively positive-weak, and negative, moderate to weak. Therefore, in the case of urban students (beginners and seniors), it can be argued that school results have a moderate tendency to increase whenever achievement scores increase. This same tendency with less strength is found in the case of rural beginners.

Table 4.6 Correlations Between School Results and Achievement Scores for Beginners in Urban and Rural Area Schools

School Results	Components of Achievement Test according to Bloom's Taxonomy of Knowledge				Achievement scores		
	Area Knowledge	Interpretation	Translation	Extrapolation Analysis			
Portuguese	U	r = 0.29(a)	r = 0.19(a)	r = 0.15(a)	r = 0.19(a)	r = 0.28(a)	
	R	r = 0.18(a)	r = 0.09(d)	r = 0.16(a)	r = 0.09(f)	r = 0.12(a)	r = 0.18(a)
Mathematics	U	r = 0.25(a)	r = 0.17(a)	r = 0.13(a)	r = 0.14(a)	r = 0.17(a)	r = 0.25(a)
	R	r = 0.14(b)	r = 0.04	r = 0.05	r = 0.01	r = 0.05	r = 0.09(c)
Science	U	r = 0.34(a)	r = 0.23(a)	r = 0.21(a)	r = 0.26(a)	r = 0.21(a)	r = 0.33(a)
	R	r = 0.10(e)	r = 0.07(f)	r = 0.10(e)	r = 0.07(f)	r = 0.08	r = 0.11(e)
History	U	r = 0.34(a)	r = 0.25(a)	r = 0.23(a)	r = 0.18(a)	r = 0.22(a)	r = 0.35(a)
	R	r = 0.10(f)	r = 0.05	r = 0.10(e)	r = 0.06	r = 0.07	r = 0.11(e)
Geography	U	r = 0.30(a)	r = 0.22(a)	r = 0.17(a)	r = 0.16(a)	r = 0.21(a)	r = 0.30(a)
	R	r = 0.12(e)	r = 0.04	r = 0.11(d)	r = 0.10(e)	r = 0.06	r = 0.13(c)
Civic Ed.	U	r = 0.23(a)	r = 0.17(a)	r = 0.14(a)	r = 0.09(a)	r = 0.13(a)	r = 0.23(a)
	R	r = 0.15(b)	r = 0.07(f)	r = 0.12(f)	r = 0.07(f)	r = 0.10(e)	r = 0.15(b)
Art Ed.	U	r = 0.14(a)	r = 0.07(f)	r = 0.07(f)	r = 0.09(e)	r = 0.12(a)	r = 0.14(a)
	R	r = 0.09(f)	r = 0.04	r = 0.08(f)	r = 0.09(f)	r = 0.05	r = 0.09(f)
X Final School Results	U	r = 0.27(a)	r = 0.27(a)	r = 0.16(a)	r = 0.13(a)	r = 0.15(a)	r = 0.25(a)
	R	r = 0.10(f)	r = 0.00	r = 0.07(f)	r = -0.02	r = 0.05	r = 0.05

Statistical Significance

(a)  $p < 0.0001$ ; (b)  $p < 0.0005$ ; (c)  $p < 0.001$ ; (d)  $p < 0.005$ ; (e)  $p < 0.01$ ; (f)  $p < 0.05$



Table 4.7 Correlation between School Results and Achievement Scores for Seniors in Urban and Rural Area Schools

School Results	Components of Achievements Test according to Bloom's Taxonomy of Knowledge					Achievement scores			
	Area Knowledge	Interpretation	Translation	Extrapolation	Analysis		Synthesis	Evaluation	
Portuguese	U	r= 0.20(a)	r= 0.16(a)	r= 0.12(a)	r= 0.19(a)	r= 0.11(a)	r= 0.2	r= 0.13(a)	r= 0.22(a)
	R	r=-0.00	r=-0.15(c)	r= 0.02	r= 0.05	r= -0.01	r= 0.02	r= -0.04	r= -0.02
Mathematics	U	r= 0.19(a)	r= 0.13(a)	r= 0.12(a)	r= 0.16(a)	r= 0.12(a)	r= -0.01	r= 0.11(a)	r= 0.20(a)
	R	r=-0.04	r= -0.14(c)	r= 0.22	r= -0.02	r= -0.04	r= 0.01	r= -0.05	r= -0.07
Science	U	r= 0.21(a)	r= 0.21(a)	r= 0.15(a)	r= 0.20(a)	r= 0.18(a)	r= 0.03	r= 0.16(a)	r= 0.28(a)
	R	r= -0.03	r=-0.17(a)	r= 0.04	r= -0.00	r= 0.00	r= 0.02	r= -0.01	r= -0.02
History	U	r= 0.15(a)	r= 0.12(a)	r= 0.10(b)	r= 0.14(a)	r= 0.13(a)	r= 0.06(f)	r= 0.11(c)	r= 0.19(a)
	R	r= -0.03	r=-0.16(a)	r= 0.00	r= -0.00	r= -0.03	r= -0.02	r= -0.05	r= -0.06
Geography	U	r= 0.17(a)	r= 0.14(a)	r= 0.11(a)	r= 0.17(a)	r= 0.18(a)	r= 0.05	r= 0.09(e)	r= 0.22(a)
	R	r= -0.00	r=-0.14(c)	r= 0.02	r= -0.00	r= -0.02	r= 0.02	r= -0.05	r= -0.04
OSPb	U	r= 0.10(d)	r= 0.08(e)	r= 0.05	r= 0.07(f)	r= 0.07(f)	r= -0.01	r= 0.08(e)	r= 0.11(c)
	R	r= 0.04	r=-0.18(a)	r= -0.00	r= 0.03	r= -0.00	r= -0.20	r= -0.03	r= -0.05
Art Ed.	U	r= 0.04	r= 0.04	r= -0.02	r= 0.04	r= 0.10(d)	r= 0.02	r= 0.05	r= 0.06
	R	r= -0.06	r=-0.19(a)	r= -0.01	r= -0.03	r= -0.03	r= -0.03	r= -0.07	r=-0.09(f)
X Final School Results	U	r= 0.17(a)	r= 0.14(a)	r= 0.10(a)	r= 0.16(a)	r= 0.14(a)	r= 0.05	r= 0.09(d)	r= 0.21(a)
	R	r= 0.02	r=-0.02	r=-0.02	r= 0.06	r=-0.02	r= 0.01	r= -0.00	r= 0.00

Statistical Significance

(a)  $p < 0.0001$ ; (b)  $p < 0.0005$ ; (c)  $p < 0.001$ ; (d)  $p < 0.005$ ; (e)  $p < 0.01$ ; (f)  $p < 0.05$ .

But insofar as rural seniors are concerned, the only significant correlations established are negative and moderate to weak. This means that whenever school results increase there is a moderate to weak tendency for achievement scores to decrease.

Therefore, correlations of achievement scores with school results point out to positive moderate to weak relationships between the two attainment measures for urban beginners and seniors. And the relationships between the two scores for beginners is stronger than for seniors. In the case of rural students positive moderate relationships are established between individual subject-matter and achievement scores for beginners but the only significant relationships between senior students' scores are negative, moderate to weak. They are found between the category "Interpretation" and results for individual subject-matter.

#### **4.4 Summary**

This chapter presents the results of the survey which was carried out with the objectives of: (a) establishing both achievement scores and school average results, representing respectively an external (standardized) and an internal (i.e., school based) measure of pupils' attainment; and (b) correlating these two measures, using Pearson correlation coefficients, to understand the meaning of pass rates in urban and rural area schools. The survey focus, therefore, on the urban and rural segments of upper primary school, which are

represented through a sample of beginner and senior pupils. Pupils' attainments in the two areas are described in relation to the sample as a whole and considering the age group of students, which according to research findings from Brazil, other developing countries and industrialized nations tend to influence achievement. The age-bracket categories are established considering the fit between the students' actual age and the grade in which the student is enrolled. Thus age is seen as a proxy for repetition.

Achievement scores are established through the use of the IEA Reading Comprehension test, in its ECIEL version which was available in Portuguese. School results represent the actual assessment of pupils' learning carried on by teachers in the schools, and are not recorded in any type of educational statistics used in the country or the state (the system prefer to consider school outcomes in terms of pass rate). Pupils' marks in individual subject matter, in bimonthly examinations are used to establish final mean average marks, i.e., a compound mark based in all subject-matters, as well as mean average results in individual subject-matters.

The results presented in this chapter are analyses which consider the statistical significance of the difference between urban and rural students scores in any given case, and the power of the classification criteria used to explain the variance amongst scores, as measured through Eta<sup>2</sup> statistics. They point out that:

- (1) achievement scores are higher for urban,

beginners and seniors while school results are higher for rural beginners and seniors, differences in each case being highly significant statistically;

(2) Eta<sup>2</sup> statistics explains a larger proportion of the variance on overall achievement scores and final school results, in the case of the latter, this appear to indicate that the expected wide variation in the criteria to assess school learning due to the decentralization of the assessment procedures, can possible be assumed to have some common features which are more strongly associated, respectively with urban and rural area schools' assessment procedures;

(3) differences in school results when they are considered according to individual subject-matters are seldom statistically significant and when significant differences are found the explained variance is comparatively small;

(4) students' age-groups, derived as a proxy for repetition have an impact both on achievement scores and schools results, non-repeaters scoring significantly higher than repeaters;

(5) the influence of repetition is more powerful in relation rural and urban beginners, for school results, and in relation to urban seniors for achievement scores;

(6) when individual subject-matters are considered the age-groups of students have a stronger effect upon school results of beginners than it has upon seniors;

(7) the correlation between the two measures of pupils' attainment is positive and moderate to weak in the case of urban beginners and seniors, insofar as relationships between (i) final school results and overall achievement

scores, (ii) individual subject-matters and overall achievement scores, and (iii) individual subject-matter and the categories in the hierarchy of knowledge represented in the test;

(8) the correlation between the two measures of pupils' attainment is positive and weak in the case of rural students but only in relation to beginners and when considering results the association of individual subject-matter with overall achievement scores;

(9) all other correlations referring to rural students are not statistically significant except those associating results for individual subject-matter and the sub-scale "Comprehension-Interpretation", which show negative correlation coefficients of moderate to weak strength.

In general the findings of the investigation to be discussed in the next chapter indicate that pass rates are not a suitable indicator to compare the quality of the performance of urban and rural schools in the State of Espirito Santo.

NOTES CHAPTER 4

1. This regional division is the one used in the Study of Disparities (Gama et al, 1984).
2. The levels of cognitive complexity of each test item were determined through the use of Bloom's taxonomy of educational objectives (Bloom, 1956), by specialists working at the Federal University of Espírito Santo.
3. A probe on the influence of the students actual age on achievement was made but results were found to be statistically significant only in relation to urban seniors, despite the large variation in age found in the sample, i.e., 10-33 years of age for urban beginners, 10-22 years of age for rural beginners, 12-25 years of age for urban seniors, and 12-32 years of age for rural seniors.
4. The distribution of the sampling in urban and rural areas according to age bracket, is shown below in percentage and absolute numbers.

Grade Group	"Proper Age-Bracket"			"Older" Students			Total	
Beginners	10	11-12	Total	13-14	15-16	17+	Total	
Urban	0.4 (03)	49.0 (376)	50.9 (379)	36.0 (268)	9.8 (73)	3.35 (25)	49.1 (366)	100 (745)
Rural	0.4 (02)	44.3 (234)	44.7 (236)	36.2 (191)	17.8 (78)	4.35 (23)	55.3 (292)	100 (528)
Total	0.4 (05)	47.5 (601)	47.9 (606)	36.3 (459)	11.9 (151)	3.8 (48)	52.0 (658)	100 (1264)
Seniors	12	13-14	Total	15-16	17-18	19+	Total	Total
Urban	1.3 (09)	55.1 (392)	56.4 (401)	33.0 (235)	8.3 (59)	2.25 (16)	43.6 (310)	100 (711)
Rural	0.8 (03)	44.9 (177)	45.7 (180)	33.75 (133)	10.65 (42)	9.9 (39)	54.3 (214)	100 (394)
Total	1.0 (12)	51.4 (568)	52.6 (581)	33.3 (368)	9.1 (101)	5.0 (55)	47.4 (524)	100 (1105)

5. Somerset (1986) groups analysis, synthesis and evaluation in a single category which demands higher cognitive ability.
6. In this study the scales used was 0-100, grades being converted accordingly for practical purposes.

## CHAPTER 5

### SCHOOL RESULTS AND PUPILS ACHIEVEMENT IN URBAN AND RURAL

#### UPPER PRIMARY SCHOOLS - DISCUSSING THE SURVEY FINDINGS

This chapter discusses the survey findings, answering the investigation questions proposed in Chapter 3, under the following headings: (a) achievement scores; (b) school results; (c) correlating two types of pupils' attainment tests. Overall this chapter throws light on the issue of the comparability of urban and rural schools' pass rates, and the suitability of such rates as indicators of educational quality of the school system, by establishing and analysing the relationship between school results and achievement scores.

This chapter explores the data presented in the previous one answering the research questions framed in the methodology (Section 3.2.4) which had guided the investigation. In the discussion of the findings the specific characteristics of the Brazilian educational context and findings of previous investigations are brought to the fore whenever they contribute to clarify the problem. The discussion establishes a foundation for drawing conclusions on the comparability of urban and rural schools' pass rates, and the quality of the schooling offered in the two areas.

The commentary provided in this chapter is descriptive, portraying the existing situation concerning school results and achievement scores without attempting to establish causal relationships. The discussion of the results follows the same pattern used in the presentation of the data, thus it deals firstly with achievement scores (Section 5.1), then with school



results (Section 5.2), and finally considers the correlation between these two clusters (Section 5.3) to draw conclusions on the suitability of pass rates as a measure to compare the performance of urban and rural schools.

### 5.1 Achievement Scores

Three of the framed investigation questions (Section 3.2.4) focused on achievement scores. They are discussed individually, in the next pages, and are followed by a conclusion which is a descriptive-interpretative overview of beginners and senior pupils' attainment in urban and rural upper primary schools.

#### 5.1.1 What are the mean achievement scores for urban and rural beginners and senior students?

Scores for beginners and seniors in both areas are between 40.9 and 52.8. Urban area students in the two grade groups scored higher (52.8 for beginners and 49.0 for seniors) than rural area students (46.7 for beginners and 43.2 for seniors).

Comparing these results with those reported by Castro (1984) in the ECIEL study carried on in Brasilia it is observed that the score of Espírito Santo students are lower. Brasilia's students scored an average of 50.07 while the mean for Espírito Santo State urban area students<sup>1</sup> was 48.48. The scores of the pupils in Espírito Santo and Brasilia are similar but the performance of the former in relation to the latter is overestimated. Whereas the ECIEL study tested 10 year old, 4th

graders (easier version of the instrument), about to finish lower primary school, and 6th and 8th graders (advanced version of the instrument), the present investigation tested a group of students that, in general, are older and have a longer school experience. The easier version of the instrument was used to test upper primary school beginners (i.e., mostly pupils who had just concluded successfully the first year of upper primary school) and the advanced version was used to test seniors (i.e., mostly pupils who had just concluded successfully the 3rd year of upper primary school).

Results for rural area pupils do not match the Brasilia sampling. However there is one investigation carried on under the ECIEL sponsorship, in a remote rural village school, in northeast Brazil, the most underdeveloped area of the country. This study (Spagnolo, 1978) reports a mean achievement score of 29.9 for 4th graders. Rural beginners in the Espirito Santo sample scored 48.27. However, Spagnolo investigated one single school, in a situation of extreme poverty. The Espirito Santo score is the outcome of pupils from the largest majority of the state's rural schools, which therefore represents a variety of socio-economic and educational contexts. The two situations are hardly comparable but it is possible to use the results of the earlier study to give some perspective to the findings of this investigation. A change in the unit of analysis from students to schools, not discussed in this thesis but mentioned here to shed light to the comparison, presents scores ranging from 29.0 to 36.0 in rural Espirito Santo. Therefore, the performance of Espirito Santo schools do not

differ largely from that of the northeastern school.

Three major issues concern the performance of urban upper primary pupils in Espírito Santo, as measured through a reading comprehension test. Firstly its overall quality tends to be lower than that of Brasilia pupils,<sup>2</sup> with the highest mean score around 50 percent.

Secondly, the performance of pupils in the urban and rural segments of the state's educational system differs. These differences in scores (Table 4.1) between urban and rural beginners (52.8 and 46.7) and seniors (49.0 and 43.2) are not large but are statistically highly significant. Thus it is undoubtful that the quality of the education offered in the two types of schools is different. Academic achievement results follow the pattern of the findings of the "Study of Disparities" which point out to a relationship between socio-economic development and educational quality in general, the exception being the case of pass rates which lies at the core of this investigation.

Thirdly, pupils' attainment decrease during upper primary school. There is an actual diminishing of scores when beginners are compared to seniors. The power of the geographic site of the school to explain the variance in achievement scores for seniors is reasonable ( $\text{Eta}^2$  value 0.0391) but it is considerably less so ( $\text{Eta}^2$  value 0.0181) for beginners. It can be argued that beginners through their achievement scores reflect the learning that took place during lower primary

school rather than during their short period of experience in upper primary school, then it is the process of schooling developed in this latter that is crucial in bringing about different standards in urban and rural schools.

The achievement scores established led to the conclusion that overall the quality of the education offered in Espirito Santo's upper primary schools is poor. Students seem to be insufficiently able to understand the written text which should constitute the foundation of their schooling. Urban students are more capable than rural students but the capacity to comprehend both the explicit and implicit meaning of written information do not grow accordingly as students progress from beginners to seniors in upper primary school.

5.1.2 What are the students' mean-achievement scores, for urban and rural areas, beginners and seniors, considering their age group?

The age of the students was found to influence achievement scores only when taken as a proxy for repetition i.e., by grouping students into two categories representing respectively pupils whose age fits the grade they are enrolled, according to legal prescription concerning compulsory school enrolment, and older students whose age is beyond the established limits.

The distribution of the sampling by age-groups as discussed on the presentation of the results (Section 4.1.2) has some characteristics that are important for the discussion

of the findings. Among rural pupils the group of "older" students is the largest one while among urban pupils the percentage of pupils in the "proper age-bracket" is larger initially, and grows in the end of the cycle.

Data from the "Study of Disparities", reveals that rural area students tend to be older because they are more likely to start school later, when they are already past the legally determined age to enrol in primary school (7 years old). This delayed enrolment is attributed to the frequently long distances between home and school. The lack of correspondence between age and grade could also be expected to increase during lower primary school due to the higher rates of repetition in rural areas, in this cycle of schooling as reported in the afore mentioned study.

However in urban areas, the increase in the percentage participation of students in the "proper age-bracket", during upper primary school is unexpected. The lower pass rate for the area suggests repetition and consequently a larger number of "older" students. It is possible to argue that urban students stigmatized by school failure tend to drop out, hence the decrease in the number of older students in the end of the cycle. In this case labelling and discrimination of slow learners in urban school could be a major force operating in urban upper primary schools.

The characteristics of the sample indicate that even though rural schools' population tends to be older than that

of urban schools, it is divided almost evenly between the groups of "proper age-bracket" and "older" students. In urban schools an increase in the proportion of pupils in the "proper age-bracket" occurs during the upper primary cycle probably due to the drop-out of repeaters.

As shown in the presentation of the findings (Table 4.2) there is a difference between achievement mean scores for the students in the "proper age-bracket" and "older" students. This difference is statistically highly significant for both beginners and seniors in urban and rural areas. For beginners and seniors in urban areas scores for students in the "proper age-bracket", are respectively 54.6 and 51.2, while in rural areas they are 50.4 and 43.7. For "older" students the scores for urban area pupils are respectively 51.5 and 44.95, while in rural areas they are 46.6 and 40.5.

The analysis of variance as reported through  $\text{Eta}^2$  statistics, show that: (a) a similar proportion of the variance is explained for rural beginners and seniors by their grouping according to the fit actual age/proper age-bracket ( $\text{Eta}^2$  values respectively 0.0132 and 0.0150); (b) there is less variance between the achievement scores of urban and rural beginners in the "proper age-bracket/older" students than for senior pupils in the two groups ( $\text{Eta}^2$  values respectively 0.0117 and 0.0428); (c) far more variance is explained in the case of urban seniors in the "proper age-bracket/older" students than in the case of beginners ( $\text{Eta}^2$  values respectively 0.0574 and 0.0086).

Such results are not self-explanatory. First it is necessary to clarify why age, as a proxy for repetition, explains less variance for beginners than for seniors. For repeaters and non-repeaters alike the experiences of lower primary school could present more similarity, thus it yields less variance in achievement scores. But repetition in upper primary school generates a feeling of failure among students due to a stigmatization by teachers, which affects learning. Hence a larger proportion of the variance in achievement scores is explained in the case of seniors. Moreover, as it is in urban schools that repetition becomes crucial, it follows that there is less variance between the achievement scores of repeaters and non-repeaters in rural area schools than in the urban ones.

If one considers that intellectual abilities are equally distributed despite the grade of the students, repetition should explain similar proportions of the variance in achievement mean scores in 5th/6th - 7th/8th grade in urban and rural areas. Actually this is the case in rural areas. As shown by  $\text{Eta}^2$  values repetition explains respectively 0.0132 and 0.0150 of the variance in achievement scores for the two groups of students. But this is not the case for urban area school children. For them the percentage of the variance that can be explained by repetition is far bigger for seniors than for beginners ( $\text{Eta}^2$  values respectively 0.0574 and 0.0086).

For beginners repetition explains a larger share of the variance in achievement scores for rural area students than for

urban students. This difference could be related to the difficulties in mastering the reading process that could be comparatively more complex in rural areas. Country children have less contact with symbols, signs and stimuli that are related to the acquisition of reading and writing mechanisms than town children. Moreover there is an apparently smaller relevance of the written school culture for country life. These reasons related to the start of school education could be underlying the fact that in the beginning of upper primary school repetition explains a larger part of the variance in achievement scores for rural students.

In the final grades of primary school (5th-8th), while the difficulties in coping with school learning seem to be met with increasing easiness by rural areas pupils, as shown through the growth in their schools pass rates, for urban pupils, difficulties in meeting teachers demands do not appear to diminish at the same pace. The students who are unable to cope, labelled as "underachievers" and cast aside not to impede the progress of the more able, present the negative results that are expected of them. Urban schools are to a large extent dominated by the demands of secondary school and the university and, as they are staffed by more qualified personnel, the learning standards set for the students could be higher than those prevailing in rural schools. These reasons could explain both the differences between urban and rural student's mean scores and the fact that in urban areas repetition explains far more variance in achievement scores.



The difference between urban and rural students' scores discussed in relation to overall achievement scores (Section 4.1.1) is maintained for both age groups. Pupils in the "proper age-bracket" (beginners and seniors) in rural area score lower than "older" students in urban areas. This phenomenon is in itself representative of differences in the quality of the learning experiences offered to students in urban and rural upper primary schools.

The relationship between the age-bracket of the respondents and their achievement scores points out that throughout primary school neither repetition nor living experience gained with age enabled students to reach a better grasping of a text. On the contrary, repeaters, frequently labelled as incompetents and comply with the low expectations of their teachers exhibit a poor academic performance. This result is in line with consistent findings in research since Merton (1948)<sup>3</sup> and later on Rosenthal (1964) and Rosenthal and Jacobson (1968)<sup>4</sup>. Apparently this mass of information is ignored by teachers either because the literature has never come to their attention or because they are pressurized by external demands such as selection for jobs for secondary schooling and later on for the university.

Achievement scores are therefore different for those within the limits of the accepted age-bracket and those beyond it. Differences between the scores for the two groups have specific characteristics in urban and rural areas. In the former the differences in score increase abruptly during upper

primary school. This leads to the supposition that slow learners are labelled by teachers and receive quantitatively and qualitatively less attention, their stigmatization leads to repetition, drop-out and is detrimental to the development of their learning potential. But more able and academically motivated students are urged to reach higher cognitive objectives. In rural areas differences in achievement scores for beginners within the "proper age-bracket" and "older" pupils are slightly more meaningful than for urban beginners. But this difference has a comparatively smaller increase during upper primary school leading to the belief that rural students are treated more equally in the classroom than their urban colleagues. The lower scores of rural area students in both age-brackets (especially considering that scores for pupils in the "proper age-bracket" are lower than those of urban "older" students) suggests a difference in teaching procedures (methods, objectives and assessment). Whereas urban schools strive towards more cognitively complex learning, forced by external demands and teachers' own ability to explore their subject areas given their higher formal qualification, rural schools standards are lower.

5.1.3 What are the characteristics of the students' mean achievement scores for urban and rural beginner and seniors considering given levels of cognitive complexity in test items?

The findings of the investigation presented in table 4.3 show that both beginners and seniors in urban and rural areas scored higher in the lower and easier categories (Bloom's

taxonomy). Differences between pupils' scores are statistically significant in the majority of cases. The exceptions are found in the higher categories in the hierarchy (i.e., extrapolation for beginners and synthesis for seniors). The power of the geographical setting of the schools to explain the differences diminishes as the level of complexity of the question increases. Only in relation to "Translation", for seniors this trend do not prevail. The proportion of the variance it explains is slightly higher than that explained in "Knowledge", the first step in Bloom's taxonomy.

Three main aspects of the results require further discussion: (a) differences between urban and rural students are not statistically significant in specific cases, (b) only a minor part of the variance in scores for pupils in the two areas, in the higher categories in the hierarchy, can be explained, and (c) the major difference between the performance of urban and rural seniors is in relation to "Translation".

"Translation" figures in the test mostly through the use of synonyms. Senior urban students may have expanded their vocabulary due to an exposure to a culture in which reading appears more proeminently. But the influence of the schooling process in the diversification of pupils' vocabulary, is also stressed in the overall performance of urban students. The conclusion that follows is that by sharing an urban culture students become more aware of nuances in the language. And by being submitted to a schooling process that places more demands upon them, requiring more reading and explaining than

is done in rural schools, the emphasis on vocabulary increase is taken further. Hence the diverse performance of urban and rural seniors in "Translation" type test items.

There are two cases of differences that are not statistically significant: "Extrapolation" for beginners and "Synthesis" for seniors. Besides the small number of test items in this categories a possible explanation is that as neither urban nor rural pupils have mastered these skills, therefore their performance tends to similarity.

This explanation is reinforced by the steady decrease in differences in scores for the two groups of senior students that goes hand in hand with the increase in the questions' cognitive complexity.  $\text{Eta}^2$  values show that the proportion of the variance explained by grouping students according to the area where their school is located also decreases as more complex reasoning is required from the students. Therefore both groups of students appear to have been prepared through upper primary schooling to deal with the recall of information and initial levels of interpretation/ explanation. Such a characteristic for schooling is likely to persist during secondary school as a conclusion from an analysis of test items scores for university entrance examination in Brazil points out that,

"As soon as the level of the demand supersedes that of mere knowledge failure becomes inevitable. Therefore one concludes that the prevailing pedagogy only promotes rote learning failing in its objective of stimulating in the candidates the comprehension, the application of concepts and an elementary analysis of the learning content."  
(CesgranRio, 1977:9)

This emphasis placed upon memorization, is neither a local phenomenon, nor is it restricted to primary school. It is found in other countries and the advantages of children from more expensive urban schools over rural school children is frequently mentioned in the literature. Loxley's (1978) study of "Cognitive abilities and achievement scores of Mexican black and white students in the United States" and the investigation concerning the performance of Kenyan children in the Certificate of Primary Education (Somerset, 1977) focused on this situation. Somerset concludes that the increase in questions which demanded more complex mental processes (verbal or scientific reasoning) gave an advantage of 20% for students from more expensive urban schools over rural school students.

The magnitude of existing differences and the relative strength of right answers in each category are better seized when the number of correct answers in each category is represented through percentages, since the number of items in each category varies. Differences in results are also enhanced by aggregating Bloom's six categories in three levels of cognitive complexity<sup>5</sup>, showing (a) the ability to identify required information which figures explicitly in the text - "Knowledge", (b) an initial interpretation of the implicit message conveyed by the text, frequently using synonyms and occasionally drawing inferences - "Comprehension", and (c) capacity to reason and reach individual decisions, determining causal linkages, finding evidences to support generalizations, perceiving trends, and giving opinions on the merit of an issue - higher cognitive skills (i.e., Bloom's analysis, synthesis

and evaluation). The computation of results according to the afore proposed procedure shows the following percentage of correct answers: beginners in urban and rural areas, respectively 61.01 and 60.43 percent ("Knowledge"), 46.34 and 42.65 percent ("Comprehension"), and 37.87 and 33.77 percent ("Higher Skills"), seniors in urban and rural areas respectively 57.80 and 55.34 percent ("Knowledge"), 46.39 and 39.04 percent ("Comprehension"), 42.28 and 39.63 percent ("Higher Skills").

Overall the results suggest that scores are higher at less complex cognitive categories for students in both areas and both grade groups. The amount of the variation explained by the area of residence of the students is larger for seniors than for beginners hinting that the diversification of the learning process affecting urban and rural area schools is intensified in the upper cycle. And as only a minor amount of the variance is explained by the geographic location of the schools in the categories of the taxonomy demanding higher cognitive skills, the conclusion reached is that even urban schools, in general, are concentrating their efforts on the transmission of information. The performance of urban and rural students in upper primary school is different for the majority of the categories in the taxonomy, the exception being extrapolation for beginners and synthesis for seniors, which can be explained by the prevailing low quality in the teaching process. The difference between beginners' scores are rather small but lies in essentials - the identification of explicit information in the test ("Knowledge") and the ability to

reorganize the information selected in such a way that they can interpret its contents. The difference between seniors' scores stress, above all, the larger vocabulary urban students acquired ("Translation") during the upper primary cycle, which their rural colleagues do not have access to.

Summing up, the discussion about achievement mean scores for students from urban and rural upper primary schools, carried on when dealing with the first three investigation questions indicate that in average only around 50 per cent of answers are right. Urban school children exhibit higher scores than rural school children and seniors scores are lower than beginners scores. But the area of provenance of the students explains a far larger portion in the variance of scores for seniors, suggesting that at the beginning of upper primary school all children have undergone a process of education that have more in common than that to be experienced before they finish upper primary school. Achievement scores in the sub-scales of knowledge, according to Bloom's taxonomy are higher in the initial levels of the hierarchy and the scores obtained by rural and urban children are in general consistently different. The difference in scores favours urban school children who seem to make some improvements in the higher categories and who decisively enlarge their vocabulary during upper primary school. The age of the respondents is significant in determining different scores for urban and rural children, if they are grouped observing the legal norms concerning the correspondence between the students' age and their school grade, taken as a proxy for repetition. Repeaters

in urban areas tend to be more marked by their academic failure than their colleagues in rural areas, indicating that pupils labelling is a more powerful selectivity mechanism in urban areas.

The results of the achievement test for urban and rural students provide an initial clarification on the paradoxical pass rate reported by schools. Rural schools staffed by less qualified teachers may present higher pass rates but the achievement mean scores of their students is lower than that of urban school children who benefit from better staffed and equipped schools.

## 5.2 School Results

Three research questions were addressed to the description of urban and rural upper primary students' results. They referred to: (a) the major characteristics of school results by subject-matter, (b) differences in final results for beginners and seniors in urban and rural areas, and (c) the influence of age-groups upon school results. Findings on school results are dealt in the following pages.

### 5.2.1 What are the characteristics of school results in different subject-matter for urban and rural beginners and seniors?

The comparison between mean average results in each subject-matter presented in table 4.4 indicates that when



school results are considered in relation to subject-matter the differences in marks between urban and rural pupils are seldom statistically significant.

Nevertheless school results highlight the performance of rural students, and in particular that of senior pupils. The pattern in individual subject-matter average marks is inversely related to the prestige scale which prevails in the school curriculum. Prestige is concretely represented through time allocations to each subject-matter in the school timetable. The highest prestige subjects (Portuguese and Mathematics) are allocated five lesson periods per week, the least prestige ones (Arts and Civics) have only one time-slot weekly, while the medium prestige (Science, History and Geography) get two or three lesson periods per week. The highest average marks are in the least prestige subject-matter, and the lowest in the most prestige ones. Statistically significant differences between urban and rural pupils results are only found in low-medium prestige subject-matter (Art Education, History and Geography). Art Education is the only case in which urban pupils (seniors) scored higher than rural ones, but only a minor part of the variance can be accounted for.

The findings bring to the fore four issues: (a) the marks of rural pupils and seniors are higher when compared with those for urban pupils and beginners, (b) there is an inverse relation between marks and the position of subject-matter in the extreme points of the prestige scale; (c) few differences in school results in individual subject-matter are

statistically significant, and (d) significant differences tend to signal subject-matter of little prestige.

Such issues are explained by the complexity of cognitive demands in the classroom, as inferred from the achievement test scores, and the influence of the hidden curriculum on learning assessment. The interplay between these factors shape school results in different curriculum areas for different groups of pupils.

As differences in school results are explained through the mental processes emphasized in the classroom teachers competence becomes paramount. The assessment schemes adopted, given their freedom to select, mirror their technical pedagogical capacity and subject-matter grasp, as much as the philosophy of education that frames their practice. The relative ease to obtain high marks can therefore be expected to depend on classroom procedures, the amount of content coverage in tests, and their complexity. Such aspects of learning are more suitable for small scale observation studies than for a survey covering a large area. Nevertheless based on evidence from the achievement test, it is possible to speculate about some characteristics of the teaching-learning process in urban and rural schools.

It can be argued that less competent rural teachers are more inclined to mediate a more formal and traditional type of teaching, transmitting the knowledge they master. Their perception of their subject-matter is shaped by a value which

is inherent to the informations they deal with, instead of coming from its relevance to provide a better understanding of the world and enhance one's life. Therefore the coverage of the content is limited and the recall of information is the preferred focus of learning assessment.

In urban area schools, more competent teachers are more demanding both as it concerns an extensive coverage of the syllabus and the level of cognitive complexity in dealing with informations, during lessons and in learning assessments. Thus, rural teachers are more inclined to promote rote learning lowering the level of cognitive demands placed upon pupils and making it easier for them to obtain high marks. Urban teachers, by raising its learning standards and discussing the content more thoroughly make high marks more difficult to get.

Nonetheless whichever the type of demand placed upon them, pupils develop the ability to cope better as they progress through school. Hence the increase in assessment marks in the majority of subject-matter (exceptions being only Portuguese and Mathematics for urban seniors). Pupils' ability to cope with learning demands refer to required attitudes as well as to the capacity to answer proposed questions. They become able to "read through" teachers' public discourse and their practices. As they master the hidden curriculum pupils' ability to respond effectively to classroom learning demands grow. Consequently their performance is enhanced.

But the hidden curriculum includes assumptions about the

importance and the role of each subject-matter which determine the attention they will get from pupils and the complexity of the learning task teachers are "allowed" to exact.

It is in this context that school results in subject-matter must be interpreted. The importance of Portuguese and Mathematics accrue from its prominent place in secondary school selection exams, and tests for jobs in the labour market. Therefore teachers' cognitive demands in this subject areas are high throughout upper primary school, especially in the final grade. This leads to the low assessment marks associated with Portuguese and Mathematics whereas the reverse is the case for the least prestige subject-matter.

Art Education is a case in point. It enjoys very little prestige. The students' work is assessed and marked but failure to reach the minimum pass mark does not endanger one's chance of promotion to the next grade. Moreover since very often Art Education teachers are not qualified, competence, motivation to work, and their professional involvement can be expected to be low. Therefore it is not a surprise to find that Art Education presents the highest mean school result, nor that it is the only subject-matter in which urban seniors' assessment marks are higher than that of rural seniors.

The focus on the level of cognitive demands upon pupils also explains why rural pupils' results are higher than those of their urban colleagues. This is especially the case of the decrease in marks in Portuguese and Mathematics observed when

comparing urban beginners and seniors outcomes which opposed the observed increase in the marks of rural pupils. While urban area teachers, conscious of the competition their pupils will face and how their success depends on mastery in Portuguese and Mathematics content, and raise the level of their demands, rural teachers are not affected by this considerations. Few among their students will continue their schooling, therefore teachers demands remain unchanged and pupils' marks increased.

To sum up, differences in school results, for urban and rural pupils, by subject-matter are seldom statistically significant but the observed results are associated to teachers competence and the prestige attached to different areas of the school curriculum. This prestige scale is (a) made official by the legal norms which determine time allotment to individual subject-matter and pass-fail procedures in content areas, and (b) a consequence of the importance of the subject-matter for sexes in continuing education in the secondary level, or in the job market. Teachers' competence leads to the setting of either high or low levels of cognitive demands upon pupils. Such demands are also dependent on the importance to the setting of either high or low levels of cognitive demands upon pupils. Such demands are also dependent on the importance of schooling for pupils life opportunities. The pattern of results in different subject-matters are associated to its prestige showing that marks increase as the subject-matter prestige decrease both in urban and rural areas, for beginners and seniors. But it is not possible to go beyond speculation

and actually compare levels of cognitive complexity. It can only be inferred, based on the achievement test scores, that higher marks are more a result of rote-learning while lower marks imply a demand for reasoning skills. Overall the hidden curriculum appears to operate with more strength in urban area schools thus marks are respectively even higher in the least prestige subject-matter, and lower in the more prestigious subject-matter as compared with rural pupils' marks. In general marks are higher for seniors than for beginners standing for the increasing ability of pupils to interpret the culture of the school-classroom and respond successfully to the non-verbal rules which dictate approved behaviour, codes of conduct and forms of learning.

5.2.2 What are the students' average final results for urban and rural beginners and seniors?

Average final results for urban and rural beginners and seniors differ significantly. However by grouping students according to the site of their schools one explains a larger amount of the variance in scores for seniors than for beginners. Mean scores for beginners are around 66.6 (urban students 64.4 and rural students 69.5) and 68.0 for seniors (urban students 66.2, rural students 71.5).

These results contrast with the achievement scores established through the external evaluation (IEA/ECIEL test) which shows higher scores for beginners and urban students. This contrast supports the argument developed when answering

the previous question that rural teachers, when mediating learning, probably rely on reasoning even less than their urban colleagues, and are likely to centre their lessons around the content of textbooks (commonly the only instructional resource available). The degree of content mastery for urban and rural teachers must certainly vary as the former have often undergone at least four years of university education whereas the latter, in general, have only completed secondary school. The self assurance that arises from an education in which a subject area is studied in depth, together with technical aspects of teaching, and general education, is reinforced, is not to be neglected. It contributes to shape a conscious perception of the world, to develop a well founded ideology through which the relationship among men and between men and the world are interpreted. But the "ownership of the content" by teachers and their self-assurance does not imply that they are able to interpret the topics which they should transmit. More often than not, as shown by Pey (1988), teachers have themselves appropriated content in the university by memorization hence they reproduce these same patterns in relation to their students.

Therefore it is possible to assume that the content of education is frequently, and especially in rural areas, not an object of questioning and pondering related to a better understanding of men, society and the world. Orlandi (1983) states that the style of pedagogical discourse is eminently authoritarian because it consists solely in the transmission of information. It is a discourse without "subject", the latter

being the scientist who talks through the voice of the teacher.

In a way it is a return to the Middle Ages when the relationship between knowledge and the cognoscent subject was marked by absolute subordination. Knowledge was then an object for repetition and not for discussion as mentioned by Haroche (1983), when she examined the historical development of discourse in relation to the act of knowing.

Rural school teachers are not the only ones expected to be imprisoned by this practice. It seems that they share this practice with urban teachers, who appear to be starting to struggle to free themselves and their students from it. Teachers from prestige disciplines are more involved in these attempts than others. They are struggling for meaning as their practice becomes more problem posing, and dialogical focusing on observation and reflective discussion of topics listed in their syllabus as they relate to the world they live in, and which they are part of. In doing so, they raise the level of cognitive complexity of their lessons/assessments with the result that, in terms of marks, their students fall in a lower position in comparison with their rural classmates.

Overall averages final results show that urban students have lower marks than rural students and beginners have lower marks than seniors. Differences in final scores for both beginners and seniors, contrary to the case of differences in scores in individual subject-matter, are highly significant. The differentiation between urban and rural students grows



dramatically during upper primary school.  $\text{Eta}^2$  values show that the amount of the variance that can be explained for seniors (0.610) more than doubles that explained for beginners (0.0301). As differences in scores are analysed in the context of cognitive complexity envisaged in lessons and assessed through tests, in the light of achievement scores, the discrepancy between achievement scores and school results suggests that urban qualified teachers are struggling to mediate meaningful instructions whereas rural unqualified teachers are still emphasizing rote learning. Overall pupils low scores in achievement test items classified as "Higher Skills" suggest that lessons are characterized by the repetition of the scientists words, as reported, in the textbooks. Nonetheless some urban teachers are striving to make sense of the lesson through classroom dialogue.

5.2.3 Is there an influence of age groups on the students' mean school results considering urban and rural beginners and seniors?

As a proxy for repetition, pupils' age strongly influences school results, especially in the beginning of upper primary school, and in urban areas. The findings of the research (table 4.5) are interpreted in the context suggested by the "self-fulfilling prophecy" (Rosenthal and Jacobson, 1968), and the "hidden curriculum" (Snyder, 1971).

It is observed that experienced either during lower primary school, or at the very beginning of upper primary

school shapes the performance of urban and rural beginners. Students who have not experienced repetition score higher than their colleagues, and rural pupils marks are higher than urban pupils.

Comparing the outcomes of the two measures of pupils attainments, namely achievement scores and school final results (Tables 4.2 and 4.5) for pupils in the beginning of the upper primary cycle, it is seen that the influence of repetition is stronger on school assessment scores than on the scores in the standardized external assessment test. Differences in scores are statistically significant in the two cases. But more variance is explained for school results ( $\text{Eta}^2$  value 0.0303) than for achievement scores ( $\text{Eta}^2$  value 0.0117).

Portuguese and History are the subject-matter in which differences in the results for the two groups of urban beginners are more sharp ( $\text{Eta}^2$  values respectively 0.0410 and 0.0337). They are followed by Science ( $\text{Eta}^2$  value = 0.0276) and Mathematics ( $\text{Eta}^2$  value = 0.0228). In rural areas Mathematics, and to a lesser extent Portuguese, are the subject-matter in which the age group of the pupils appear to affect results more sharply ( $\text{Eta}^2$  values are respectively 0.0316 and 0.0182). It can be argued that in these subjects either teachers emphasis lie on abilities which repeaters lack, without offering them a support to overcome such deficiencies as for instance could be the case of an expected stress on reading comprehension<sup>6</sup> or on reasoning.

As pupils progress through upper primary school and become senior students, the age-group differences remained unchanged in urban areas but they disappear in rural areas. The findings, as reported in table 4.5, show that average scores are equivalent for the two groups of rural seniors (final results respectively 71.7 and 71.6), but are significantly higher for urban non-repeaters seniors than for repeaters (final scores respectively 68.2 and 64.1). The part of the variance in beginners and seniors final school results, explained by pupils age group differences is very similar ( $\text{Eta}^2$  respectively 0.0356 and 0.0396) but it must be remembered that the participation of senior "older" students in the sample decreases in relation to that of "older" beginners.

In comparison to beginners final scores, urban and rural seniors' scores are higher, (the highest increase is for rural "older" students). As discussed in the previous question differences in marks for pupils in the "proper age-bracket" and "older" students are explained through a combination of two aspects of school life: the pupils acquired ability to "read" the hidden curriculum, as it applies to learning assessment, and the cognitive demands placed upon pupils by their teachers. The overall increase in assessment scores indicates that pupils in both age groups become more able to deal with the type of learning assessment carried on in their classrooms and consequently get higher grades in the final years of upper primary school. But, as this increase is slightly higher for rural seniors in the two age groups, and given their lower achievement scores, it is likely that their teachers learning

requirements are less complex or extensive than those urban seniors have to cope with. The similarities between rural repeaters and non-repeaters scores are explained by rural teachers lesser concern for previous success. Their expectation from "older" pupils are not negative, based upon previous repetitions, as apparently is the case for "older" seniors in urban schools. The added effect of less discrimination and lower cognitive demands yields a substantial increase in rural "older" students final school results, eliminating the difference between marks for the two groups of rural seniors.

In urban areas the effect of negative expectations continues to shape "older" pupils final school results despite the increase in their mean average scores. Actually, the increase in final results for non-repeaters seniors are slightly larger than for repeaters. Thus whereas the influence of repetition is attenuated in rural schools, it is reinforced in urban schools. Urban teachers, pressed by external requests from secondary school selection and the labour market, become more demanding as they assess learning. At the same time they concentrate their efforts on and stimulate pupils that have never experienced repetition, who are seen as more likely to succeed in future life opportunities, whether in school or work.

As school results are observed by subject-matter, individually, it is seen that even though differences in scores for students in the "proper age-bracket" and "older" students

are highly significant, mostly at the 0.0000 level, they explain a smaller part of the variance than in the case of beginners. Portuguese and History continue to be subject-matter in which the learning performance of urban pupils is significantly influenced by repetition, but the variance explained by repetition in Science is slightly larger than in these subject-matter.

A decrease in average scores for pupils in the "proper age-bracket" is found in all subject-matter in the case of rural seniors in the "proper age-bracket" as compared to rural beginners in the same age-group. However, "older" pupils scores increase. Therefore the argument that in rural areas previous repetition as a signal of the students' potential for success is not so important, possibly because life opportunities for rural pupils are less connected to school learning, gains strength.

A comparison between the effects of age as proxy for repetition, on the external and the internal measures of senior pupils attainments (tables 4.2 and 4.5) indicate that its influence: (a) is stronger upon achievement scores (explaining a larger share of the variance) than on school results; (b) is felt on rural seniors achievement scores but does not affect their school results; and (c) is significant for urban seniors in both measures but repetition explains a larger proportion of the variance in achievement scores than in school results.

The outcomes of this comparison differ from those

referring to the beginners performance which indicated that the age-groups of the pupils had a stronger impact upon school results. But the comparison points to similarities for beginners and seniors as in both cases the influence of repetition upon attainment is stronger for urban pupils. It affects pupils marks and has an effect upon achievement scores which grows considerably during the upper primary cycle. These differences and similarities confirm the interpretation of results in the light of pupils ability, increased as they progress through the schooling steps, to evaluate and respond satisfactorily to teachers learning requirements, and the self-fulfilling prophecy. As stated by De Cecco,

"Not all students' experiences have to be crowned with success, but they have to connect their "wagon" to a star that shines reasonably brightly. Modifying their pupils expectations according to such finding teachers may change the motivation that fosters pupils efforts to succeed."  
(1968:167)

Rural teachers overcome an initial discrimination of repeaters (older students) and lead them to build positive expectations. Helped by adjustment to upper primary school demands and lower (as compared to urban areas) cognitive skill requirements, rural pupils school scores for repeaters and non-repeaters alike become similar. And even though there are still statistically significant differences in their achievement scores (which are significantly lower than that of urban students), repetition accounts for only a small part of the score variance. Urban teachers, possibly under external pressures raise the level of cognitive skills required from pupils, and focus on pupils that have not experienced

repetition, considered more likely to succeed. Therefore they reinforced the negative expectations of "older" pupils. These latter although apparently keeping the same position in relation to school based assessments due to their mastery of the classroom hidden curriculum, in reality do not reach the same level of mastery as non-repeaters. This is evident in the increase in the variance in achievement test scores accounted for by repetition.

To sum up, the influence of the pupils' age-group, as a proxy for repetition, on school-based assessment scores, has a considerable effect upon school results as reported through average final marks. The influence of repetition is more strongly felt in the beginning of the upper primary cycle, weakening towards its end, especially in rural areas where scores are similar for seniors in the "proper age-bracket" and "older" students. The comparison between beginners and seniors scores, in the two age-groups considered, points to increase in final results, in the end of the cycle, in both areas. This suggests that pupils have "learned" how to respond to teachers demands. The increase, however, has not the same impact on repeaters/non-repeaters in the two areas. This is an indication that not only more cognitive complexity is exacted from urban pupils in learning assessments than from rural pupils, but that for rural teachers, pupils previous repetition becomes less important as a sign of the students chances of success after the conclusion of primary school. As school results are observed by individual subject-matter such interpretation gains power. Whereas for rural seniors mean

scores decrease for non-repeaters and increases for older students, for urban senior scores only diminish for students in the "proper age-bracket" only diminish in prestige subject-matter like Portuguese and Mathematics, and in these cases "older" students scores also decrease or, at least are maintained in the same level. Overall it is possible to conclude that age affects school results as it stands as a sign for the students chances of success after primary education, whenever such success depends on school learning. Thus the influence of age, as a proxy for repetition, is more important in urban areas and in prestige subject-matter. Pupils in both areas, repeaters and non-repeaters alike, tend to master the hidden curriculum insofar as learning assessment is concerned, becoming more able to respond satisfactorily to teachers demands, counteracting the effects of previous repetition discrimination by teachers.

### 5.3 Correlating Achievement Scores with School Results

The correlation between achievement scores and school results presented in tables 4.6 and 4.7. aim to add to the understanding of basic relationships between the two measures of pupils attainments established when discussing school results (Section 5.2). It provides statistical evidence supporting or denying the usefulness of pass rates as a suitable index to compare the quality of rural and urban upper primary school learning outcomes. Two questions framed when the investigation was structured seek to clarify (a) if statistical significant correlations between the two attainment



scores do exist, (b) what are the characteristics of the established correlations, and (c) what relationships prevail between the two types of attainment scores. These questions are dealt with in the following pages.

5.3.1 Are there correlations between achievement scores and school results for urban and rural beginners and senior students?

The findings presented in tables 4.6 and 4.7 show that there are correlations of mean scores in the externally developed achievement test with the internally based school results. The correlations established are positive for achievement scores and individual subject-matter for urban and rural beginners, with strength tendencies towards moderate (urban beginners), and weak (rural beginners). Equivalent positive association for senior students are only found for urban students. They are slightly weaker than the correlations found for urban beginners. For rural area seniors the only correlations of statistical significance are found between individual subject-matter and the test items in the category "interpretation", but they are negative.

For urban pupils the correlations between final and individual subject-matter results with achievement scores are statistically highly relevant. The only exception is the correlation of achievement scores with Art Education, for seniors.

As for rural beginners the association between subject-matter assessment and achievement scores are also significant even if at a lower level, but the correlation of final school results with achievement scores is not statistically significant.

The association between average final school results with achievement sub-scales are equally highly significant for both beginners and seniors in urban areas with few exceptions. For rural area beginners significant associations are found for schools final results with test scores in the categories "Knowledge", and "Translation".

Therefore, the findings of the investigation indicate that there is a correlation between the two measures of pupils attainment for urban beginners and senior pupils. This correlation is positive, but is not strong. Nonetheless the correlations found comprise, in general, all subject-matter and almost all categories of knowledge, according to Bloom's taxonomy (1956).

A positive correlations is also found for rural beginners. It is weaker than that established for urban pupils, and is also more restrictive. It appears in all subject-matter but not in final school results. It characterizes the relationship of individual subject-matter with the categories "Knowledge" and "Translation", but only scattered statistically significant cases appear in the other categories/subject-matters. For rural seniors there are no statistically significant

correlations signalling the relationship of subject-matter's results - achievement scores, or school final results - achievement scores. The only statistically significant correlations found are negative, and characterize the relationship of individual subject-matter and the category comprehension-interpretation. Thus, when assessment marks in each subject-matter increase, scores in test items classified in this category, decrease.

From such results it is possible to infer that pass rates are not a suitable, comparable indicator of the quality performance in urban and rural schools. The decentralization of assessment procedures open an opportunity for teachers to centre assessment around different cognitive skills. In urban areas schools the cognitive skills imparted to pupils during the upper primary cycle appear to bear some similarity with those measured through the achievement test. The positive correlations between achievement scores and all subject-matter and school final results, and between the categories of knowledge represented in the achievement test with individual subject-matter and school final results, denote a spread out concern in urban schools to mediate quality education. They are attempting to go beyond rote learning, and to develop cognitively complex skills which call for the involvement of the pupils' thinking process, through objective reasoning and evaluation. Such an attempt however is more marked in the beginning of the cycle than towards its end as the strength of the associations established are weaker for seniors than for beginners.

It was observed that assessment marks increase during upper primary school, but that the correlations between the internal and external, measures of pupils' attainments diminish. Thus the interpretation that the increase in assessment marks was due to pupils ability to interpret and respond to the hidden curriculum, is sustained. In this case higher marks do not correspond to growth in mastery of complex cognitive skills but in anticipating teachers' cognitive demands and preparing to respond to them.

The relative homogeneity that characterizes the correlations between the two attainment measures for urban area pupils is not reported in rural areas. In the beginning of the cycle a positive correlation, albeit a very weak one, signals some of the relationships observed between the two measures. But the pattern is not found in the end of the cycle. Indeed, for rural seniors the pattern of correlation is reversed, the only statistically significant associations are negative. The significant positive associations found for rural beginners (between scores in "Knowledge" and "Translation", and subject-matter/final school results) indicate that the ability to answer questions using information explicitly presented in the text, or to understand and use synonyms characterize the learning process in which rural beginners are involved. A common way to do so is through the use of traditional question-answer exercises. However, the significant negative correlations found for seniors appear to indicate that during upper primary school a conscious search for required information, and its understanding gives place to a mechanical

memorization of answers, without a serious attempt to comprehend its meaning. This emphasis on rote-learning culminates with the attribution of highest grades to the pupils who have perfected the process to its utmost. They store the information without "wasting time" to decode the message it conveys. Ultimately the highest marks tend to belong to the pupils least able to interpret a text in order to answer a given question.

This interpretation suggests that urban and rural upper primary schools follow different paths that, although meaningful for their own communities, are not comparable through learning results expressed by pass rates. Urban schools are directing its efforts towards quality education, interpreted as the development of complex cognitive skills, together with the acquisition of information. So far they have made but an initial steps towards this goal, but the direction of the learning process is clear. The aim of rural schools is apparently the promotion of an encyclopedic type of learning, i.e., the storage of information.

The discussion of investigation findings leading to an answer to the question of possible correlations of achievement scores with school results, brought to the fore that positive correlation: (a) are found for urban beginners and seniors, and their strength tends to vary between weak and moderate; (b) for beginners are stronger than for seniors; (c) characterize relationships between mean achievement scores and final school results, mean achievement scores and individual subject-matter

results, mean scores in the majority of the categories in the hierarchy of knowledge forming up the achievement test and school results by subject-matter or globally; (d) are found for rural beginners but not for rural seniors; (e) for rural beginners, are weaker than those for urban students and characterize only the relationships of achievement scores with results in individual subject-matter, and scores in "Knowledge" and "Translation", with individual subject-matter and final school results; (f) do not exist in the case of rural seniors, rather the significant correlations found are negative and signal the relationship of individual subject-matter with mean scores in test items in the category "Interpretation". Such findings suggest that the school process and learning assessment follow different routes in urban and rural schools and consequently pass rates represent different concepts of quality education. In sum, pass rates are not a suitable comparable index of the quality of education in the two areas.

### 5.3.2 What are the characteristics of the correlations established?

Five major aspects emerge from the analysis of the significant correlations established: (a) the associations are larger in number and have more strength for beginners than for seniors students; (b) the associations are larger in number and have more strength for urban students than for rural students; (c) the significant associations are positive for urban seniors and negative for rural seniors; (d) the strength of the correlation of subject-matter with achievement differs for

urban-rural beginners as well as for urban beginners and seniors; (e) knowledge consistently presents the highest coefficient of correlation for urban and rural beginners, and for urban seniors.

The strength and the direction of the association between school evaluation results and achievement scores are indicators of the relevance of the process of education which includes a scheme for the evaluation of learning. The stronger the positive correlations established the more meaningful is the learning process mediated by the teachers in relation to the understanding of the messages in a text, to pupils' ability to comprehend its explicit and implicit meaning. This type of learning mediation tends to be more democratic than authoritarian as teachers need to be open to dialogue with the students. And teachers' ability to stimulate dialogues is at the core of problem-posing education, as opposed to the "banking" concept of education. Freire (1972) says,

"Dialogue is the encounter between men, mediated by the world to name the world ... dialogue cannot be reduced to the act of one person's depositing ideas in another" (p.61), and concludes,

"Finally, true dialogue cannot exist unless it involves critical thinking" (p.64)

Dialogue is a tactic used in the teaching process with the objective of eliciting pupils' knowledge about the content, and unveil their perceptions about the meaning of a phenomenon/fact undergoing investigation. The use of dialogue, as conceived by Freire, implies that teachers and students are both subjects of the educational process. As their life experience differs,

their knowledge is expressed differently, exhibiting distinctive levels of elaboration. The responsibility of teachers is to stimulate their pupils to express their views/perceptions and through the established dialogue explore the emerging meanings until knowledge is (re)created. Dialogue presupposes reversibility between subjects as the message is being discussed, and reversibility leads to unfolding the meanings attached to the content, culminating in its appropriation by the learners.

Orlandi (1983) established a typology for the pedagogical discourse which takes into account such attributes in the teaching process that according to Freire results in education for liberation. She considers both the responsibility inherent in dialogue and the unveiling of the multiple meanings of reality. The basis for the typology are the two fundamental processes she distinguishes in language, hence in talking: that which copies, called paraphrasistic, and that which represents the tension men-world, through action, called polisemic. At the extremes of the typology are the authoritarian and the ludic discourses. In the first there is no reversibility, the object of the discourse is hidden by the words of the teacher and polysemy is repressed. In the latter, reversibility among speakers is complete, the object of the discourse is clarified by the discussion and polysemy is open. Dialogical teaching should be provoked/stimulated by a pedagogical discourse of the ludic type, which would conduct learning away from the mere repetition which characterizes authoritarian discourse. In the words of Harroche,



"it (learning) gets away little by little from reading, or comment, from the written paraphrase to introduce with a question, the questions, in direction to the interpretation of the text, hence in direction to its possible (re)interpretation." (1984:45)

Within the frame of dialogue, through a polissemic process and ludic discourse the characteristics of the correlations of school results with achievement scores indicate that in urban schools there are attempts to include more participation, to move towards a "true dialogue" and to the re-creation of knowledge. Such attempts are more evident in the beginning of the cycle than in its final stages, possibly due to the external pressures which force teachers to concentrate in the formal aspects of the content, i.e., the transmission of information. In rural schools copy and repetition seem to prevail, dominating all areas of the school curriculum.

The weak strength which characterizes established correlations suggests that an authoritarian discourse, a "banking" education still predominates over a problem-posing dialogical education developed through a ludic discourse. Pupils appear to have enjoyed a certain measure of freedom to explore and discuss either during lower primary school or in the initial phase of the upper primary cycle, but as they move upwards the authoritarian, paraphrasistic discourse prevails promoting more rote-learning than the re-creation of knowledge.

Data on school results by subject-matter makes it possible to speculate about the relative attempts to mediate meaningful learning in different areas in the school curriculum. The

importance of subject-matter to pupils' learning is officially stressed through time allocation in the school time-table. It shows that Portuguese and Mathematics are privileged subject-matter; Science, History and Geography enjoy a medium prestige; while Art Education and Civic Education are the least prestige subjects. For urban pupils the least prestige subjects, especially Art Education, appear to contribute little to the promotion of meaningful learning.<sup>7</sup> The broad configuration of the results suggests that in the beginning of upper primary school in urban areas a direct contact with written instructional materials focusing on the understanding of its content, is the concern of all subject-matter but Mathematics and Arts. Once the basic skill of extracting information from a text is mastered at a basic level, teachers main task, with senior pupils, is cover all the syllabus. For rural pupils the pattern differs. Portuguese appears to be the sole subject-matter concerned with the comprehension of written materials and even so, only in the case of beginners, and at a very incipient level.<sup>8</sup>

The characteristics of the correlations also indicate that the highest correlation coefficients are found in the lower levels of the knowledge hierarchy (i.e., "Knowledge" for urban beginners and seniors and rural beginners accompanied by "Interpretation" for urban beginners, and followed by "Extrapolation" for urban seniors). This emphasis on basic skills, mainly related to urban pupils, and mostly in the beginning of the upper primary cycle, supports the argument previously presented that at least in urban schools there is

an attempt to mediate a type of learning which transcends the mere transmission of information, while rote learning largely predominates in rural schools. Such concepts of learning are portrayed in assessment instruments/procedures and therefore it is not possible to accept pass rates to compare either the quality of the education provided by urban and rural schools or the learning performance of urban and rural pupils.

To sum up, school results and achievement scores are positively associated in urban areas, for beginners and senior students. The strength of the correlations vary from weak towards moderate but it is weaker in the final years of primary school. This leads to the supposition that lower primary school learning may be more centred on dialogue and comprehension than upper primary schools. Observing the correlations of subject-matter results with achievement scores it is perceived that the lower coefficients of correlation are related to least prestige areas of the curriculum. The rather low correlations between scores in the more complex categories forming the achievement test and school results (global and by individual subject-matters) show that the type of teaching prevailing in urban upper primary schools, even if at a lower level than in rural schools, stresses learning by repetition and for examinations rather than learning for understanding. The crucial importance of the teaching processes developed at school was demonstrated discussing Freire's opposing concepts of education: problem-posing and "banking", as well as his ideas of dialogue which find parallels in the typology of pedagogical discourse as developed by Pei. Both authors show

that significant learning, going beyond repetition has to do with the quality of thinking which is affected only and if students are stimulated to expose their views and perceptions of the content, reacting to the new ideas being incorporated and absorbing knowledge through its (re)creation.

Rural school results for beginners are also positively associated with achievement scores. This indicates a more homogenous lower primary cycle of studying in urban and rural areas than the upper cycle. The strength of the associations found for rural beginners are rather lower than the corresponding ones for urban beginners. The stronger correlations are in the association between final results and test items in the "Knowledge" and "Translation" categories. As for rural seniors the only significant correlations are negative. They are found in the association between individual subject-matter results and achievement scores in the sub-scale "Interpretation". It appears that during upper primary school rural students, with the approval of their teachers, have perfected the rote-learning process to a point that the grading system becomes the antithesis of achievement as measured through the external test. The school learning system becomes a game of right-wrong while the words grouped in sentences, as answers to questions, lose any meaning connected to reality, and assume a validity of their own. This suggests that the rural schools' results are only meaningful in its own context and consequently rural area pass rates do not bear comparison with urban area pass rates. The education offered by rural schools seem to be a provision for schooling without the

corresponding creation of conditions for a true comprehension of the knowledge acquired, whereas in urban areas even if rote learning prevails over understanding, the latter appears to be sought by teachers-schools.

#### 5.4 Conclusions and Summary

Throughout chapter 5 the findings of the survey were discussed, based in the investigation questions presented in the methodology (Section 3.2.4), aiming to reach a conclusion on the adequacy of pass rates as an index to compare the performance of urban and rural upper primary schools in Espírito Santo.

Such a conclusion would emerge from comparisons and statistical correlations between achievement scores and school results, as two measures of pupils achievement. The former an external assessment of pupils' attainments through a standardized reading comprehension test, and the latter the result of internal assessment of pupils' learning in different curriculum areas as expressed in teachers marks.

In both cases the measures were not previously available as tools to evaluate the quality of the education being mediated by urban and rural schools. On the one hand the decentralization of learning assessment which characterizes the Brazilian educational system (law 5.692/71) is not followed up by the practice to use standardized testing, at key points in the school hierarchy, to gain knowledge about pupils

performance, and the quality of the education offered to them. On the one hand school results, under the form of teachers' marks on bimonthly test are not recorded except on each pupil "school transcript". Therefore mean average marks are not known. Pass rates, i.e., the percentage of students enrolled at the end of the year with mean average marks above 50, in all subject-matter, is the statistic tool commonly used by schools and the central state administration to assess the relative success of the educational policies in practice. This index, registers higher rates for upper primary schools in rural areas than for those in rural areas. This result is a paradox since rural schools are poorly staffed and ill-equipped, when compared to urban schools, rural areas are less developed than urban areas, and the quality of the educational system follows along the lines of the socio-economic development of the area.

The findings discussed in this chapter present evidence that pass rates are not a suitable index to compared the performance of segments of the system. As foreseen decentralized learning assessments incorporate a variety of concepts of learning and philosophies of education which render its results impossible to be compared. They are meaningful only in relation to the content they represent, and to be understood their contexts must be made explicit.

The comparison between mean achievement scores and final school results shows that whereas school results follow the trend which characterizes pass rates, i.e., rural beginners and seniors final results are significantly higher than those for

urban beginners and seniors, the reverse pattern prevails in relation to achievement scores. Urban pupils scores are significantly higher than rural pupils scores, thus following the lines of the associations between quality education and socio-economic development, found by the "Study of Disparities".

The reverse position of urban and rural pupils in relation to mean average results in the two measures of attainment, together with the high level of statistical significance of the difference (in the two measures) between the scores of students from the two areas, constitute an initial support for the argument that pass rates are not suitable to compare the performance of the two segments of the school system. This argument is further advanced by the pattern of the correlations found between the two attainment scores.

This investigation shows that whereas there are positive correlations between achievement scores and school results for urban pupils (seniors and beginners alike), this is not the case for rural pupils. Statistically significant positive correlation are found for rural beginners scores but not for those of rural seniors. Moreover, the positive associations found for rural beginners are fewer in number and weaker in strength than those found for urban pupils in general.

Positive correlations between the scores in the two tests indicate that the cognitive complexity represented in them are relatively similar. The absence of statistically significant

correlation shows that no relationships can be established between the cognitive demands presented in the two measures. The argument that follows, given the correlations established, is that urban and rural upper primary school results only bear some comparability in the beginning of the cycle. Nevertheless upper primary beginners attainments highlight the cognitive skills acquired throughout lower primary school, at least as much as the newly acquired cognitive abilities, as the length of their experiences in the lower cycle far outweighs that of the upper cycle. Thus, positive correlations in the relationship between beginners' achievement scores and school results mirror the cognitive competencies mastered by urban and rural pupils during the lower cycle. This stage of primary education is relatively homogeneous as compared to the larger differences which prevail between urban and rural schools. Rural beginners exhibit higher final school results and lower achievement scores than urban beginners. More variance is explained for the differences in their achievement scores ( $\text{Eta}^2 = 0.0181$ ), than for their school results ( $\text{Eta}^2 = 0.0301$ ) and as the achievement test is standardized, it can be inferred that the cognitive requests upon rural beginners are lower than those on urban beginners. The larger variance in seniors school results ( $\text{Eta}^2 = 0.0601$ ) than in their achievement scores ( $\text{Eta}^2 = 0.0301$ ) explained by grouping pupils according to a geographical/socio-economic criteria is followed by a lack of statistical correlation between mean scores in the two measures. Therefore, it can be assumed that teaching and learning differences become more important as urban and rural pupils climb the school hierarchy.



Pass rates as a comparable index of the performance of urban and rural upper primary schools convey the illusory idea that rural pupils perform better than their urban colleagues during the upper primary cycle, that there is more quality education in rural area school. Actually, the existing situation is reversed. Differences in educational quality, favouring urban schools grow during the four years of upper primary school, leading urban and rural pupils, who have mastered relatively similar cognitive skills during lower primary schools, towards different paths in the pursuit of "education", as perceived by their schools' communities. The major differences between urban and rural pupils are found in the least complex cognitive skills ("Knowledge" and "Comprehension") evidencing that the attempts of urban teachers to develop more complex skills or emphasize learning for understanding are not spread enough, or have not yet been fruitful. This is possible due to external pressures which require the coverage of a large syllabus even if learning is ultimately represented by the acquisition of information rather than the ability to apply this information to understand men, society, nature and the world. Nonetheless, by the end of upper primary school urban pupils become more competent than their rural colleagues in using the Portuguese language and more able to deal with written texts finding and interpreting require information. The higher marks in rural pupils school results do not correlate with their achievement scores in the reading-comprehension test, except negatively, in the case of the association of individual subject-matter results with scores in test items classified in the category

"Interpretation", according to Bloom's taxonomy. Thus, it can be inferred that the expertise measured in school assessments is the ability to learn by rote selected information handed down by teachers, probably through the use of written "questions-answer" learning exercises.

Ultimately, the comparison between the two measures of pupils attainment presents evidence that pass rates are not comparable, and lead to the conclusion that whereas rural schools centre the learning process in the transmission of information urban schools are concerned with the development of the pupils thinking process, even if their emphasis lies on basic reasoning rather than the highly complex ones.

Age was used as criterium to describe urban and rural beginners and seniors learning outcomes, given the evidence that it is a good predictor of academic achievement in a number of studies carried on in both industrialized and developing countries.

Taking pupils age as a proxy for repetition, pupils were grouped according to the fit between their age and the grade they are enrolled. The groups formed included students in the "proper age-bracket" and the "older" students. Scores in the two measures of attainment were influenced by the pupils' age-group. Students in the "proper age-bracket", i.e., non-repeaters presented significantly higher scores than "older" students, i.e., repeaters, in all cases, except that of final school results for rural seniors. The influence of the

students' age-group is less strongly felt in their achievement scores than on school results, and age, as a proxy for repetition, distinguishes more sharply between the performance of urban pupils than of rural pupils. Actually there is a considerable growth in the power of the age group to explain variance in achievement scores of urban seniors ( $\text{Eta}^2$  0.0574), as compared with beginners ( $\text{Eta}^2$  0.0086), whereas the power of age-groups to explain the variance in rural beginners and seniors achievement scores is almost identical ( $\text{Eta}^2$  values are respectively 0.0132 and 0.0150). As for school final results whereas the proportion of the variance explained by age-groups for beginners in urban ( $\text{Eta}^2$  0.0356) and rural ( $\text{Eta}^2$  0.0331) areas is very similar. The power of age groups to explain variances in urban seniors scores remains constant ( $\text{Eta}^2$  0.0396) but it disappears in rural schools. This is interpreted as an effect of teachers' expectations from their students. Urban area teachers, under external pressures from secondary school selection requirements and labour market demands, possibly have negative expectations from "older" pupils who have previously failed to meet school standards and have repeated one or more grades. Accordingly they are likely to stress the potential for success of pupils in the "proper age-bracket". Therefore the effects observed are those of the "self-fulfilling prophecy" the absence of external pressure leads rural teachers to treat repeaters and non-repeaters equally and differences in school results disappear.

However, for both groups of students (in the "proper age-bracket" and "older") when the performance of beginners and

seniors is compared, marks in school final results and in individual subject-matters (except for Portuguese and Mathematics for urban seniors) increase while their achievement scores diminish. This lack of balance is interpreted as a consequence of the pupils' growing grasp of the "hidden curriculum" as it operates in classroom learning assessments. Whether the required ability is memorization, or basic understanding they become able to anticipate the type of requirement and cognitive complexity demand and respond to it. Only in the most prestigious areas of the school curriculum and in urban areas, where school learning affects life opportunities, do teachers demands grow in complexity/content extension in such a way that senior pupils are not able to improve their performance to obtain higher marks. The effects of subject-matters prestige on the level of cognitive demand presented by teachers is also apparent in school results in the least prestigious subject-matters, Art Education and Civic Education, in which the increase in marks is large, specially for urban seniors. This is the only case in which urban pupils marks outweighs those of rural seniors.

The decrease in achievement scores that accompanies the increasingly higher marks in school results has to be seen in the perspective of the unsatisfactory performance of upper primary pupils in test items classified as "highly complex". The emphasis of the teaching process in the urban areas where teachers are, in general formally qualified, is in basic skills rather than the more complex ones. In rural areas, where a very low level of formal qualification prevails the teaching-

learning process is dominated by rote learning. From such findings it can be inferred that teachers' perception of schooling and the meaning of school learning, is a result of their professional competency which in turn accrues from their teaching qualifications.

The survey results add to the knowledge about academic achievement in developing countries, specially in the context of decentralized school assessments. Pupils' academic achievement in state run schools, which serve a population that comes largely from lower/low-middle class, tend to follow the lines of socio-economic development prevailing in the area the school is located. Higher achievement scores are associated with larger schools, with more qualified teachers helped by a technical infra-structure and having access to more instructional resources. The instructional atmosphere which prevails in schools where pupils are high achievers is also fostered by the cultural emphasis in school learning which prevails in the communities' culture, which link economic opportunities to schooling.

The absence of any type of central control or follow up for the teaching process, of which learning assessment is a part, leads schools in more developed and less developed areas, and staffed with teachers with a different level of qualification towards different learning objectives. Thus the resulting pass rates portray different perceptions of learning. Pass rates may convey a misleading message about quality education, as higher pass rates may represent no more than the

rote learning of information selected by the teachers, providing no better understanding of life and the world and making no contribution to the enhancement of the pupils' life opportunities. On the other hand lower pass rates may portray an attempt to mediate more meaningful learning, and more complex cognitive demands upon pupils. This is the case in the State of Espírito Santo.

To sum up, the survey results clarify the meaning of pass rates showing that:

(1) pass rate are not suitable to compare urban and rural pupils performance as they express attainments in instructional processes geared towards different goals, as evidenced in the comparison between achievement scores and school results for pupils in the two areas, confirmed by statistical correlations between internal and external measures of learning attainments;

(2) rural pupils' high pass rates is a consequence of low cognitive standards in learning assessments and an instructional process which emphasizes rote-learning without much concern for the understanding of the knowledge content transmitted to pupils. This is inferred from pupils' high school results and low achievement scores, as well as from the few significant correlations between the internal and external measures of attainment which are negative for seniors and positive, but weak, for beginners;

(3) urban pupils low pass rates is a consequence of cognitive requirements in learning assessments involving reasoning, and of instructional process which is incipiently concerned with learning for understanding. This is inferred

from pupils' low school results and high achievement scores, as well as from correlations between these measures, which are mostly significant and positive even though with a weak to moderate strength;

(4) the quality of the educational process is not portrayed in pass rates, as results from the achievement test show that rural pupils, with higher pass rates, are less capable than their urban colleagues to identify, interpret and reason about relevant information conveyed through written texts, hence high pass rates represent lower education quality while low pass rates stand for better quality education;

(5) differences in the teaching-learning process developed throughout upper primary school in urban and rural areas are crucial as pupils' performance shares some similarities in the beginning of the upper primary cycle, but grows apart in the end of the cycle;

(6) teachers qualification as well as the importance of school education for the learners life opportunities play a significant role in determining the direction of the teaching-learning process developed in urban and rural schools;

(7) whatever the goals set for schooling, explicitly or implicitly in the "hidden curriculum", pupils increasingly master the type of cognitive demands exacted from them and get higher marks, without reaching a correspondent gain in their capacity to decode the written messages, in the roots of their school education, and which has an overwhelming importance to a full understanding and profitable participation in community life and culture;

(8) the "hidden curriculum" adds to the prestige ascribed

to subject-matters through official time allocations in the school timetable, defining its relative importance in school life and determining the learning requests to be placed upon pupils. Thus the pattern of school results for urban and rural pupils, shows that "important subjects" (Portuguese and Mathematics), yield lower marks, whereas the inverse is the case for the least important subject-matters (Civic Education and Art Education) probably due to the differences in mental skills required from pupils;

(9) the impact of teachers expectations, differentiating between repeaters and non-repeaters is strong in urban areas where its influence grows through the upper primary cycle determining pupils' school results and affecting its achievement scores. But its strength diminishes in rural areas where repeaters and non-repeaters school results become similar for seniors and differences in achievement scores, although significant are maintained at the same level as that of beginners.

The survey results also contribute to a better understanding of achievement scores in less developed countries. They show that:

(1) the socio-economic development of the geographic location of the schools, as a proxy for the human and material resources available influence pupils scores;

(2) differences in learning experiences are crucial during upper primary cycle as the explained variance in scores for urban and rural seniors doubles that explained for beginners, who appear to have shared more similar quality education during



the lower primary cycle;

(3) the experience of repetition which marks "older" pupils, possible through negative expectations from teachers, influenced achievement scores of upper primary school pupils, specially for urban area pupils and towards the end of the cycle;

(4) using an IEA-ECIEL instrument Espírito Santo pupils scores were around 51.0 and 47.0 respectively for beginners (5th/6th grade) and senior (7th/8th grade) pupils, such scores are lower than those found in the ECIEL study carried on in Brasilia (Castro 1984) and overall results for the IEA study (Peaker, 1975).

In all the quantitative study presents evidences that pass rates are not useful to assess the quality of the education provided by the state school system as a whole, or to compare the performance of urban and rural pupils. Such result could have been expected due to the decentralization of learning assessment which prevails in Brazil, and the diverse level of formal qualification of the teaching force in urban and rural schools. Based on the findings of the survey it is argued that urban schools' instructional process may contribute to the enhancement of pupils' life opportunities, through the development of their thinking process and the acquisition of basic knowledge skills, but rural schools offer mostly an appearance of instruction, with little gains for their pupils' in the understanding of the life, society, nature and the world.

### Notes Chapter 5

1. The comparison focuses on urban students in Espírito Santo because the ECIEL study in Brasilia focuses on urban schools only.
2. Both Brazilian studies show mean scores in reading comprehension lower than those reported by industrialized countries in the IEA study. The lowest scores (Belgium-Flemish and Israel) were 57 and 59 percent, the highest (New Zealand) was 70 percent. (Thorndike, 1973).
3. Merton, R. (1948) The self-fulfilling prophecy. Antioch Review (8):193-210.
4. Rosenthal, R. (1964) The effect of the experimenter on the results of psychological research. In B.A. Maher, Progress in Experimental Personality Research, New York: Academic Press and Rosenthal, R. and Jacobson, L. (1968) Pygmalion in the Classroom: Teacher Expectation and Pupils' Intellectual Development, New York: Holt, Reinehart and Winston.
5. Bloom's six categories of cognitive objectives are aggregated here, given that: (a) higher skills grouping together analysis, synthesis and evaluation not only stresses the level of reasoning required to answer but also the difficulty in validating their hierarchical order (Seddon, 1978, Maddaus, 1979), plus the fact they have already been grouped in other studies (Somerset 1983), (b) the test does not include items requiring "application", (c) comprehension is a category distinctive from knowledge as it goes beyond the ability to look for clearly spelled out information.
6. Such an stress may be expected very early in urban upper primary school not only on the grounds of the desirability of the objective in itself but also given that secondary school selection examination frequently includes text interpretation items.
7. The case of Civic Education stands out as it presented a far higher correlation coefficient for beginners than for seniors and from its content focus on the 7th/8th grades (Brazilian Socio-Political Organization) an emphasis on Comprehension could have been expected.
8. The correlation coefficient .18 compares with the lower coefficient for urban students, i.e., for senior's History.

## CHAPTER 6

### THE QUALITATIVE STUDY: AN ETHNOGRAPHY OF A SUCCESSFUL URBAN UPPER PRIMARY SCHOOL - THE SCHOOLING CONTEXT

Chapter 6 is an introduction to the urban school ethnography which was undertaken with the aim of disclosing the type of teaching-learning process mediated by a successful school. The objective of this introduction is to portray the scene of the study, thus providing readers with the basis upon which to draw naturalistic generalizations. The schooling context is presented through a focus successively on : (a) the school characteristics, (b) the school culture, (c) the school daily life and (d) 5th and 8th grade classrooms which are the central setting of the ethnography.

The ethnographic study of an urban upper primary school was carried out to answer the questions: what constitutes relevant learning in a successful school, and which teaching approaches are associated with different prevailing perceptions of desired learning outcomes? It was believed that a clarification on the meaning of learning and the teaching process through which different types of learning are promoted, would provide a frame to put the findings of the survey into perspective. By unveiling the characteristics of the teaching-learning process in a school offering quality-education it would be possible to take further the understanding of the true significance of pass rates.

The school selected for the study enjoys an academic prestige rooted as much in its tradition, as one of the oldest upper primary schools in town, as in the high percentage of the

coveted places in the "Secondary Federal School" that are taken by its leavers. It was identified as a "successful" school, on the grounds of the excellence of its pedagogical and organization standards by a massive majority of educators, as discussed in chapter 3 (Section 3.3.2). Therefore, it can be argued that the quality of the education it offers is a target for the less privileged schools in the state of Espirito Santo, among which rural schools figure prominently.

The objective of this chapter is to present an analytic description of the case-study school, setting the scene to provide readers with a vicarious experience upon which naturalistic generalization can be drawn. Thus, the selection of the contextual aspects portrayed in the following pages was made bearing in mind that, although a comprehensive picture of the school, the characteristics of its teachers and pupils must come to life in the readers imagination, a focus should be placed upon those features of the context which would enhance the understanding of the teaching-learning process carried on in the classroom. Therefore a choice was made to draw a picture of (1) the material aspect of the school, its size and resources as they set limits to teaching-learning activities there developed, (2) the school culture where traditional and progressive educational practices and values struggle to determine the ethos of the school thus constraining certain actions while stimulating others, (3) the school staff considering its social and educational background which was found to influence classroom teaching practice as well as relationships within the school, and their discourse about

their subject-matters, (4) the students' familiar and educational background thus describing the major characteristics of the students who seek this school to provide a frame for the understanding of the academic-social selectivity mechanisms operating within the school, and (5) the classroom setting, as teachers-students relationship had different nuances when the 5th and 8th grade were concerned, enabling the researcher to perceive the school policies, educational practices and aims that emerged as successful features in the school culture and examine its relationship with achievement.

#### 6.1 The School Characteristics

The building - First day of the term. Seven o'clock in the morning. Students are flocking to the school coming from the right the left and down the narrow hilly alley facing the large open gates. It is an old school in a privileged area of the town; a hill overlooking the harbour, by the Government Palace, surrounded by well kept gardens. It is an interesting area to find a school! In the midst of administrative buildings and by a busy commercial area. The nearest residential area are the surrounding hills inhabited by lower working class people. But the beautiful school building has been there since 1912! It is a rather large, two floor building, white painted with rows of door-like windows finished in wrought iron work patterned like the high fences that close the well kept garden in front of the building, facing the lateral facade of the Palace. In fact, the two buildings follow the same style. The school

building itself has three doors. The side ones through which pupils enter in the school open into a hall with framed notice boards along the walls. They are covered by pinned sheets of paper listing the distribution of students by classroom. The halls lead both to the 1st floor and to a veranda that runs alongside the back of the building. Where another staircase leads to a lower ground floor and a courtyard in which pupils gathered.

The large building provides space for 20 classrooms, a staff room, a library, several rooms for administrative and technical-pedagogical purposes, a music room, a dance room, medical and dental consulting rooms, a kitchen, a refectory, storage rooms and several toilets.

The school is well cared for. This is noticeable in their very clean classrooms with large fans and cotton curtains hanging in the windows of rooms that receive direct sunshine, the waxed wood floor in the public areas, the assembly room with velour curtains and seats and old candelabra, and its nicely arranged refectory. It is also a well equipped school: a well stocked library and a reading club, musical instruments for the school band and a piano, a large collection of maps and charts neatly arranged in easy-access shelves, an electric mimeograph and an alcohol duplicator (in the staff room ready for immediate use), and an assembly room equipped with light and sound instruments and a movie camera. To sum up, the building is old but is very well kept, providing a comfortable environment for the students and teachers alike. The school has

an old tradition and has strived to update its resources to support teachers as they work.

The School Population - The school serves a population of about 1,000 students<sup>1</sup> in two shifts: morning (7:00-12:00) and afternoon (12:30-17:30). Places in the school are eagerly sought for the population in and around Vitória and only a small percentage come from the residential hilly area near the school. The school policy concerning its limited place availability, defined according to the number of students already at the school, is one of first arrived first served, and it neither privileges any lower primary school, nor set an entrance selection exam as do private upper primary institutions it shares prestige with.

The Beginning of the School Year - On the first day of the term most of the arriving students wear their ordinary clothes. A large majority of students come in happy, talkative groups, and 5th graders frequently arrive with their parents (mostly mothers) who have been especially invited to the opening ceremony. In the back courtyard where the students gather in a playful mood the loudspeakers are transmitting a soft music until the bell rings and the "educational agents"<sup>2</sup> move in. Swiftly the students reach the area assigned to their classrooms for queuing up and while other students are led to their classrooms, 5th graders are directed to the assembly room. Their initiation to the school routine has started. In the assembly room they are to be presented to their teachers and also to have their first introduction to the school culture

through the headteachers welcoming words,

" ... you're expected to be wearing your uniforms next week and to have it always tidy and clean ... in this school we expect all students to work hard in the classrooms and to do your homework daily ... good behaviour, good manners are very important we will pay a very close attention to the behaviour of all of you ... no shouting in the classroom nor anywhere else in the school ... you're not allowed to leave your classrooms without specific permission and you should always walk slowly inside the school ... you're asked not to hang around in the garden when you arrive, but to go straight to the back courtyard ... the central door is for teachers and for our visitors, we want them to be well received in our school, don't we? ... I'm sure you are going to take good care of our school, we are proud of its cleanliness as we are proud of the academic records of our students ... walking to and from the school you will be identified as student from our school by your uniform. Wear it proudly and well! You are our ambassadors! ... Order, remember the motto in our flag? (students- order and progress) Don't forget it! That's our motto! There can be no progress where there is no order. But progress depends also on hard work, and HOMEWORK. We can't repeat that word too much ... .. now I want to welcome you to our school, to let you know we are glad to have you here for what we expect will be four profitable and happy years in your life."

Indeed, order, homework, hard work, good manners would soon be perceived as key words by the students. Obedience is expected of them as much as hard work.

The School Staff - The school has a large teaching staff and formally a well qualified one. From its 35 teachers only one has but a Secondary School Teaching Certificate with additional studies in Mathematics,<sup>3</sup> all others hold university teaching degrees. The school staff also includes a technical body integrated by three supervisors, one student advisor and two shift coordinators, in addition to the headteacher and the deputy headteacher.



Teachers get together in a large and comfortable room furnished with a long table, chairs, settees, shelves, cupboards, a refrigerator, and an alcohol duplicator ready for use. The room is spacious enough for teachers to get together in small groups to discuss matters of common concern while others sit around the large table talking and joking over a cup of coffee. The staff room is a place for relaxation between classes as well as a place of work and meetings.

The morning shift, that housed the investigation, has only one male teacher and about twenty female teachers.<sup>4</sup> They were presented to the researcher by the headteacher after the 5th graders welcome ceremony, in the staff room. Teachers, dressed smartly and fashionably, are mostly young, in the 25-40 age bracket. In the conversation that followed the friendliness which characterises teachers school relationships, as well as some tension between teachers and the headteacher became apparent. Half joking they put forth their views on the meeting and the headteacher:

T(1) "x" (The headteacher) was certainly successful in scaring off the newcomers (laughingly)

T(2) You can joke but without "x" this school wouldn't be the same.

T(3) Sure! Sometimes he goes beyond the board but I rather prefer that than the hoity-toity found in most schools.

T(4) You like a little dictatorship! Ah!

The headteacher himself, a man around 45 years of age, a former Portuguese teacher sees his post as a privilege and a responsibility specially given the tradition of the school.

He is quite clear about his duties, as he states:

"I concentrate in providing the material means for them (teachers) to carry on their work ... I don't lose sight of either instruction or discipline and I lay down the ground rules clearly."

But the pedagogical support to teachers is actually the direct responsibility of School Supervisors. The one in charge of the morning shift informed the researcher about major issues concerning the organization of learning in the school.

### Organization of Learning

The case-study school offered a diversified curriculum<sup>5</sup> that can be considered standard for urban area state schools: "Practical Arts" (5th and 6th grades), "Orientation for Life" (7th and 8th grades) and English (7th and 8th grades).

Time allotment for subject matter,<sup>6</sup> a subject of frequent discussion among teachers, follows the rules laid down by the Secretary of State for Education as does the distribution of work load by teachers. They are the elements which serve as a base for the Supervisor to design the timetable and assign teaching tasks. This task and the distribution of students by classroom constitutes the bulk of the work to be completed by the Supervisor(s), the Student Advisor and the Deputy headteacher before school starts. In the words of the Deputy Headteacher, in "our school, differently from a large number of others, these tasks are seriously considered and completely finished before the school term starts". The particular policies adopted by the school take into account: the students'

age and their experience of repetition, and the desirability for teachers following up a group of students. However specific teacher' characteristics (e.g., qualification to work only with initial grades, or manifested interest to work with certain grades) and the need to ensure that 8th graders receive the best Mathematics and Portuguese teaching available in the school, in view of secondary school selection, are kept into mind.

This clearly spelled out norms based mostly on pedagogical considerations, are in practice outwit by an undercovered judgement on the quality of teachers work, as could be read between the lines in my very first conversation (discussing classroom organization), with the Supervisor and the Student Advisor, confirmed later on, as their confidence had been gained.

Supervisor: - Teachers don't like to have many of them (repeaters) in the same classroom.

St. Advisor: - You know, they tend to be sources of problems ...

Researcher: - Which type of problems?

St. Advisor: - Ah! Noisy. Provocative ... Not doing their homework. (...) They end up in my room, far more often than I would like, (...) It's sometimes quite difficult to deal with them or with some teachers. I have my hands full!

Researcher: - How come?

Supervisor: - Teachers are very different! Some are too demanding and some are not terribly interested in their work.

Researcher: - Would you say there are many "not terribly interested" here?

- Supervisor: - No! We are lucky! And some of them are really wonderful.
- Researcher: - Why are they wonderful? What makes them so?
- St. Advisor: - It's kind of a combination. They know their subject and they enjoy what they are doing ...
- Supervisor: - That's not saying that the others are not competent. You will have "R", teaching Portuguese for the 8th grade. He is so competent that other teachers seek his advice. But his classes are not (seeking for a word) ...
- St. Advisor: - (interrupting) Well, he has this low tone voice ... Students say his classes are monotonous.
- Researcher: - (jokingly) A bore?
- Supervisor: - Some say so. But he is very knowledgeable! (emphatically)
- Researcher: - What about the outstanding teachers, what would you say are their other qualities?
- Supervisor: - They are more easy to deal with, more understanding.
- St. Advisor: - It's easier to discuss openly with them. They are not so susceptible and are willing to appraise their own way of handling things, students and methods alike.
- Researcher: - Do I get to see them in "my classrooms" as well as the "not so good" ones?
- Supervisor: - For sure! Teaching tasks had already been distributed when you came.

Therefore, in practice the appraisal of teachers work determines which grade they are assigned. Some are never given 5th grader classes or 8th graders, neither do they follow a class, and sometimes they are offered duties other

than teaching, thus diminishing their teaching load. The assessment of teaching performance carried on by peers has an effect upon the "specialists" adding to their own perception, and determine to an extent far more considerable than the spelled out rules the distribution of teaching tasks.

The Supervisor and the Student Advisor, have their own rooms adequately furnished for the work they carry on ordinarily. The Student Advisor has a large table around which students sit in punishment either to do their homework (at break time or in extreme cases while the lesson is carried on by the teacher) or to do extra work, as well as an isolated partition in which she talks to students and/or their parents. The Supervisor's room is larger. It includes a place for a secretary whose duty is to type, at teachers requests, tests and exercises, a corner where meetings with a small group of teachers can be held in privacy, as well as materials that are used in the "Classroom Council"<sup>7</sup> to follow up the progress of classroom and individual pupils.

The work of the Supervisor and The Student Advisor is very close, in this school, even though officially one's responsibility lies with teachers and the other's concerns pupils. Between themselves they develop several schemes aiming at fostering learning and dealt with a number of other responsibilities in matters concerning discipline, fund raising, and school celebrations festivities and civic commemoration. To a large extent they are responsible for the dynamism that is seen in the life of the school.

On the school characteristics - The urban school is in a privileged site and occupies a large, old but well kept building. It is a well organised school albeit a very traditional one. A school that uses all possible schemes to equip itself and ensure conditions for the development of an effective teaching-learning process. Its technical and administrative personnel take their role in providing an infrastructure for learning quite seriously. Some of the school problems became visible very early in the study: repeaters, the headteacher's authoritarianism, the concealed judgement of teachers performance affecting school life and learning, the pressure for order alongside with academic attainment. Such aspects of school life are deeply imbedded in the school culture and are examined more closely in the next section.

## 6.2 The School Culture

Manifest and latent values: The history of the school dates back to 1892 when the building construction was finished. Then it was a teaching training school for girls that had completed their basic education and it continued as such until 1936, when due to a national educational reform teaching training courses became part of secondary education and middle schools (today upper primary schools) were created. From 1936 until 1970 the building housed both a middle school and a secondary school. However, in that year the administration of the two levels was separated and the secondary teacher training course was moved to newly built

premises. The upper primary school, in the old building, inherited more than the premises. It was the heir to an academic tradition that goes back to a time when there were no outstanding private schools in the state, and the school offered education to the daughters of local upper class families. Nowadays, the academic success of the school, visible through the high intake of its students in the prestigious Federal Secondary School, reaffirms its tradition as an elite school. Therefore it is an acceptable option for the education of children from middle class families. This trend that goes against the attitude prevailing in the Brazilian culture that favours private education for children as a priority, and even as sign of upwards social mobility, also seems to be gaining support due to the present economic crisis that is being felt at its utmost by middle class people. These factors are contributing for a higher intake of students from middle/upper middle class, creating a socially mixed school environment and a great deal of heterogeneity (in terms of ability, behaviour and speech) rather than the homogeneity the school seeks through the grouping of students in the classrooms, by age.

The school is lively providing a number of extra curricular activities, which students are stimulated to join in. The reading club, the school band and a few sports are carried on on a regular basis. Dance classes and olympic gymnastics may be taken instead of ordinary physical education classes, and are popular among pupils, either due to an interest in such activities or the fun and prestige that

results from public presentations and competitions. Nonetheless if a student's grades are consistently "in the red" (i.e. below the 5.0 minimum required average) he/she may be banned from all extra curricular activities except the Reading Club. It is a well established feature of the school, aiming to foster a habit of and a positive attitude towards reading which is central to the teaching approach of the majority of the school's Portuguese teachers. Actually to stimulate reading, besides promoting the use of the school library and the Reading Club most Portuguese teachers lead their students into operating a classroom mini-library. Undoubtedly reading for leisure is a prominent trait in the school culture, one that is more accentuated than sports performance. Two eventful happenings and the welcome they received stand for the difference between sports and reading: the girls olympic gymnastic team won the "Schools' State Championship" and the Reading Club celebrated the mark of the first 1,000 books read in the year. Whereas the Reading Club victory, indicated in a huge poster placed in evidence in the school entrance, was a motive for conversation in the staff room and the Deputy Headteacher herself disclosed the news to the assembled students congratulating the club's directory and incentivating non-members to join in. The achievement of the girls olympic team found its way to one of the notice boards, but that was it. The Students Advisor was the only staff member concerned with the different treatment of the two events.

Academicism prevails and is privileged in classroom



activities. Learning is mostly oriented towards secondary school and job selection exams, from the time students enter the school. Teachers statements demonstrate this point.

Mathematics teacher to 5th graders:

"You have to learn this problem with fractions very well. It appear all the time in tests for jobs in ...

History teacher to 5th graders:

"This time I've given you half the value of the question, but not any more. If you were being tested for a job they wouldn't take it You have to read the instructions carefully and follow them..." (She had asked pupils to mark True-False in an exercise and some had answered yes-no)

Portuguese teacher to 5th graders:

"Be careful with your handwriting, no one will strive to read it in a public contest"

Mathematics teachers to 8th graders:

"You have to simplify the final result. In the Federal Secondary School selection an answer that is not simplified is marked wrong. I won't take it here either!"

The points made are valuable in themselves. What is remarkable is the stress placed upon them: preparation to compete for a job, when teaching 10 year old children! Or the accountability used, which ignores a correct reasoning to emphasize a criteria used by another school to mark selection papers. Indeed in the 8th grade the emphasis on secondary school selection adds extra importance to Mathematics, Geometry and Portuguese lessons and gears most, if not all, classroom activities towards this end.

Conversely highly educational activities as music classes, visit to art galleries, students active organisation of commemorations for the "Folklore Week" or "Environmental Week", are frequently curtailed on the grounds that "it disturbs the order" or "it is very risky", or yet, with rispid remarks like "you should be in your classroom teaching", addressed to a Science teacher that had her 6th graders in the school kitchen preparing a vegetable salad and a fruit salad as a conclusion of a topic on nutrition.

There is a controversy on what constitutes the relevant learning which must be attentively promoted by the school. What is at stake is not instruction nor the importance of the most prestige disciplines (Mathematics and Portuguese) but active learning practices as well as "culturally" oriented learning. They are contradictory forces pushing the teaching-learning process towards opposite directions. The possibility of perceiving them as complementary aspects of the educational process equally worthwhile and fulfilling different yet important tasks, seems to be beyond the grasp of a large number of teachers and some school authorities. The configuration of the school culture, insofar as the type of learning promoted is still struggling to determine its ethos. Which values should be sought? Discussing the researcher's report to the school, at the end of the study Teachers have agreed that this has been the case.

Within the school competition is more stimulated than cooperation. There is very little group work, grades are of

paramount importance and most frequent than not they are announced publicly, as tests are handed to the students, in a decreasing order. Inter-classroom competition is incited by teachers trying to give new vitality and purpose to the classroom say,

"Look here children (making a sad face), I'm sad! The boys and girls in 5C did much better than you (showing two separate bunches of tests). Do you like to be behind them? So ... we are having another test next week, aren't we? I expect you to do better than them. (Maths teacher - 1st bimester)

Inter-classroom competition is also stirred up by the graphics on the classroom walls demonstrating its pupils performance in a four points scale (unsuccessful, satisfactory, high, excellent).

Cooperation is more evident in activities that are not meant for assessment. This is among others, the case of the newspaper like posters focusing on topics of Brazilian life (Brazilian Social-Political Organization) made by groups of students in rotation, and changed weekly in the notice-boards.

Order, discipline and obedience, responsibility, cleanliness and initiative are attitudes highly valued in the school culture impressed upon the students in several ways. Order, discipline and obedience are paramount. Instructions are repeated from the day pupils enter the school until they leave it. Their behaviour is under continuous control and punishments for breaking rules may be severe. Noise is associated with an unsatisfactory teaching-learning process.

Teachers, under some control themselves, are expected to keep classroom doors open and not to allow any noise that can interfere with learning in other classrooms. This is not actually imposed upon teachers (some do close classroom doors at times) but the unspoken request remains and the headteacher is "likely to get inside any classroom if (he feels) they are making too much noise." There was One such case happened during the period of the study<sup>8</sup> story and generated much discussion among the staff. It was first reported to me by one of the History teachers.

"The Teacher was writing in the blackboard and hell was breaking loose in the classroom. The class was already under the headteacher's observation, they were growing out of hand, I was having a few problems with them myself. Well, he asked permission, got in, inquired about the reason for all that noise, for the lack of respect for the teacher, asked pupils to put their Portuguese books on the top of the desks, and as only a handful of them had their books, he stated that not only they were not following the lesson but had not had any intention to do so from the beginning. He asked the teacher what book he had last recommended the students to read, and told the class to get ready to go home, read the book summarize it, bringing the work for him to assess, Only then they would be allowed back to attend classes. Teachers were told to go on with their subjects as usual, even with only a few students in the class. Some teachers, including myself tried to argue with him that the book was too long, and too boring, at that (the book was a classic from the romantic period of the Brazilian literature), but to no avail.

The message conveyed to me by the episode is a call to order for the teacher as well as for the students and

interference in his way of handling classroom affairs. Nonetheless this was not questioned by the teachers. Their concern was the severity of the punishment based on the time the students would be away from the school. But there was no arguing. Subdued students returned to classes when they had fully completed the task set. The only voice that I heard commenting the incident more equitably was that of the Student Advisor who said,

"He (the Headteacher) is strafing in the students what he cannot chastise in the teacher."

Responsibility is impressed upon students in academic matters concerning mostly the completion of their homework. Apparently they reach their goal as in the 8th grade checking on homework is much laxed and seldom students fail to complete the tasks they are given. Students are given a number of other responsibilities in the classroom. They take turns to keep the room floors clean, to collect and distribute school frequency notebooks, rotate their places in the rows by themselves,<sup>9</sup> despite disliking the procedure immensely (8th graders).

Cleanliness and care (with self and school materials) is another value emphasised. Clean uniforms, books and notebooks covered, and adequately named, combed hair and clean hands are often subject to inspection in the 5th grade.

All in all pupils know that what is demanded of them will be exacted, and that there will always be some kind of dear

payment if they are found at fault. Surprisingly along with this so strict discipline there is room for initiative. Students are urged to plan and organize celebrations for civic events, to find ways to gather money for their end of the year party (8th graders) and even oriented to take action in formal ways. This was the case when 5th graders mugged near the school were taught how to write a petition to the State Governor, how to make an appointment to hand the petition in personally, and how to address him.

#### The initiation of 5th graders

The yearly arrival of new students is carefully planned by the school staff. They are concerned with the age differences between the newcomers and other pupils, and with the impact of their large institution upon children coming, in general, from small schools where they know everybody and are known by everyone. In this school prevails the belief that an adequate adaptation of new pupils to the school life will benefit all. Thus, administrative and instructional provision are established to facilitate the students' adjustment. Some are policies which cover the whole school year while others apply only to the first few weeks of classes. The long term policies concerned "the protection of the newcomers". Fifth graders are kept together and somewhat isolated from older students, to ensure they will not be bullied by the older pupils<sup>10</sup>. Evidence of threats to younger students were not observed in the school<sup>11</sup>. Nonetheless planned policies (not always welcomed by teachers, as often they prevented the

organization of teaching timetables following their wishes), were enforced. Attempts to discuss these policies as a means to ensure that by avoiding contact with older pupils 5th graders will not be influenced on how to see the school, its practices and teachers, were evaded or openly discarded by the staff. The only acknowledged reason for 5th graders semi-seclusion was the protection of the young students. But my feeling is that the partial isolation is an attempt to avoid older students influencing newcomers on the assessment of prevailing rules/ways of evading rules, before there is enough time for the school to make an impact upon them.

The short term policies concern mostly the organization of the first two weeks of the term. Their objective was to get new pupils roughly acquainted with the school grounds and the rules that prevail in the schools. Individual classrooms are taken around the school and are visited by the Supervisor, the Educational Advisor and the Shift Coordinator. The themes covered by their talks to the pupils is varied but a stress is placed upon addressing teachers, how to obtain and upkeeping books and homework. A large importance is the assessment of pupils' specific needs, plans to meet them and the contact with pupils' families (when perceived as desirable) that takes place during the beginning of the term.

The distribution of the school books, carried on during the "period of adaptation"<sup>12</sup> is of special significance. The Headteacher, himself, undertakes the tasks when brand new books are being lent to the pupils. The whole procedure is

to impress upon the students the privilege and the responsibilities bestowed on them. Thus lists are signed by the students acknowledging they are lent specific books and rules are clearly spelled out of how to use and how to keep the books in perfect conditions. On the whole, the relations between the administration of the school and the students in the initiation period are like the tuning of a piano, or the setting of a watch. Rules are spelled out, every possible infraction is discussed to make sure that routine life will be carried out smoothly, attuned and right on time. It is in all senses an initiation to the school life and culture.

During "initiation" teachers are expected to get to know their students, assessing the knowledge they have acquired in lower primary school and identifying their problem areas to adapt their "Teaching Plans"<sup>13</sup> before handing them in. They are to "introduce the students to the ways of the school" and not to start presenting-discussing new content, much less to carry on any assessment.

Thus, during their first meetings with 5th graders, teachers are concerned with: getting acquainted with the students, discussing the instructional materials that are necessary (signalling those they would be getting from the school), verifying the ability of the students, and familiarizing them with the classroom routine. But even though new content is not presented homework tasks are determined daily.



"Initiation" is a period during which teachers are very careful in addressing students affectionately (diminutive forms were very much used), in providing interesting activities, in paying attention and correcting in pupils' behaviour those features labelled as "bad manners". But only few teachers devised means to obtain information that would enable them to adapt their initially drawn "Teaching Plans". After "initiation" the Mathematics teacher could point out after initiation, which students had problems with tables, and the Portuguese had identified specific spelling and pronunciation mistakes, the vocabulary currently used by the children, and the students who would be likely to come forth participating actively in the class, and those who would need to be enticed to do so. But whereas the latter adapted her teaching plan, the former did not change it, merely using her acquired information as a basis for the process of labelling underachievers to develop.

The first two weeks of the school term are really a period for students to become acquainted with colleagues and teachers without the pressure of assessment as well as a period for teachers to get to know at least their new pupils' names. It is set to provide teachers with an opportunity to adapt their "Teaching Plans", when they are willing to do so, and also to give families a little time to equip students with the learning materials required by the school. But above all the first weeks in the school is a period for the pupils' initiation to the school culture to take place. Schooling everywhere is a ritual performance through which access to

valuable forms of learning take place, opening to the successfully initiated new life opportunities. The schooling rites, much stressed in the school concern both ways of behaving, and forms of learning. Two weeks in an overcrowded timetable are devoted to enable the newcomers to perform the rites correctly. Initiation stresses features that are either foreign to students coming from lower social classes or are alien to all students as mere remnants of an old fashioned type of education. It introduces to them the values that deserve praise in the school: discipline and order, responsibility and hard work, obedience to the authorities and, within these boundaries, self-initiative.

Overtly "initiation" is a manifestation of the school's concern for the students. They must know the school rules and its expectations from them to succeed. They have to feel that the school is undertaking every possible measure to give all students equal opportunities to learn, as it makes sure that all the students have the required books and learning materials and that everyone receives the same attention from teachers by sitting in the first row by turn. Such efforts, inefficient as they are in some cases, speak of the interest of the school in the students' success, therefore indirectly they may promote pupils' learning. The value of the school self-motivation as a predictor of pupils' achievements cannot be underestimated. It is discussed by Heynemann (1977) in relation to the ownership of duplicators by Ugandan primary schools. And he concluded that it was the effort of the school staff to get the equipment that revealed its interest

in promoting learning and influenced pupils' academic attainments. Similarly, the school staff concern for newcomers may affect their learning outcomes.

The initiation period as a mechanism to introduce newcomers to preferred learning rites can be an asset in the promotion of achievement as students learn how to behave and know what is expected of them. However, it also reveals that some features of the period may have been devised for the protection of the school, its staff and the image they want to project. "Initiation" may be a period to reinforce or to create a positive image of the school in the minds of the students and to put forth an illusion of equality.

To sum up, initiation is the short period when new students are introduced to the school rites, learning about the school, the behaviour forms it accepts and rejects, the values it promotes. They are presented to the school formalism. Overtly initiation is an initial proof of the school's concern for its students and their learning outcomes but embedded in it are features which are self protective.

On the School Culture - From an analysis of the school culture comes a sense of conflicting values: excessive control versus self-responsibility, excessive obedience versus initiative, excessive emphasis on instruction and academic achievement versus provisions for overall educational opportunities, authoritarianism versus liberalism. The activities planned for the adaptation of 5th graders to the

school are seen as a mechanism through which newcomers are initiated into the school culture. They are proof of the school staff interest in promoting learning but some of its features are self protective. Overall the school culture is unsettled. It appears that the traditional formal type of education associated with the school as it was created subsides as a latent culture. It finds support in the Headteachers authoritarian view of school education and is accepted by some teachers. Thus new values and practices stemming from a contemporary and more liberal concept of education are inhibited and prevented to determine the ethos of the school culture. They are still struggling to gain fully acceptance. What we see is a school culture in transition.

### 6.3 Classrooms: The Central Setting of the Study

To back up the statement that classrooms are the central setting of this investigation it is only necessary to recall that its whole design was based on the assumption that the differences in pass rates basically reflected variations in classroom procedures that were largely related to teaching competence and perceptions of learning which led to different cognitive demands from pupils. These could vary from the recall of rote learning to basic understanding of acquired knowledge and the use of learning to foster one's interaction with the social and natural world. Therefore classrooms are the selected focus of the study, from which it will be necessary to reach the school and the whole educational

system, to clarify the vital questions at the foundation of the enquiry. On such grounds classrooms merit a proper analysis.

The classrooms in the school vary in size but all of them have large windows, opening either to the garden or the courtyard. They are equally supplied with fans, desks formally disposed in rows, a teacher's table, a blackboard and a waste basket. The uncommon feature of the school's classroom are a broom and a mop with which students sweep the room and clean the desks after classes are over.

Meeting 5A students - There are 34 students in the class, girls (64%) prevailing over boys (36%). They are young, between 9 and 11 years of age, (most of them being 10 years old), and boys tend to be younger than girls. They are a bunch of alert and happy looking children. Their attire is clean and tidy, they are used to have older people around, as many of them are the youngsters in their families. The school is not entirely unfamiliar, to these 5th graders: a majority of them have siblings, relatives or friends studying or working in the school yet they are not overconfident. They are quiet and subdued. The 5A pupils state they enjoy studying, they have never experienced repetition, and expressed positive opinions about their lower primary school, matched by positive expectations from this school.

Pupils' families tend to be middle class, fathers hold a variety of jobs, from menial self employed jobs to

lower-middle professional jobs in private or public enterprises, and a few of them hold more prestigious liberal professions. The majority of mothers (65%) tend to hold an occupation outside the house.

There are no illiterates among their siblings and while most fathers have a full secondary education (a few holding university degrees), most mothers have primary education, but some of them also have university degrees.

The 5A pupils tend to live beyond a walking distance from the school. About 70% of them have a bus journey from home to school that runs from 1/2 hour to over one hour.

Only a slight majority of pupils (60%) come from state schools. Thus, a significant part of the group had their first experience with schooling in private institutions, frequently a small school offering only initial education (kindergarten up to 4th grade). But some of the mentioned schools are very well known institutions. From those pupils coming from the state school system some were oriented by their teachers to enrol in this school despite the fact that "their" school offered the upper primary cycle.

A comparison between the area of the residence of students, their socio-economic status and the reasons for the choice of the school show that children from better off families lived near the school, (even though beyond a walking distance) and had chosen it because they were acquainted with

someone in the school staff, knew other families who had children in the school or yet had siblings that were already in the school. They declared that: "it was a very good school", "it instructs as well as educates", "its students do very well afterwards" (hinting at secondary school selection), and their "parents are pleased with the results they have seen" (concerning siblings in the school), especially "because here students do learn to behave." But they also mentioned that "school tuition is very expensive nowadays", that "parents (hers) are paying a lot of money for (to maintain) my brother in secondary school". Therefore, middle and upper middle class families are willing to enrol their children in the school, because it is not very far from their house and their evaluation of life and work in the school meets their standards. Moreover the economic crisis and the increase in costs in school education calls for cuts in schooling expenditure. Apparently they prefer to invest in their childrens' initial schooling (either because they don't have another choice or because they consider the first learning experiences to be very important) and in secondary school, as it is very much geared towards university entrance examinations.

Children from lower S.E.S. families are the only ones that come from very nearby areas, (which are working class residential areas), or from distant areas. Those living far from the school are driven to it by its academic reputation. In a larger number of cases their 4th grade teachers or the headteacher of their lower primary school "advised my (the

students) mother to enrol me here", or "told my mother that as I had done well in the early grades she should look for a good school, as this one, instead of getting me into the upper primary school near my house." For those living nearby the convenient location of the school frequently is sufficient reason for the selection, of the school. There is another "free" school in the area, but a few mentioned that their parents had selected the case-study school because "it is good and you go ahead if you study here".

On the whole it stated that 5A children come almost equally from better off and less better off middle class families. Their earlier school experience took place equally in state and private schools. It appears that better off families are not prepared to put their children through the strain of long trips to reach school, but the less better off are willing to do so in order to ensure their children a better upper primary instruction that will help them to improve their living conditions. Children that come from distant residential areas are those who have performed above the average in lower primary school, and it may well be that travelling expenses represent a financial burden for the family. Therefore by choosing this school some middle-upper middle class parents are in effect saving money that can be later spent on their children's secondary education, while others are spending more than before to ensure their children get the best they can afford. Children tend to be familiar with the school and were attracted to it due to its prestige.



Meeting 8A Students - Unlike 5th graders the 8A pupils did not look astonished or subdued. They had been given a small room on the first floor. It seemed so crowded that there would hardly be room for anyone else in the class. They got up, as they were expected when the Headteacher arrived with the researcher but immediately started to complain about the conditions in the classroom. And were scolded by the Headteacher who said he would, "hear your complaints later on, in my office, you decide who is to talk to me, two or three pupils, after this class". The hotly arguing about the overcrowded conditions and the heat that the light curtain and the fan did not abate went on. It took a lot of control from the History teacher to restore order. That was only achieved when she decided to allow pupils to carry on a vote on their representatives to go and talk to the headteacher. When the question was actually decided, some ten days later, a new 8th grade classroom was formed. The 8A group was reduced from 37 to 28 students. The reorganization of the class itself was subject to bargaining among the students and the Supervisor, with the mediation of the Mathematics , and the History teachers. In the end 8A had no repeaters, nor had it students that had not been in the school since 5th grade, but it had gained two older students from another class as part of the exchange to keep friends together, and maintain a balanced number of students in each classroom. The negotiation had been long and the results were accepted by the Headteacher even if apparently he had not been told about the process.

The climate prevailing in the 8A classroom is quite

different from that of the 5th grade. Instead of the mixture of shyness and excitement, here prevails an air of nonchalance, of knowing the rules and how to get by them, an intimacy between students themselves, the students and the teachers that is still to be built in the 5A classroom. The 8th graders are used to have observers in their classroom and did not hesitate to ask the researcher if she was a student teacher from the university. When asked about how well they knew the school, and outspoken girl said,

St - ... we know everyone students and teachers alike, we know how to get along, to get by ...

R - With the teachers?

St - But certainly! We know how far we can go. Some are easier, some more difficult but we always try and sometimes we get away with the impossible! (laughing)

They have most certainly mastered the schools hidden curriculum and seem to be very proud of it. That is a formidable task waiting for 5th graders, and no one will give them instructions on this matter.

Comparing 8th graders with 5th graders it seen that the economic level of pupils' families is higher: pupils' parents have approximately the same level of instruction but there is a decrease in the number of menial jobs they hold, and the pattern of residential area distribution presents a major change. The percentage of students living within a walking distance from the school decreases dramatically (from 31% to 7%), while there is an increase (from 30% to 50%) in the group

living far from the school, and the percentage (42% of those living in the school neighbourhood (mostly students from higher S.E.S. families) is stable. This pattern could be an indicator of selectivity mechanisms operating in the school. As the school groups students by age, and given that 8th graders students have started their upper primary education in this school, and have never experienced repetition it can be inferred that the group of students who came from residential areas very near the school, (the lower S.E.S. 5A pupils who had chosen the school mostly because it was near), decreased due to repetition and drop out. Thus, the academic prestige of the school is built upon a selectivity that can be associated with the socio-economic level of the pupils' families.

Some facts that had been established in relation to 5th graders were confirmed through the interview of 8th graders. They tend to have siblings in the school, frequently they had friends, siblings or relatives in the school when they started 5th grade, some of them know pupils whose families have chosen the school because of their parents and their own impression on the school. But a large proportion of 8th graders' siblings are already at the university and many of those divide their time between work and study. Only a very small number of students stated that their older siblings had dropped out from secondary school, or had not carried on studying after completing primary school.

The 8th graders have clear plans for the future. They

know the type of secondary school they would like to attend the next year. They planned to go on to university, and many of them stated they expect to work and study. The majority of the students trusted they would achieve their plans, either "without any doubt" (45,5%), or accepting it as a "likely probability" (44.5%). Among those few who had doubts some still believed that "with some luck" they would be able to fulfil their plans (7%). Hence, only a very small minority saw their goals as dreams they would not fulfil. In the opinion of an overwhelming majority (97%) have attended that particular upper primary school influenced the way they perceive their studies would proceed. They strongly emphasized that the school "stimulates students to go on studying" and also that it "helps students to plan their future and learn about work possibilities." Nonetheless there are those who point out that their "families had the strongest influence on their plans" and that "the school could improve, that some teachers could be better". But there is no disagreement in rating their school as a good school", frequently saying that it is so because "learning is a serious business here", and they know they "are expected to study hard", or yet that "there are rewards for those who do well as much as there are ways for punishing those who play instead of doing their work." Unanimously they expressed affection towards the school and a few, in the middle of their final year, had already start to miss it.

To sum up, pupils in the 5A and 8A classrooms come from middle class families. The socio-economic status of families

is higher for 8A pupils. There is a friendship and ease among 8th graders that is not yet found among their younger colleagues. It comes from the familiarity acquired through almost four years of study in the case-study school. The formalism of the school education has not curtailed pupils' initiative. They have learned to fight for their rights. But it is debatable if this characteristic is actually developed through schooling or if it is a result of the selectivity that appears to operate in the school. This selectivity is inferred from the increase in the S.E.S. level of 8th graders, as compared with 5th graders and the decreases in the group of students living within a walking distance from the school who are amongst the lower S.E.S. 5A pupils. Pupils seek this school because of its academic reputation and it fulfils their expectations. It prepares them adequately for secondary education and contributes positively to make them envisage university studies as an objective that is attainable.

Meeting the teachers - There were fifteen teachers working with 5A and 8A students. The only ones working with both groups are those teaching Art Education and Religious Education. With the exception of the 8A Portuguese teacher, all of them are women, and again, all of them, except the 5A Mathematics teacher have university teaching degrees. The experience of the teachers varied from a minimum of 5 years (8A English teacher) to a maximum of 26 years (8A Portuguese and Religious Education). Nonetheless most of them had worked for 10 to 17 years.

Teachers' life stories shown that the majority of them came from middle S.E.S. families with a strong educational tradition. For these teachers the choice of a teaching did not represent any social mobility. There are a few cases of teachers coming from either high or low S.E.S. families, for whom the teaching profession corresponds to a change in social status. In the case of the teachers with high socio-economic background, marriage with professional men from their own milieu, ensured the maintenance of their status. It is very obvious they do not depend on their salaries to maintain the standard of life that is evident in their presentation. They are very involved in teaching as a profession as they derive satisfaction from what they do. On the other extreme are those teachers who come from humble families. For them the career status brought upward social mobility. There are but few teachers in both cases but the difference in their status is perceived in the way they act, and in their grasp of their subject-matter's content. Teachers' socio-economic background interferes with the type of social exchanges in the staff room, and it becomes apparent in the classroom.

The life stories of three teachers highlight the differences just hinted.

#### 5A Geography -

"I attended a rural school and only as an adolescent I was able to finish primary school attending special night classes. I have studied very hard and manage to pass the exams and start teachers training at secondary school. Night classes again, during daytime I worked. When I took the university entrance examination I was already married, had a baby, and had been teaching at lower primary school for some

time. I liked History and Geography very much so I decided to study Geography. Anyway I knew I couldn't make it if my choice was for the difficult courses or those very much sought. I got in with very good grades ... I have struggled a lot to do all I had: housework, the kids, my work as a teacher and my study, but it paid off. The university prepared me for a work I like."

#### 5A Portuguese

"I have studied at S.E.M. (a very exclusive all-girls religious school) all my life. I have always enjoyed languages so I started to learn French at the "Alliance Francaise" quite early. I took it up at the university later on, at that time they offered a teaching degree in Portuguese and French. I've enjoyed myself while studying at the university. It wasn't really very demanding, so I did a number of other things: took up painting, wrote a lot - I took myself seriously! (smiling) Frequently I used to send my chronics and poems to "A Gazeta" (local newspaper), I even gave some French lessons ... but most of all I read ... I have spent two years in Paris following a course in teaching French as a second language but I ended up teaching Portuguese ... After all I believe that when I teach I use as much what I have learned in France and at the university as all I have been learning throughout my life. Right now I'm learning a lot with my own children, not to mention what I learn, all the time, with my students in the classroom."

A sharp contrast can be perceived in these teachers self-presentation, despite the fact that both implied they enjoy teaching. For one, life had been easy. Access to every type of learning considered desirable, was always taken for granted. She sailed through the university, learning as much from it as she did outside it. For the other it was necessary to fight to get an opportunity to study. The university was the final struggle and from it she learned what was required to teach Geography. The night class, the life experiences she had are not seen as having made any relevant contribution for her teaching career. They are but isolated learning experiences

that don't seem to have a relationship either with what she studied at the university, or with what she teaches nowadays. Yet she has as sharp a mind as the Portuguese teacher that sees her preparation to teach as an ongoing adventure. Everything fulfils its purpose and is useful, even the "lessons" she is open to learn from her own children and her students. Their attitudes in the classroom towards their pupils and towards knowledge could be expected to be very different and they most certainly are!

The 8A Portuguese is the only male teacher in the morning shift. His life history is also a very interesting one. He is rather the negative proof<sup>14</sup> in the typology of approaches to teaching (Section 7.3), he presented himself saying,

"I am sort of a black sheep in my father's flock. While my brothers always said they would be doctors and engineers, I said I was going to be a teacher. I was always involved with books, much to my father's pleasure as he was in commerce and liked to believe I was an intellectual. ... after going to law school I took up Portuguese teaching as that was what I had already been doing for quite some time. ... well, now my brothers are very well off and I am here counting my pennies ... gone is the excitement of teaching as well, they (pupils) don't want to learn nowadays ... I've worked too much for too long and for too little money, I am ready to retire!"

He lacks the enthusiasm of the previous teachers, is pessimistic about the students and feels rather wronged by life. He had all the learning opportunities his Portuguese teacher colleague had. But unlike her he depends on his salary to maintain his family, which most certainly cannot be done in the same style he was brought up. He is an intellectual for



all his knowledge of and love for literature and language. But is that a pre-requisite to be a teacher? Is it that his downward social mobility is a negative factor affecting his attitude to teaching?

Teachers' economic status are of paramount importance in the measure they determine their teaching work load. Teachers who have other sources of income are inclined to accept only the minimum work load. It leaves them free time to plan their lessons, to carry on other activities and they arrive to school relaxed and glad to meet their pupils. Those who cannot afford to live on an initial level teaching salary either apply for a double working journey, or work in two or three different schools. They end up so tired that it could hardly be expected of them either to take time to select, to create, and plan carefully their classroom activities, or to develop any type of learning activity that will take too much of their "free" time to assess. They teach following a pattern that their experience and previous training led them to establish long time ago, relying on their general knowledge as well as their expertise to improvise as the lessons develops.

To a large extent leadership seems to fall upon those teachers who are recognised as professionally competent and that have not enjoyed upward mobility through the teaching profession. Their appreciation on important issues is always carefully considered. They are the ones who volunteer, or are appointed, to discuss problems with the Headteacher.

Teachers' opinion about the school are very positive even though they point out a few aspects that they would like to see changed. Their appraisal is divided when it comes to the assessment of the authoritarian way the Headteacher administers the school, but they are unanimous in expressing a very positive valuing of his efforts to keep the building in its best conditions and to ensure instructional support for teachers work (e.g. books, maps and charts, paper and stencils). In this area teachers are ready to cooperate with him. The textbook library is a case in point. The school receives every year a number of textbooks to be used by pupils. The supply amply covers the demand in the areas of Portuguese and Mathematics and lately Sciences, but not the other content areas. Thus a scheme was devised to create a textbook library in the school. It called for: (a) the careful conservation of the books freely received from the government, (b) the joint work of teachers and pupils to operate a cooperative-like enterprise buying books whole sale, donating them to the library (after a year's used), and payment of a fee to use the textbooks donated by other pupils, and (c) teachers contribution requesting sample books from all publishing houses and donating them to the textbook library. The school has already quite a large and useful textbook library. It helps teachers given them more leeway to select the textbooks they consider more suitable, and helps pupils to get required books at far more reasonable prices.

The opinion voiced by teachers on the school can be grouped under three headings: (a) general appreciation of the

school, (b) the perception of the Headteachers' administrative style, and (c) claims for change.

They say:

"... it is indeed a good school" ... "it stands comparing with the prestigious private institutions."

They are proud of the school and their work there,

"... see how we fared in the Federal Secondary School this year!"

and,

"I always wished to work here!"

They recognize the Headteachers' efforts,

"... his efforts to provide enough learning material and equipment are staggering.", and ... we have all we need to work well: maps, books ... no need to go begging for paper and stencil as in my other school", and also "... of course everybody plays a part to ensure that we have what we need but the burden really falls on him."

Nonetheless they claim for more socializing activities,

"... we need an active student union, more sports and overall more chances for participatory activities",

and

" ... pupils receive a lot of instruction but they have few chances to express themselves",

for parental and teachers recognition of more dynamic and integrative learning approaches,

"... you ask them to read newspapers, watch TV but parents don't accept this as part of the learning process at all," and "we could go much further if we had a cooperative plan integrating different areas, but it's so difficult..."

And they are divided in their appreciation of the style of the school's administration,

"we are a good school because there is order in the classroom", or "sometimes I feel very tied down by the call for order. I'd like to involve the students in a number of activities... I don't dare. they would disturb order", and "he is authoritarian, he just doesn't discuss anything he decides", or "he has a strong personality but I argue with him and frequently I have my way" or yet "he is changing, he is no longer as strict as he used to be"

And they are also divided in the way they appraise the education offered by the school,

"we have a tradition of educational quality. This school is different from many others and the students that choose to come here know beforehand what will be expected of them"

or

"academically we are faring well but frequently I tell myself it is at the students cost, socially speaking"

And they feel that there's a system of valuing subject-matter operating within the school,

"... unfortunately the area I work is not seen as very important but it is my deep conviction that it has a high educational value" or "there is no problem with Mathematics they all know its essential."

Overall it is possible to say that teachers are happy about "their" school, but they disagree in the way they assess some features of school life and they perceive areas where improvement is desirable.

On the classrooms - The classroom environment is characterized by order and cleanliness and a constant strive to keep it pleasant, comfortable and adequate for learning purposes. The two observed classrooms, (5A and 8A) had

respectively 34 and 28 students taught by 15 teachers, (Physical Education excluded). The students' background show that they come from a varied range of middle and working class families, and that 5A pupils' parents tend to hold more menial jobs than 8A pupils' parents. A relation can be established between the home-school distance, the socio-economic background of pupils and their reason for choosing that particular upper primary school. Pupils living very near and very far away from the school tended to come from lower S.E.S. families than those living in the school's neighbourhood. They selected the school because of its academic tradition and on the grounds of inside information about it. Pupils living distant choose the school upon advice from teachers who thought they had done very well in lower primary school, while students coming from the nearby hilly residential area are enrolled in the school mostly because of its convenient location. It was observed that the intake of students coming from the most poor residential areas around the school was larger in 5A than in 8A, and while the percentage of pupils living around the school was unmutable, that of pupils living very distance increased from 5th to 8th grade. Most pupils in 5A are 10 years old and in 8A they are in general 14 years old, the exact legal age associated with the grades. In 5A there are more girls than boys and these latter are in average a trifle younger. In 8A there are more boys than girls who tend to be, in average, a little bit younger. Pupils have positive attitudes towards the school and were not totally unfamiliar with it when they first enrolled. The 8th graders, about to leave the school, have educational plans to go on studying and perceive the school as being

largely responsible for those plans as well as for the positive expectations they have to reach their goals.

Teachers are pleased to work in the school and take pride in its achievement. They unanimously believe their teaching tasks are alleviated by the supportive structure provided by the school, but tend to take opposite sides as they assess the school administration. They believe that there is room for improvement, especially in areas like cooperative teaching and learning, socialization of the students and more opportunities for self expression, and in the development of a more dynamic, integrated and creative teaching-learning approach. Teachers' education and family background is mostly, middle class with a strong educational tradition. Their socio-economic status have an influence on their educational opportunities and shaped their approach to teaching. In the school life teachers' academic competence, as well as their social status play an important role in determining a pattern of relationships with other teachers and the school administration.

#### **6.4 About the Schooling Context: Summary and Conclusions**

The case-study school is an old, well known school with a tradition that dates back to 1936. It is a big co-educational school, enrolling about 1,000 students each year, to whom it offers upper primary education. The school population comes from the town itself and its surroundings areas. 5th grade pupils come from both private and state lower

primary schools, this last prevailing slightly over the former (60%). They represent working class and middle class families. There is a relationship between their area of residence of the students and the socio-economic status of their families. Those better off (upper middle class/middle class families) tend to live not very far from the school even though beyond a walking distance from the school; those from lower middle class may come from very distant areas, travelling sometimes for over one hour to reach the school, and those from working class/lower middle class tend to live in the hilly area surrounding the school. Accordingly, it is possible to relate the reasons for the choice of that particular school with the students' S.E.S. While the prestige of the school was mentioned by the large majority of its pupils as a reason to enrol in it, students from lower S.E.S. mostly enrolled in the school due to its suitable location. The other students are driven to it by social relationships between their families and the school community or were directed to it by their lower primary schools. This prestigious school appears to be fulfilling a specific role in providing upper primary school education for the children of middle class families that are constrained by the Brazilian economic crisis to cut their expenses. They prefer to pay private school fees for their children's initial education, and for their secondary schooling, as both would have a great impact in the children's life: learning how to read and paving their way to the university. For the upper/middle class families enrolling their children in this state school represents an economy measure. But for lower/middle class families living distant from the

school it may be a financial burden (due to the high costs of transportation), that can be regarded as an investment in their future.

It is observed that the number of lower class pupils is dramatically reduced as children move from 5th to 8th grade (from 30% to 7%). As the group of 8th graders observed was entirely made up of students that had never experienced repetition it is possible to infer that the academic selectivity mechanisms operating in the school have social effects forcing less privileged children, unable to follow the learning rhythm, and to reach the learning goals established, either to lag behind or to drop out of the school. This possibility is hinted by one teacher while talking about the school's academic achievements. Pupils that are able to make it without experiencing repetition have high academic expectations and believe they will be able to attain their goals, at least partially due, to the school influence.

The school is well kept and very well organized, its policy concerning important issues such as organization, discipline, repetition and classroom teaching tasks distribution are clearly spelled out. Nonetheless more hidden values and semi-concealed judgments affect some administrative measures that have a considerable impact upon teaching and learning.

The school is very alive and provides several extra curricular activities but discipline is strict and rules on



them. Order and discipline are major aspects of the school life and sometimes interfere with approaches to teaching perceived as more adequate by teachers. Nonetheless this formalistic discipline does not prevent students initiative to be fostered.

The school culture is marked by conflicting values being enforced side by side: excessive control and self-responsibility, obedience to orders and self-initiative, academic standards geared towards secondary school selection and a type of learning more meaningful for the students life as a whole. Certain features emerge clearly as daily life unfolds in the school: (a) school learning goes beyond the aspects that are associated with classroom learning, (b) order and discipline are paramount, (c) there are hidden values attached to different subject matters as well as concealed judgments on teachers performance, (d) competition prevails over cooperation when learning activities are related to classroom assessment and (e) a climate of authoritarianism dominates in the school and few dare to question the Headteacher's decisions.

The headteacher himself a well educated and highly qualified teacher is very much concerned with the upkeep of the school building and with all matters affecting teaching and learning. He strives with the full cooperation of its staff to update the instructional resources available to teachers and students alike.

The large majority of the formally well qualified staff is made up by women, following the trend prevailing throughout the state and the country, and is attributed by teachers themselves to the diminishing social and economic status of their career. Teachers, in the observed classrooms, have very different social and educational background. The type of social mobility they have experienced seems to affect the semi-covered opinions expressed about them by their colleagues. The target teachers and the specialist in the staff unanimously expressed a pride in the school prestige and its academic achievement. They are happy to work in this successful school but some of them would like to see a few changes concerning students socialization activities and the integration of subject matters. Teachers are divided as they assess the strict discipline that prevails in the school, the Headteacher's authoritarianism and above all in their acceptance of the prestige scale of subject matters which dominates the school daily life.

This is the context in which teaching and learning experiences analyzed in the next chapter must be perceived.

Notes to Chapter 6

1. The school final enrolment (1985) and pass rates by grade in 1985, and initial enrolment (1986), were as follows:

Grade	Enrolment		Pass rate (%)	Drop out rate (%)
	86	85		
5th	251	225	62.6	8.3
6th	246	205	83.4	9.3
7th	268	349	74.2	7.7
8th	242	219	89.5	6.8

2. "Educational Agents" are part of the staff in medium to large schools run by the state. They are responsible to keep order in the school, record the students presence in their school notebooks and conduct other minor tasks. In the case study school each "Educational Agent" is in charge of two classrooms and their first daily responsibility is to accompany "their classes" from the courtyard to their classrooms.
3. Legally a Secondary School Teaching Certificate plus a year of additional studies entitles a teacher to work from 1st to 6th grade in primary school, i.e. the lower primary cycle and the first two years of upper primary school. Ordinarily an University Teaching Degree is required to teach at upper primary school and secondary school.
4. The massive predomination of female over male teachers is very common in Brazilian primary and secondary schools.
5. Law 5,692/71 defining the characteristics of Brazilian primary education conceived the school curriculum as two independent segments: a national core-curriculum (Portuguese, Mathematics, Science, History, Geography, Civic Education - Brazilian Socio-Political Organization, Art Education, Religious Education and Physical Education) and a diversified curriculum for which subject-matters are selected either by the state through the "State Educational Council" or the schools themselves.
6. Time allotment by subject matter in number of hours per week (total 26 hours per week) in the case-study school is the following:

Subject Matter	5th-6th grade	7th- 8th grade
Maths	5	5
Portuguese	5	4
Science	4	4
Geography	2	2
Physical Ed.	2	2
History	3	3
M.C. Ed./OSPB	1/0	0/1
Art Ed./R.Ed.	1/1	1/1
P. Arts/Orient. for life	2/0	0/1
English	-	2

7. The "Classroom Council" another feature of school life devised by law 5.692/71 consists of a bi-mester meeting of all teachers working in the same classroom with the "Supervisor, the Student Advisor" and the school Headteacher and/or Deputy Headteacher. Its task is to discuss the progress and problems of the classroom after the assessment of learning in the bimester is completed.
8. It involved one group of 8th graders, but not the classroom under observation.
9. The procedure of moving backwards row by row, daily, is used to ensure each pupil equal opportunity to sit in the first chairs, being near the teacher and the blackboard.
10. Fifth graders are reserved a section of the school where their classrooms are next to one another and are allowed time to eat their school meal before the other pupils are out for their morning break. Both measures entail organizational decisions not always easy to carry on, especially in the last case, when due to the longer break given to 5th graders special time-table procedures have to be devised.
11. Bulling of younger pupils is discussed by Delamont and Galton, 1986.
12. The first two weeks of the term for newcomers is labelled "Period of Adaptation", the term emphasizing the aim of the policies implemented during it.
13. The "Teaching Plan", an outline of the time scale and the objectives for the implementation of the syllabus, is required from the Regional Educational Centres and School Supervisors have the task to gather and analyze them. While the first duty is taken seriously the last is said never to be carried on.
14. Negative case analysis, according to Guba and Lincoln (1985:219) is a proof of credibility for an ethnographic study. It envisages the search for the case(s) that do not follow the general rule; absolute unanimity, complete homogeneity do not portray reality.

## CHAPTER 7

### TEACHING AND LEARNING IN A SUCCESSFUL URBAN UPPER PRIMARY

#### SCHOOL : CLASSROOM PROCEDURES AND STUDENTS ACHIEVEMENTS

Chapter 7 analyses teaching procedures in use in the target classrooms, and the learning attainments they promote, as well as the pupils' and the schools' appraisal of the teaching-learning processes developed. It discusses: (a) homework, (b) teachers' discourse on their subject-matter, (c) teaching approaches, and (d) the appreciation of school learning. The focus on teachers' discourse reveals the "official" view on school learning in different content areas, and provides a basis for a comparison between the rhetoric and the practice in the light of the schooling context and teachers qualification. The typology of teaching approaches is central to the chapter as it portray different perceptions of teaching and learning enforced in the same classroom, stressing the pupils' participation structures used. The chapter unveils different concepts of relevant learning as they are shaped by teachers' competence within the constraints of the school culture and the pupils attainments that are inherent to each approach.

The evidence at the core of this chapter was organized based on the constant comparative method that is the trade mark of ethnography. The guiding principle was that of its representativeness of the school's routine and its power to through light on the problem as expressed in the overshadowing questions: What constitutes relevant learning? What are the teaching mechanisms devised to implement desirable learning outcomes?

The objective is to demonstrate that: (a) school learning goes beyond academic knowledge, (b) there are mechanisms devised to make pupils' families responsible for possible

academic failures, (c) learning mediated in the classroom always represents a compromise between teachers ideals limited by their own technical-pedagogical competence, pupils' perceptions and relative willingness to cooperate as well as their intellectual potential, and the school culture manifest and latent values, and (d) pupils' learning attainments match teachers' cognitive requests which results from the compromise between their "ideals" and existing conditions.

### 7.1 Homework

Recent ethnographic studies on the dimensions and structure of classroom instruction<sup>1</sup> called the attention to classroom order, motivation as a call to lessons and to the actual structure of the lessons. These are major points to be reckoned, undoubtedly. But there are major differences between these American ethnographies and the Brazilian classrooms which are the object of this investigation. And "homework", a feature altogether absent in the afore mentioned research appears, as the characteristic of classroom routine shared by all teachers.

Homework is one of the learning rites that are to be acknowledged by pupils during initiation as vitally important. They must learn to perform it as determined or be prepared to suffer punishment if they fail to comply with the rules. Homework is assigned at the end of almost every class and is regularly the object of verification in the beginning of classes. To a large extent, it dominates classroom life.

Checking homework, normally, follows roll call with teachers walking along the rows marking each student's work, as they acknowledge it has been seen. Alternatively, sometimes teachers take it home. The homework rite becomes so well performed that pupils rarely need to be reminded to have it ready for checking and accordingly, surprised pupils always inquiry, "what about the homework?!", whenever teachers do not assign it. Failure to present a homework is a major fault and entails punishment, mostly affecting subject-matter assessment. Successive failures to present homework entail the compulsoriness to do so in the Student Advisor's room, outside classroom hours. And failing that pupils' parents are formally called to the school.

The initiation to the "homework rite" is careful, deliberate, and successful, even though teachers never seem entirely pleased. During the initiation period homework check was carried on daily. However, failure to present it was discussed friendly, though persuasively,

History Teacher: Why didn't you do it (the homework)?

Pupil: I forgot!

Teacher: But, dear little one, you know that we always have homework and that you have to do it! How come you forgot? How are you going to learn if you don't work at home? And, besides, (turning to the class), we all know that doing homework is part of the assessment of students. It will appear in our .... (cueing)

Class: marks

Teacher: Homework task is part of one's grades! (repeating) Now (to the student) I'm going to make a mark by your name (marking the

roll). For this time you are forgiven, I'm just advising as a good friend, but I'll pay extra attention to you next time. I want to know if you are a good student or not!

The messages carried through the drilling which takes place in the initiation period is based on contrasting characteristics: threatening and love, rationality and an emotional appeal, cajoling and frightening. By the end of initiation, however, failure to accomplish one's responsibility is no longer discussed. It is only briefly acknowledged and the "adequate" measure is taken.

Teacher: Again! (to a student who had already failed to present the homework) This makes two minuses! I'm going to give your name to "V" (the Student Advisor). She'll have some work for you at breaktime. Be at her room! (with a menacing tone).

As the routine is established every now and then teachers do not check but rather ask,

Teacher: Now, today I'm not going to look at your notebooks but I want you to answer me honestly, those who have done the homework raise their hands.

Teachers deal differently with pupils who did not comply with the rules but honestly acknowledged it. But at random checking on those who are likely not to have fulfilled their task is often carried on and punishments, both for lack of honesty and responsibility, follow.



In 8A random checking is far more the routine procedure but individual verification still occurs. Actually, the majority of students in both classrooms do their homework. The students who systematically fail to do their homework do so in all subject-matter. But personal teacher-pupils relationship are likely to interfere with this norm. Teachers who get along well with the students tend not to have problems with homework tasks. Conversely teachers that are not liked have their requests ignored more easily. And massive failure to present homework, is a form used by 8A pupils to state their rejection for a teacher, and by extension for a subject-matter.

Research: (to a 8A student) Why so many pupils don't do the Geography homework?

Student: We don't like Geography and she is a bore, anyway, always inventing things .... always screaming with her screech voice ....

Or

Research: (to one of the difficult students) How come you always do "M's" homework and almost never other teachers'?

Student: I like her! (flatly)

Research: But don't you like any of the others? "J" is so nice to everyone?

Student: Yes, she is! But it's different! And sometimes I do her homework.

Teachers and school administrators feel strongly towards homework. A well regarded Portuguese teacher told the researcher in the staff room, right at the beginning of the study,

Teacher: "You want to find out why so many students repeat grades in this school yet it is seen as a good school? I can tell you beforehand. They don't do their homework and they can't get pass marks without adding to what they start to learn in the classroom by doing their homework."

There is a widespread belief that parents ought to take part in the instruction of their children. But teachers fail to consider that often pupils' parents lack the ability and the time to do so. Their expectations are rather similar to the role they fulfil as parents.

The correction of homework, part of the classroom routine follows three distinctive patterns of student participation (i) all students are given an equal chance to participate, (ii) there is selective participation through self-appointment or by teacher's choice and (iii) the students' role is passive.

Equal participation through roll call is used by few teachers (Portuguese 5A, and sporadically by History and Science teachers). Teachers deal differently with the possibility of different answers. Whenever this is possible the 5A Portuguese teacher stimulates pupils to present a wide range of answers, but other teachers are more inclined to wait for the pupils to state they had a different answer to hear it. These two procedures however are basically related to the type of question asked. Portuguese questions frequently allow multiple correct answers as they often call for examples. History and Science generally call for the

explanation of a phenomenon/event thus allows for answers that may be incomplete, worded differently or copied from the textbook. Teachers point out mere differences in wording the answer but seldom referred to copying from the textbook. Their concern seems to lie in getting a complete answer, either in the pupil's own words, or as a transcript from book. The fastest way to get it is to call on the "right" student(s) to answer the question. Homework as classroom exercises appear to be a way to provide students with organized material to study for tests. This is evident as they either point out / had the students find out in the textbook the paragraph with the "right" answer, or summarized / had a student summarized the answer in the blackboard without discussing the implications inherent to the different answers presented.

The second pattern is the most frequently used. Questions demanding short unequivocal answers are directed to the class as a whole, or addressed to less outstanding students, or conversely they are open to volunteer answering. More complex questions are in general addressed to more able pupils ensuring the required answer is obtained without loss of time. The teachers' role is rarely that of promoting a true understanding of a doubtful question by mediating a discussion on the types of answers obtained or stimulating students to answer freely using their own words. Neither does the inability of pupils to demonstrate understanding of a topic lead teachers to discuss the topic again. (The only exceptions are the 5A Portuguese 8A Mathematics teachers). At the most teachers repeat a short explanation concerning

specific cases.

In the last pattern of exercise correction pupils are mere expectators. Teachers, using the blackboard, present the answers to the questions and solve the exercises in an organized form, calling on the class for short answers.

Homework or class work correction is a boring activity that appears to occupy the students more mechanically than reflexively. It is a time for conversation in the classroom giving occasion for frequent disciplinary interactions. Turntaking is a problem whenever the activity is interesting engaging the students' minds. They tend not to follow the rules disrespecting the row order or answering together instead of waiting for the teacher's call one pupil.

Exercise correction is perceived by teachers as "an obligation", "to verify if pupils have learned" and "to clarify remaining doubts". But "unfortunately there is never enough time to do it properly". Teachers are not very happy with the way the task is fulfilled but they do not see how to spend more time correcting exercises discussing topics not learned, and still cover the syllabus. Teachers willing to do so either use more of the pupils' home studying time preparing handouts with instructions and exercises (Maths 8A), or are not so much concerned with the syllabus and openly stated that "it does not pay to go ahead if the students do not understand a topic so I'd rather cut out something, if that's needed, and repeat what wasn't well understood." (Portuguese 5A).

Overall, to follow one's "Teaching Plan" is important enough to determine the amount of time that can be spent in homework-classwork correction. Quantity rather than depth is the major concern of teachers.

The emphasis on homework is the most striking feature in the daily routine of classroom life. There are differences in the patterns of behaviour associated with homework correction but it is assigned almost daily by all teachers, (except 8A Portuguese). Its correction occupies at least one third of almost each lesson and aims mostly to provide students with a guide for tests rather than be a means to check/promote understanding and to stimulate divergent thinking. Such characteristics are exceptions rather than the rule. My own interpretation of such teaching behaviour characterized by an emphasis in homework without the full exploration of its potentialities to promote meaningful learning is that it is a mechanism for teachers (and the school) to extroject academic failure throwing the responsibility of repetition on the students and their families. By the extensive use of homework and without allowing enough lesson time to a comprehensive discussion of its content it is possible to cover a large syllabus in a short time and provide students with a large set of information organized under a form that facilitates its memorization. The teachers' task is thus fulfilled while the responsibility for the students' success or failure is handed to pupils themselves and their families.

The concern for time saving is also perceived in the choice of patterns for student participation in homework-classwork correction. Free and voluntary pupils' participation is selected by teachers less troubled with content coverage and more so with the ability of the students to grasp the meaning of the information transmitted, using it to enhance their understanding and to act. The selection of a pattern to ensure pupils' participation in exercise correction (without loss of time) is also a mechanism teachers use to demonstrate that their tasks are being carried on according to modern pedagogy. Thus, the knowledge basis provided in the classroom is ample, abiding to the "prescriptions" of accepted textbooks, it is "progressive" including student participation, and from it results an organized learning file, useful in pupils' preparation for learning assessment.

## 7.2 Teachers Discourse on their Subjects

Teachers' views on their subject matters, is presented with the aim of unveiling their perception of the value inherent to the area of knowledge they teach, the objectives that orient the teaching process in the classroom, the role of the syllabus and the textbook and the characteristics of the assessment structure. The data used was obtained through semi-structured interviews and is presented comparing opinions and perceptions of teachers working in the same content area establishing what constitutes consensus/major divergences among teachers, and later on contrasting teachers' intentions

with their actions.

Teachers' discourse concerning the IMPORTANCE AND MEANING of their SUBJECT-MATTER show they are dominated by different feelings. A positive view of one's own subject prevails, as seen through the tone of the voice, the attitude of teachers, and their choice of words such as: "important", "useful", "educative and cultural", and "enjoyable". to convey their feelings. But often they are also defensive and disillusioned, as they say

".... Arts is not in the curriculum to entertain the pupils."

" ... Science is not very valued" ... "... There's no time provisions for preparing experiences"  
"Geography is not really respected, it gets only two time slots per week."

" ... my attempts to lead them to appreciate the Portuguese language have not succeeded."

Negative feelings arise from the school culture, administrative measures taken at state level, and from one's own teaching practice. Complaints imply a need for an accommodation between the type of learning desired and the existing conditions. Disillusion characterizes teachers who often lack energy or interest to search for new and more effective ways to pursue their teaching goals. But a defensive tone of voice stands for a fight to win respect from one's colleagues and gain pupils' interest for a less prestigious subject-matter. Such attitudes can be expected to lead, on the one hand, to a detachment from the students and the results from the learning process, and on the other hand to a deeper

involvement of the teacher.

According to teachers' statement curriculum provisions are well balanced. Subject-matter's role go beyond academic instruction to incorporate educational and practical roles. Teaching objectives in different subjects are said to be:

"To see the world as a community and behave towards others according to Christian rules." (Religious Education)

"To become more able to learn and to deal in everyday life by developing one's communication skills." (Portuguese)

"To foster creativity by generating a new awareness and understanding of art, and learn to express oneself through sound, rhythm, colour and forms as well as words." (Art)

"To gain understanding about the world of work." (Practical Arts)

"To ensure success in continuing one's education at secondary school level." (Mathematics)

Comparing the opinions of teachers from the same subject-matter the most contrasting views are expressed by the Portuguese, History and Mathematics teachers. The two Portuguese teachers are entirely different. The 5th grade teacher is enthusiastic and joyful. Her aim is to develop pupils' communication skills. "To be able to speak and write clearly and objectively, to be understood by all as one expresses one's own ideas and feelings, and to understand the messages conveyed in the texts one reads, and in what one hears is the ultimate aim of the teaching of Portuguese". Therefore, extensive reading, which must be an enjoyable experience for the pupils, is an essential activity to reach this goal. The



8th grade teacher is serious and sounds tired. He maintains that Portuguese is important "because students learning is very much based on reading" but an interpretation of a text is seen as the result of "syntactic analysis, a competence students seldom acquire despite being taught year after year. Reading is stimulated but is not compulsory, it's something extra." They represent an active and a mechanical view of the process to develop communication skills.

History teachers share the concept that the aim of their subject-matter is to "make students capable of understanding the world's present and past". But the 5th grade teacher is more interested in facts, thus she points out that "History is interesting and not very difficult", and her 8th grade colleague says "it is not an easy subject as it has a formative and critic function, generating awareness that man is bound to a social context, set into a specific time and in a geographical space."

Mathematics teachers state a concern with the continuation of schooling and the use of the subject-matter content by the labour market to test candidates to jobs. But while for the 5th grade teacher that is the major objective to be pursued, the 8th grade teacher stressed a need "to demonstrate the interlinkages within mathematics, as everything depends on something else, in a logical sequence, and to deal with the practical use of the content." The latter teacher is concerned with a value that she sees as inherent to the subject-matter connected with logical thinking, besides the mastery of the

mathematical content.

The most common feature of TEACHING TECHNIQUES according to teachers discourse, is the use of the textbook "as guided reading". Explanations are stressed, especially by Mathematics' teachers, by the 5A Portuguese teacher, and, less so by Science. And the active participation of the pupils is frequently mentioned. The popularity of the textbook guided reading as a teaching technique is due to its advantages in engaging the students in the lesson without demanding too much from the teachers, at the same time that classroom order is maintained and the speed, which is necessary in the learning process if the complete syllabus is to be covered, is kept.

Teachers declarations point out that selected TEXTBOOKS AND SYLLABUS are guides for the development of the teaching-learning process and teaching plans are prepared according to the selected textbook. However the 5A Portuguese teacher questioned the use of a single textbook in the classroom stating that it was meant "for the pupils to consult at home according to their individual needs after classroom discussion, planned by the teacher and based on the best texts found."

The ASSESSMENT STRUCTURE proposed by teachers is largely similar. Differences consist mostly in the balance of its elements, not in their type. Tests form the bulk of learning assessment, and the outcome of the continuous assessment of pupils' application in fulfilling set learning tasks is added

to test scores.

Teachers' discourse point out to a surprisingly similarity of views. In terms of instruction they say they are concerned with understanding rather than with the mere acquisition of information. They agree their subject matters are important and should fulfil specific roles in the pupils' life catering for academic, educative, and utilitarian needs. Teachers tend to rely on the selected textbooks to formulate their "Teaching Plans" and to cover the complete syllabus using, guided textbook reading. Assessment is based in content testing but to its results is added a quantitative assessment of pupils' diligence in fulfilled required tasks. Nonetheless there are cases that deviate from this mainstream tendency and some differences in views are expressed by teachers dealing with the same subject.

Teachers discourse led to certain specific expectations concerning teaching practices: an active learning stressing reading and other communication abilities versus the stress in grammar rules, in Portuguese; an emphasis in factual knowledge versus a comprehension of the relationship present-past, in History; a concern with preparing the students to cope with the demands of the next step in the educational ladder in Mathematics; an ineffective practical experiences base in the teaching of Sciences; some attempts to use current events to enhance the study of Geography; a strong stress in creativity as a means for self-expression in Arts, and a practical and utilitarian focus in Practical Arts lessons. Textbooks and

visual aids should be very much to the fore in the classroom and content testing should take place regularly. Teachers perceive themselves as fulfilling their duties consciously and in line with modern pedagogical principles and techniques.

### 7.3 Teachers Approaches to Classroom Teaching and Learning

The typology of teaching approaches that follows shows that despite the similarities in teacher's formal qualification, and in their discourses about subjects-matter, their approaches to teaching practice diverge. This diversity stretches in a continuum that ranges from rote learning to the "recreation of learning"<sup>2</sup>. The typology makes evident that specific teaching procedures are conducive to different types of achievement as the learning content is mastered by students.

#### The typology of teaching approaches

DEVELOPING THE TYPOLOGY - The typology comprises four teaching approaches labelled as: puzzle-proposing, textbook-exploration, textbook-orchestration and information-dispensing. Its development considered teaching procedures related to: text/textbook use, techniques for mediating learning, the focus of questioning and learning exercises, types of skills sought, and the prevailing pattern of classroom interaction.

The use of texts/textbooks present different characteristics in planning learning and, in mediating it. Text/textbooks can be used by the students at home, or as a guide hold by teachers who transmit its contents as short

lesson texts. Teachers may use several textbooks to define the syllabus, or select one textbook planning their courses: accordingly, perhaps excluding or reordering some topics.

During the lesson textbooks are frequently used to mediate learning. When used their content may be highlighted by teachers' explanations and/or questions, or be merely a source for students "guided reading".

The majority of teachers who rely heavily in a textbook place emphasis in explanations and questioning bringing to the fore textbook features (e.g., pictures, graphics or selected parts of the lesson text). The few remaining teachers are either very original using a wide variety of challenging techniques or limit themselves to transmit information by summarizing the content of the lesson, extracted from textbook(s), in the blackboard.

Questioning and written learning exercises may have quite different foci and imprint specific marks to a teaching approach. They may be directed to (a) elicit short answers from pupils who identify or recall specific information, (b) foster understanding/ evaluation of the content, then pupils are asked to explain, establish relationships, summarize and criticize, or (c) re-create knowledge, leading students to observe and reason about facts/events.

Pupils' participation in the lesson may be carefully planned and constantly stimulated, be used to check on pupils

attention, or may be ensured mostly through textbook reading.

The characteristics of lesson mediation, like textbook use, questioning foci, and pupils' participation are differently structured together determining distinctive teaching approaches called in this typology puzzle-proposing, textbook-exploration, textbook-orchestration and information-dispensing.

VALIDATING THE TYPOLOGY - The approaches perceived may be disposed in a sequence as teachers' aim seem to evolve from rote-learning to the re-creation of knowledge. The distinction between teachers in extreme categories, (information-dispensing and puzzle-proposing) is very clear. But to determine the cut between categories next to one another is less so. And often teaching practices are a mixture of contrasting procedures while the categories portray an "ideal" situation. Thus the categorization of the approaches is based on students' views about subject-matter and the analysis of the assessment tests, besides the researcher's observation of classroom procedures.

The actual writing up of an ethnographic account of teaching approaches requires four major tasks: (1) observation of the actions taking place in the classroom, focusing on its constitutive parts, and finding out prevailing patterns, to determine the elements upon which a typology can be built; (2) clustering traits in significant wholes in configurations of ideal categories; (3) associating individual practices with the generated categories; (4) validating the typology by the

teachers and pupils from whose behaviour it derived.

The perception of existing configurations is a natural result of extensive observation and "rumination", its validation is a different matter. It is easy to triangulate isolated interpretations of specific procedures questioning teachers and pupils. It is more difficult to validate the typology as a whole, and the assignment of teachers to each category. Teachers and school officials pass judgment on the performance of their colleagues but their assessment is based on aspects of teaching behaviour that are evident from outside the classroom: students marks, and students opinions, teachers' willingness to cooperate with other teachers, for example. This informal assessment is influenced by individual teachers' socio-economic status, background, oral ability and personality. Thus, if the validation of the typology by the staff was possible, the association of individual approaches with the categories was not.

Teachers themselves, would not receive kindly remarks that linked their practices with less than progressive teaching principles. Therefore, before getting information on the typology as a whole they discussed a description of their classroom procedures.<sup>3</sup>

TEACHING APPROACHES - In this section I propose to describe the typology's categories, illustrated with vignettes from the teaching practices they were derived.

Puzzle-proposing teaching seeks to promote learning by challenging students to think and solve the puzzle represented by mastering (e.g., knowing, understanding and using) aspects of knowledge. Teachers' action is but a guidance for the pupils to re-create knowledge.

The foundation of the approach lies in developing the thinking process of the students. The teaching-learning process is geared to enhance observation and questioning as tools to find answer(s) to proposed puzzles. Norms and rules must be elicited as they apply to the phenomena being explored. Puzzle-proposing teaching depends on careful planning and enlists a wide variety of techniques, the use of visual aids and a skilful selection of texts/activities that engage the students in an interested and effective participation in the lesson. Such participation must be organized to allow all the students a chance to express their ideas and to minimize the noise and brawl that tends to occur, keeping the classroom under control. Calls for order are addressed to the classroom but seldom names of individual students are mentioned. When that occurs the message and the tone of the teacher's voice shows an affective and educational concern being tinted with threatening and punishment. Teachers use encouragement and praise often, as they probe/offer cues, guiding pupils to re-create knowledge while solving a proposed learning puzzle.

Teachers' originality is the hallmark of puzzle-proposing teaching and whenever it prevails textbooks are not a permanent feature in the classroom. But, at the end of the lesson, a



reference to the exact textbook location of the topic discussed is always written in the blackboard. And pupils are stimulated to read the textbook presentation of the theme at home, as part of their homework.

Puzzle-proposing teachers do not follow willingly the disciplinary pattern enforced by the school, which is seen as "stifling students and curtailing useful learning opportunities". Teachers say,

"I would like to spend, perhaps weekly, one of my class periods in the library. I'd like the students to browse around, select books ... there are so many opportunities to learn in a library! But that's unthinkable! ... Above all this would not be considered a serious learning activity. It would be interpreted as a way to ease my work."

(Portuguese teacher - 15th March)

"Music and drama are almost cut off from my "Teaching Plan". There is limited access to the Assembly Room, the ideal place for such activities and there's scarcely, enough space for drama in the crowded classrooms ... Besides both activities would entail noise at a level that's not acceptable in a classroom. And Art is so frequently dismissed as unimportant that's inconceivable for it to disturb the overall important learning of Mathematics and Portuguese, so I've heard often enough! To keep the disciplinary standard of the school we loose plenty of relevant learning opportunities."

(Art teacher - 12th September)

The puzzle-proposing approach stresses creative work, and an instructional content comprehension manifested through a capacity to use knowledge to make life more meaningful. Learning exercises are frequently designed by teachers themselves and often they take the form of games, either explicitly (e.g. crossword) or implicitly given the way they

are handle by the teacher. A playful mood tends to dominate the classroom while questions are handled seeking to develop a wide range of cognitive abilities. Pupils are not hurried as teachers accept the syllabus and the "Teaching Plan" as a guideline, and would not hesitate to reshuffle/cut it in the benefit of pupils.

Learning assessment in puzzle-proposing approaches follow conventional lines (i.e., content based tests and other evaluations) but they stress more complex cognitive abilities and tend to take into consideration the individual development of the students.

Pupils' interest in complying with the request of puzzle-proposing teachers equals the enthusiasm they display in their lessons. They perceive learning as a pleasant activity. Apparent signs of their attitude are: applause, disappointment as the lesson ends, carrying on with tasks after the end of the lesson, and eagerness to participate in the lesson which leads them to ignore turntaking established rules. The high regard for subjects taught through puzzle-proposing approaches is confirmed when pupils select them as those they liked better and learned easily, despite not getting their highest grades in them.<sup>4</sup>

Only two teachers (Portuguese 5A, Arts 5A/8A) are constant users of a puzzle-proposing approach. Glimpses of its tactics are present in the work of "textbook explorers", but they lack the ingeniously that enhances students' eager and enthusiastic

participation.

The 5A Portuguese teacher (Section 7.2) attaches a high value to reading and strives to transmit the belief that reading is a fun and worthwhile activity. Thus, besides a classroom reading club that provides a network for book circulation and reading discussion in the classroom, the basis for her lessons are carefully selected texts. Such texts serve several purposes: raise the attention and the interest of students, present a content that may be explored in connection to the topic of the lesson, applies to broad educational and moral issues that are relevant for the pupils, foster the understanding of written messages, and stimulate further reading.

(July 13th, 5A Portuguese)

"Today I've brought a very interesting book (shows the book), it's called "The Enchanted Mountain". It has many illustrations. (Showing a few) I'm going to sketch the story for you, later on, those who wish may read it. Can a mountain be really enchanted? (With an inquisitive and astonished look and tone of voice) What do you think?

(Follows a dialogue about reality and imagination, the story is briefly presented but abruptly interrupted)

Teacher: "I'm not going to tell you the end (several interjections from the class), it will spoil the story! (interactions). I'm sure you'll be able to guess the end (gestures calming down the class) when we're through, ok?"

Now, I'm going to read a paragraph, and I want you to pay attention so that you'll answer the question (emphasis): what was the most important wealth of the old dwarf?"

(The discussion that follows the reading of the passage centres around material wealth and the wealth represented by one's senses, introducing the word "materialistic".)

Teacher: I'm adding this book to our classroom library, you may borrow it if you want, or you may ask your mother to buy it for you, in which case, what is it that you need to know?

Pupil: The title and the author.

Teacher: (writing in the blackboard, after acknowledging with a gesture that the answer is right.)  
And what else? (points to the book cover)

Pupil: "April Editions"

Teacher: Right, the editor. (writing and then turning to the class)  
Now, let's do some work in our notebooks. (write date on the blackboard as students get ready) I want you to leave the topic of the lesson for the time being, you will have to guess what we'll be studying today! Write today's date, skip one line and then copy.

She writes a paragraph of the story on the blackboard, checks if students are copying as she walks through the class and urges pupils, in a joking way, to finish the copy, at the same time that she corrects the spelling, either addressing the pupil directly in a low voice or talking to the class as a whole. When the class finishes she proceeds:

Teacher: Jacqueline, you're going to be the first, but I want everyone to pay attention and check if she finds the right answer to my question, in the text. Now, what's the word that qualifies the dwarf?

The teacher proceeds writing the elicited answer in the blackboard inside a box, and asking similar questions to other students, always referring to the text and suddenly one student breaks in enthusiastically.

Pupil: I know we are studying adjectives!

The lessons proceed as the teacher praises and encourages the students to answer questions related to: the identification

of adjectives in the text, generating adjectives from nouns, the adjectives position in relation to the noun, the function of adjectives, the use of "locução adjetiva"<sup>5</sup> and synthesizing the content studied. Pupils' creativity is fostered as the lesson is about to end.

Pupil: I had given a title to the story: the wise dwarf. (in a sad voice)

Teacher: It is a good title to the story! But I was referring to the lesson content when I asked you to skip one line nevertheless, it's possible to keep the two titles side by side, isn't it? Your first title will remind you of the story and the second, Adjective, will tell you what we are looking at today. Now, I'm going to propose you a game on "adjetivação". You have to think fast. I'll give you a noun and mark the time you will take to write as many adjectives as you can think of to qualify it. Are you ready?

Pupil: I don't know how to do it! (one of the troublemakers in the class).

Teacher: Are you defeated before getting into the fight? You that are so intelligent! I don't believe it! How about giving it a try?

Pupil: All right! (complacently)

Teacher: Are you ready?

The game is carried on with enthusiasm. Some students get as many as 24 adjectives for the "easy" noun (boy), and 14 for the most difficult one (look). The task is completed with pupils exploring the meaning of each adjective named, thus building up their vocabulary. As the "game" ends pupils show they have enjoyed the activities asking if/when they will be repeating it.

Puzzle-proposing teaching covers only a very small percentage of lessons in the observed classroom. It aims to re-create knowledge through active pupils' participation. The lesson has a content focus but spreads beyond it encompassing moral issues and establishing relationships with other aspects of knowledge related to the issue investigated. Norms, rules, and patterns are derived by the students from the experience they are led to live through reasoning based on observation. Teachers believe that learning must be a pleasant and useful activity consequently students efforts to succeed are stimulated and praised. Creativity, reading, the development of pupils' perception (including artistic) and the expression of feelings and ideas are constantly encouraged. Individual characteristics and differences are stressed and respected. Learning is a widely open activity and attainment goes far beyond the retention of bits of information transmitted by the teacher. Puzzle-proposing teaching requires careful planning. It depends on teachers' originality and inventiveness allied to a solid general education base which enable teachers to see their subject-matter in the broad context of its interlinkages, as part of the large network of human knowledge.

Textbook-exploration teachers use a selected textbook as the centre around which the teaching-learning process evolves. The textbook presents the content which forms the core of the lesson, it provides the majority of the exercises used to reinforce learning, and learning assessment is also based in it. However to explore the "textbook lesson" teachers rely

heavily on their own mastery of the subject-matter content and their familiarity with other aspects of knowledge and culture. They are not bound to the textbook, despite developing a lesson within the frame provided by it and assessing learning according to it. In this sense textbook exploration means that teachers often establish linkages between the textbook content and current world/local events, other aspects of the subject-matter, and specific needs of the particular group of students. The textbook lesson is a starting point and plays a major role in the mediation of learning but teachers strive to enhance a comprehensive understanding of the content, making it less static and more meaningful for the students.

The major shift from puzzle-proposing to textbook-exploration approach lies in the stress on teaching and on learning as opposite sides of the instruction process. While learning through pupils' active participation is at the core of the former approach, teaching through teachers' explanations is the hallmark of the second. The quality of pupils' participation portrays this difference clearly. Voluntary contributions are welcomed and participation is stimulated in both cases, but in textbook exploration they lack the dynamic enthusiasm that characterizes pupils' contributions in the former case. Active work occurs, but mostly as homework, and only completed tasks are presented in the classroom. The valuable learning that derives from such activities never figures in assessment tests. The completion of the task and the presentation of well done work is the objective of these activities. The "Illustrated Murals"

prepared by 8th graders for History classes, news search reported in Geography lessons (8th graders), and the few experiments Science ask their students to "give it a try at home", are good examples of such activities. The users of the approach are characterized by some peculiarities: (1) History and Geography (8th grade) teachers tried to make content more real for the students enabling them to gain a better understanding of today's world; (2) History and Mathematics (8th grade) are always presented as an interconnected sequence spreading out in a chain-like form; (3) Mathematics and Science teachers (8th grade) are specially concerned with secondary school demands to be made from students and constantly use extra materials (exercises and synthesis of topics) which are handed out to students as homework tasks, and (4) Science (5th grade) and Brazilian Social and Political Organization (8th grade) teachers seem more tied to the textbook organized lessons than their colleagues using the same learning approach. But all teachers try to go beyond the written text relating it in some practical way to the pupils' life and leading to a better grasp of nature, society and man.

(March 19 - 8A - History: Great Navigations)

Teacher: Could you read the introductory quotation, please (signalling to one student)

Student: "The history of men in the last century is the history of Western Europe expansion. It is a new process of civilization that throws itself upon all people in successive waves of violence, greediness and oppression."  
Darcy Ribeiro

Teacher: Have you ever heard of Darcy Ribeiro? (silence from class. Teacher cues) Newspapers mention him often ... Rio ... construction of different schools ...



Student: He is in the government.

Teacher: Yes, he holds a key position as Secretary

Student: (interrupting) for education, he "built" those big schools ... it didn't work!

Teacher: (talks about the integrated schools project, pointing out its advantages and disadvantages. Does not attempt to have students joining in the discussion but stresses the existing controversy. Writes in the blackboard;  
DARCY RIBEIRO - Secretario de Educacao -  
Rio de Janeiro, Governo:  
Leonel Brizola.)

Teacher: What else have you heard of him?  
(silence) Did he write books? ... He did!  
He is a well known anthropologist  
(clarifies the meaning of the word  
questioning a student, then adds to the  
blackboard "ANTROPOLOGO")

Teacher: Let's look at the quotation. The author of the book considered Ribeiro's statement important enough to introduce the study of the Great Navigations. Why should it be so? What are the characteristics of the civilization process that was initiated through the great navigations, according to Ribeiro?

Student(s): Violence, greediness and oppression.

Teacher: I want you to underline those words. By the end of the lesson we'll get back to them, to check if you believe he was right in using them.  
(hanging a map) This topic is well known to you (inquiringly), you've learned about ... (cueing pointing to the map)

Student(s): - The discovery of America.  
- The discovery of a maritime way to India.  
- Cabral and Brazil

Teacher: Right! We'll be recalling some facts, gaining some more information, discussing issues connected with them. Let's look at the map. Where, in Europe, were the expansion centred?

Student(s): - Portugal  
- Spain, Italy

- Teacher: No, not Italy, but here, this area (pointing to the Iberian Peninsula) where Portugal and Spain are, how's it known?
- Students: Iberian Peninsula.
- Teacher: Exactly/ That's the focus of the expansion. Who would like to read the first paragraph?
- Student: (Reading about Portugal, its geographical location and navigation instruments)
- Teacher: What's this paragraph about?
- Student: Navigation development.
- Teacher: Such as? (successively pointing to pupils)
- Student: Astrolabe, caravel, magnetic needle.
- Teacher: And ...? (pointing to the map to Portugal's coast line)
- Student(s): - Portugal  
- its favourable maritime position
- Teacher: And why did we start focusing such aspects?
- Student: Because they made the long oceanic trips possible.
- Teacher: Yes! There are always technical conditions enabling or hindering men's exploration of the earth. What are we exploring nowadays?
- Student: The universe.
- Teacher: As we explore the universe we gain more knowledge about it. Can you give an example, Daniel?
- Student: We've learned more about the moon and other planets.
- Teacher: Can we compare these two explorations through the ocean? - and the space?
- Students: Yes! No!
- Teacher: Why not? Wasn't the ocean as unknown then as the space today? Didn't it mean a great adventure then as it is today?  
Think about it!  
Which type of knowledge was gained as a result of the great navigations?
- Student(s): - About new lands  
- About the Indians

Teacher: What else they got? (cueing) what was found in America?

Student(s): Gold, silver, precious stones.

Teacher: We should add, a large amount of different products coming from the Orient and sold in Europe, the slavery of the Africans ... All this meant (writing in the blackboard - WEALTH). Wealth that later on made possible the development of the arts in Europe, in a period know as Renaissance (writes in the blackboard  
WEALTH -> RENAISSANCE : 14th-16th cc)

Teacher: I would like to call your attention to the linkages that characterize historical events. Nothing is isolated but is part of a sequence. Everything that happens today has a foundation in past events. I want you to be very aware of this! Let's go ahead. Would you like to read, Lucy?

Teacher: That was a long paragraph. What is the main idea presented?

Student: Lowering the prices of merchandises.

Teacher: (hanging another map showing caravanning routes to Istambul). So there was commerce with the Orient even before a maritime route to India was slowly established in ... which century?

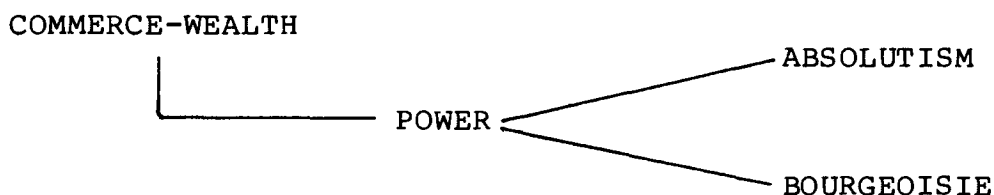
Student(s): - 15th century  
- 1492

Teacher: (writing in the blackboard)  
(XVc-1401 - 1500: a maritime route to INDIA.)

Teacher: Don't forget the dates. They are signposts in history showing the sequence of events. Very, very important!

Questioning goes on recalling facts presented in the theme dealt with in the text so far - antecedents to the great navigations. it is a summing up of the content and a preparation for the next step, a discussion on broad issues concerning commercial relationships: producers and consumers,

selling for high prices and buying cheap, intermediates, and the power that is associated with the wealth generated through commerce. In the blackboard the development of the lesson is sketched, showing the major points discussed, as follows:



When the lesson ends questioning is used to recall the major causes and consequences of the great navigations, and finally the teacher turns to the initial quotation, asking students to express their opinion on Ribeiro's view about the civilization process started by the 15th century navigations. This discussion seeks to establish the positive and the negative results of the maritime expansion and to draw parallels between the 15th century and the 20th century "discoveries". The exercise that follows is from the textbook, and the questions proposed leave aside the interesting analytical aspects of the lesson to focus on the recall of facts and rephrasing of information.

The lesson portrayed contains the more significant aspects of the teaching-learning pattern prevailing in 8a History classes and, to some extent, other textbook exploration lessons. The textbook provides a frame for the lesson but in exploring the content the teacher goes beyond the proposed frame establishing cause-consequences linkages

across the centuries and unwinding the thread of history before the students eyes. She also seeks to compare past and present situations as part of an effort to show that the study of history leads to a better understanding of the world and of men's actions. Pupils' participation is provided through textbook reading and question answering and is less extensive than teachers interventions. The pattern of the lesson follows a 4-step procedure that is repeated paragraph after paragraph: stimulation through questioning or visual aid, textbook reading, brief exploration of the crucial points, summing up questions. However, if lessons go beyond the boundaries of the written text, learning exercises and assessment are confined to it.

The 8A Geography approach is challenging and dynamic in a way that could be considered puzzle-proposing however the teacher lacks the ability to make it accepted by the students. They are inclined to prefer the orderly summaries presented by their previous teacher, which required only memorization. They resent the amount of time they spent searching for information (listening to TV news and keeping an eye in daily newspapers) and preparing their reports (presented every fortnight) even though they never complain about the similar amount of time spent preparing the History illustrated murals. The teacher fails to make them, (a) perceive as an accomplishment, the ability to classify events in geographically set categories; (b) understand the importance of acquiring map reading skills; (c) see the value and usefulness of the type of knowledge they are acquiring; and

(d) above all she is not capable to transmit to them the insights and enjoyment that can be derived from the observation and understanding of the world, seen through the lens of a geographer, that she feels, herself. Teacher-pupils interpersonal relations are tense as the teacher is unable to establish a positive rapport with her pupils. She sets higher performance standards (as compared to the History teacher), and is very demanding. Pupils complain about her high pitched voice, her lack of respect for them, her "lack of organization"<sup>6</sup> in dealing with the content. It is evident that there is no empathy between teacher and learners and the misunderstanding that prevails hinders student participation and achievement. As the teacher's competence and general knowledge is as undeniable as her professional involvement the prevailing situation highlights the role played by the affective dimension in pupils-teacher relationship, in determining the students response to a given teaching approach.

In 8A Geography teaching procedures differ little from the pattern adopted in History, except in the initial motivation to the lesson. In Geography this phase of the lesson is dynamic and is provided by pupils' reports. In History it was but a short and sharp focus on the theme skilfully made by the teacher. Textbook exploration, however, is very similar: textbook reading paragraph by paragraph highlighted by map reading, questioning and enlarging the topic using pupils' contributions whenever this is possible, and finally summing up. Learning exercises in general

consisted of map reading (a mimeographed map is provided by the teacher) and, less frequently, textbook exercises were used. Learning assessment are similar in History and Geography as in both cases they are based on the textbook lesson but the cognitive complexity exacted by the Geography teacher is higher and students grades are higher in History.

On the whole textbook explorators teachers base their lessons in the lesson provided by the selected textbook but explore the content going beyond it. Student participation is called upon through direct questioning and reading. The majority of the proposed questions have to do with the identification of basic information in the text, rephrasing explanations presented by the text, and the recall of previously acquired knowledge relevant to the topic. But, now and then, more complex questions are posed to the students. The exploration of the text tended to emphasize interconnections within the subject and the relevance of the content for the understanding and acting into today's world. The learning experiences provided in the classroom and through homework had a wider range than the learning actually assessed through tests.

Test results in content areas dealt with through a textbook exploration approach are in general a little higher than in the puzzle-proposing approach. In subject-matter where cognitive demands are higher and/or there is some friction between students and teachers, (e.g., Mathematics and Geography), pupils marks are the lowest. In general students

tend to perceive subject-matter taught through this approach as those they learn fairly easily, got average grades, and like to learn. Geography is the exception. Textbook exploration requires from teachers competence in the content area they teach plus a solid general education. Evidence from interviews<sup>7</sup> suggest that teachers are aware that a more dynamic approach to learning could be used and learning assessment should include the broader issues discussed in the classroom but chose not to use it. They cannot afford to spent the amount of time required to reach satisfactory results and at the same time complete the syllabus. Thus a dichotomy between the type of learning mediated in the classrooms and assessed through testing and other procedures. Lack of time also impairs the development of the lesson, as for example Science teachers claim that it is not possible to carry on experiments. Only in the case of one teacher (8A Mathematics) there is a firm conviction that short of more dedication to homework tasks, i.e., pupils efforts, nothing could enhance learning achievements.

Textbook-orchestration as an approach to teaching is characterized by teaching-learning procedures dictated by the selected textbook. The textbook defines the scope and structure of the lesson, provides the factual knowledge to be transmitted to and "stored" by pupils, makes available learning exercises that later on are used in assessing learning, and determine the sequencing of the content. In mediating learning the teachers' major task is to orchestrate the lesson portrayed in the textbook. Teachers may introduce



a personal touch presenting some visual aid to attract pupils attention to the topic and occasionally bring in game-like exercises (e.g., cross word). However, their concern is to ensure that there is sufficient time to read and understand the textbook lesson, to complete the classroom exercises and to correct homework.

Pupils' loud textbook reading is the core of the lesson. Their understanding is ensured through short direct questions posed by the teacher aiming to elicit major facts, check on the vocabulary or rephrasing the book explanations. Teachers' role is to provide a frame for the textbook author to be understood by the pupils.

Textbook orchestrators tend to be more strict disciplinarians than their colleagues that follow textbook exploration or puzzle-proposing approaches. Students are kept very quiet throughout the lesson and their punishments tend to be more severe. Quite often their concern extends to the students overall appearance and the order of school materials.

Pupils' participation in the classroom is required by the teacher and voluntary contributions are frequently given little attention, unless they are made by "outstanding" students. Like textbook explorators and much unlike puzzle-proposing teachers, textbook-orchestrators tend to favour pupils who will probably answer the proposed question correctly. While textbook explorators present many questions to the class as a group orchestrators prefer to name pupils to

answer their questions.

Teachers using this approach are inclined to test students very frequently, generally assessing learning after each unit. Therefore they always assess fairly small chunks of content a procedure which pleases the students as they have to cope with less learning materials for each test. Such procedure makes the recall of information easier and lead to high grades. Test questions frequently repeat exercise questions and students prepare for assessment going through exercises rather than reading the textbook lesson again, and checking their notes.

Textbook orchestrators, like all other teachers in the school, believe they are progressive, keeping abreast of the pedagogical evolution. They claim they have effective students participation in their lessons and point out they vary the types of exercise they use (e.g. crosswords, fill the blanks, matching columns) besides the traditional question-answer exercise type, apparently unaware that changing the form does not necessarily entails a change in the cognitive complexity of learning demands. Textbook orchestrators major emphasis is the recall of the information presented by the textbook.

The textbook orchestration approach tends to prevail in the 5th grade, whereas textbook exploration was more observed in the 8th grade. This association is probably accidental as teachers working with 5A pupils will follow them through upper

primary school, the exceptions being only the History and the Mathematics teachers.<sup>8</sup>

Extracts from lessons in 5A Mathematics and History illustrate the points made.

(July 15 - 5A Mathematics)

Teacher: Today we are going to work our tables in another way. Please, open your books on page 58. We have been dealing with multiplication, division, addition and subtraction, then we mixed all of them in the expression. Those of you who still don't know it, I'm sorry, the reason is you don't know your tables well enough (teacher questions weak pupils getting wrong or no answer and the class becomes very subdued). Today we are going to determine the value of the unknown term (writes on the blackboard and below it the date). The book may show a, x, or n. It's similar to something you've done last year. It's not going to be difficult. Karina will read for us.

Student: (Student reads explaining that each computation has a reverser and how this property is used to find the value of an unknown term.)

Teacher: I'm sure you understood. What is the reverse computation for addition?

Class: Subtraction

Teacher: For multiplication?

Class: Division

Teacher: (going to the blackboard) Are we going to use X or N?

Class: N (the symbol used in the book)

Teacher: The book gives us an example (cueing)

Class:  $N + 8 = 12$

Teacher: (writing on the blackboard while students read from the book) And what's the value of N?

Class: 4

Teacher: You did it mentally but how we do it in the paper? Karina told us that first we isolate N (starts writing) than we reverse the computation (in the blackboard speaking as she writes)  
 $N = 12 - 8$ , and the result ...  
 $N = 4$   
 Let's try the next example

Class: (dictating from the book)  
 $N - 6 = 9$

Teacher: What's the reverse operation?

Class: Addition

Student: Let's use x

Teacher: Why don't we stick to N, like the book? Well, you may use x if you want to be different! (complacently)  
 So:  $N - 6 = 9$  (writes)  
 using the reverse computation ...

Class:  $N = 9 + 6$

Teacher: Which equals?

Class: 15

Teacher:  $N = 15$   
 Now turn the page of your books, let's try the first 3 exercises.

Teacher: (looking at her own book and writing on the blackboard)

$8 - N = 5$   
 What's different here?

Class: The number comes first

Teacher: (unaware that the students attention was not focused on the negative n)  
 When this happens everything changes.  
 Is it possible to know how much N is?

Class: No

Teacher: We want a positive N, how do we get it? What our book says? Can you read, Rodrigo?  
  
 (the pupil reads paragraph ending with the example  $8 - N = 3$ )

- Teacher: (writing on the blackboard)  
 $8 - N = 5$      $8 - N = 3$   
 Now we have two examples and we know what to do, we have to ... (cueing)
- Class: Change the signals
- Teacher: Let's see (explaining while she completes the exercise). (is completed.)
- Class: It's easy
- Teacher: Let's try the other example.
- Teacher: Now let's work. Exercises 4 to 8, page 60.

(August 27)

(August 27 A History: Exercise correction)

- Teacher: Homework correction!  
 Alexander, the first question ...  
 (pupil reads in very low voice, apparently a copy from the text, somewhat incomplete)
- Teacher: Anyone has a different answer, Karina?  
 (one of the brightest pupils reads aloud and answers similarly to the former one but evidently not copied from the book)
- Teacher: Karina's answer is more complete!
- Pupil: I've said more than that ...
- Teacher: You may read
- Pupil: (reads a very long answer)
- Teacher: Daniel has a long answer, it's right. You'll find the answer in page 25.
- Student: Where?
- Teacher: The first paragraph starting with ... (reads from book) ... (some students work) Are you ready for the next question? Can you read it Roger?
- Pupil: (reading a short direct answer naming the hereditary provinces that were successful)
- Teacher: Correct. The answer is very clear on page 26. The 3rd question, who wants to read (several hands up), You, Rodrigo.

Pupil: (replies with a short "no" to the question enquiring "Is it possible to say that the failure of the hereditary provinces was complete?)

Teacher: Only that?  
You need to justify this "no", why was it not a total failure? (some hands up) You, Luciano.

Pupil: (reading a longer answer)

Teacher: That's better, one of the reasons to state that the hereditary provinces were not a total failure, as Luciano mentioned, is because the system prevented foreigners to establish themselves in our coast. (Some students raise their hands). Rubens, what did you write?

Pupil: (reading a long list of reasons carefully copied from the book)

Teacher: You mentioned all the causes. it was not necessary, one reason was enough. You'll find the answer in page 26, 3rd paragraph ...

The vignettes show the textbook as a key feature in the lesson. Teachers guide pupils through the lesson content reading the textbook, use the exercises it proposes to reinforce learning and refer back to it when correcting the exercise. They rely on the brightest pupils to provide the correct answers quickly, are more concerned with the memorization of procedures - facts rather than reasoning about it. In History few attempts are made to compare different answers, to point out the inadequacy of incomplete copied answers, and to stimulate students to synthesize using their own words. Actually copies are stimulated as pupils are referred to specific paragraphs in the book. Such crude procedures are far less likely to occur in the case of

textbook explorators but are the common practice between both textbook orchestrators and information dispensers.

Students reactions to learning through textbook orchestration appears to depend on the affective relationship they have established with the teachers even more than in the previous cases. The content is said to be easily learned when teachers are liked (e.g. History, and Practical Arts), while the opposite prevails when they disliked the teacher (Mathematics) but there is not much difference in the grade they get in these subjects, and the demands made on the pupils are fairly similar across the approach. Testbook orchestrators differ from textbook explorers in the level of cognitive mastery they exact from pupils, and also in the amount of content covered by each assessment. There is far less variation in the level of cognitive complexity dealt with in the classroom, more consistency between classroom learning demands and assessment tests cognitive complexity, and less content coverage in each test. Nonetheless marks appear to be influenced firstly by the affective tie between teachers and pupils, and only secondly by the cognitive complexity exacted.

Information dispensing teaching is characterized by the transmission of selected information which either derives from a selected textbook or is composed by the teacher based in his/her own knowledge. Teaching and learning consist in the transfer of this information through dictation or writing on the blackboard, and the question-answer exercise which follows.

Information-dispensing teachers (Portuguese 8A, Civic Education 5A, Geography 5A, Practical Arts 5A) show little enthusiasm in their classroom practices, tend to undervalue the importance of the subject and to blame the students for lack of interest. Classroom procedures for information-dispensers follows a dull routine: homework check and correction, lesson (i.e., transmission of the information on the topic in the syllabus), question-answer exercise. Pupils are kept very quiet, their occasional questions are swiftly dealt with, few, if any extra explanations are offered as, the text provided is seen as self explanatory. Pupils' activity consists in searching for the answers to the exercise questions in the text they have copied in their notebooks.

Orderliness is considered a major issue for information dispensing teachers who frequently examine and mark pupils' notebooks. The 8A Portuguese teacher is the exception to this rule. But, as already mentioned, he stands for the negative proof which adds to the credibility of the study.

Assessment procedures among information-dispensers are the more lax observed in the school. Fewer tests, characterized by short answer questions, reduced content coverage, and less homework.

Information-dispensing is likely to be a selected teaching approach by teachers who have a less sound earlier education, come from low socio-economic status families, and teach subject-matter with a low prestige profile, like Civic



Education. Portuguese is indeed an exception. Its inclusion as a subject-matter taught through an information-dispensing approach is rather unexpected. Portuguese holds a prestigious place in the school curriculum the teacher has a solid educational background, and is known for his competence. However, as he stated (Section 7.2) he is tired of teaching and looks forward to retirement which will come in few years time. Meanwhile he has a heavy work load and the income he makes as a teacher is hardly enough to provide for his family the same living standards he grew up taking for granted. This situation could account for his tiredness and the low demands on / expectations from his pupils. He treats them kindly and pupils say "He is likeable but his classes are boring."

Students' opinions about learning with teachers using the information dispensing approach confirms the personal relations effect described previously. The worst combination, insofar as pupils learning is concerned, is an unfriendly teacher dispensing a large amount of information. The case of 5A Geography is an example. It is pointed out by pupils as a subject-matter they dislike, had difficulties in learning and got low grades. Accordingly the teacher was unfriendly and transmitted/assessed a lot of information.

The observation of classroom procedures led to the perception of four different configurations characterizing teachers' approaches, ranging from a creative re-creation of knowledge to the transmission of information. The use of the textbooks was central to the development of the typology and

appears as a key feature in classroom teaching and learning in all but the puzzle-proposing approach. There are few teachers using the extreme approaches<sup>9</sup> and for those in the categories in the middle of the continuum the textbook provides not only the lesson content and learning exercises for students but was the major means to ensure pupils participation in the lesson. This is presented by teachers as a proof of their progressivism. Pupils' effective participation in the lesson, however, differed as much as the use of textbooks in each approach: from a much sought, planned and welcomed participation to occasional questions referring mostly to organizational rather than instructional issues. Puzzle-proposing as a creative approach is based in an active and reflexive participation of students which is carefully planned. The two textbook centred approaches differ mostly in the type of questions posed to the students, which are more factual in the case of textbook orchestrators and more interpretative, in textbook exploring. Information-dispensing is a rote learning approach to teaching, and calls for very little student participation, as the lesson consists in the transmission of information. The approaches are also different in the way pupils' contribution during homework/exercise correction is handled. Puzzle-proposing teachers try to offer opportunities for all students and to stimulate voluntary participation. In the other approaches there is a preference for restricted participation. Teachers often seek those pupils who are more likely to respond correctly. In the correction of the exercises more text-bound teachers often refer students to the textbook location of the

answer and rarely allow time for comparing different answers and checking comprehension. Learning assessment has similar characteristics in all approaches as they use assessment tests and observed the completion of homework tasks. However, tests differ in quantity as much as in the level of complexity of the questions proposed. Evidence from pupils discourse suggests that the affective relation teachers establish with them is as important as the approach they use, and the level of cognitive demand exact, to influence learning attainments and ensure an appreciation for the subject-matter. Teachers option for an approach is rooted in their educational background (the approach reflects a prevailing perception of the meaning of learning), but it represents a compromise between teachers' ideas, school conditions (e.g., the prestige of the subject-matter) and external demands on learning determining the importance of subject-matter for the learners life opportunities.

#### **7.4 The Appreciation and Assessment of School Learning**

The appreciation and assessment of the learning process carried on in schools takes place at three levels: the pupils, the teachers, and the school as an institution. Judgements made at each level reflect different perspectives of the learning process. For the school, institutionally, evaluation evolves chiefly around the results of teachers' assessment of learning, expressed through students' marks. Pupils' views are neither sought nor, when known, officially considered. For teachers learning assessment serves a two-fold objective:

it enables them to verify if established learning goals are being attained and, is a tool to determine the students' marks.

The school's formal appreciation of the learning process (Classroom Council) is a mechanism devised to enhance learning. The pupils' appraisal of the learning process is an informal procedure. It takes place constantly as pupils observe/interact with their teachers making judgements which are a foundation for decisions on courses of action. The evidence they gather as their observation focus changes from teachers personal characteristics to teaching procedures and the learning demands they make, could elucidate many cases discussed in the "Classroom Councils"<sup>10</sup> were they given a chance to express their judgement on classroom life.

In this section I propose to: (1) focus briefly on the "Classroom Council" evaluations; (2) discuss the students' appraisal of classroom life, and (3) analyze learning assessment tests used by teachers and its results. From such data a more comprehensive picture of assessment will emerge complementing the analysis of teaching procedures carried on in the previous sections, and making it possible to deal with the relationship between classroom procedures and students achievement, clarifying the meaning of learning in a successful urban school.

The school appreciation of the learning process:

In this school the "Classroom Council" is an important event.<sup>11</sup> Classes are off for the day and following a pre-established schedule teachers, specialists and school administrators gather to appreciate the school's learning process.

Three major issues have to be discussed: the amount of teaching time, the general characteristics of specific classrooms and pupils' learning achievements and their problems.

The first two items of the agenda are brief. Accountability of teaching time<sup>12</sup> is carried on recording teachers' information about the number of classes (by subject-matter) in the bimester. Comments about the classroom are superficial. Classroom climate, level of noise, responsibility towards homework and other duties are considered without too much concern from teachers. But when pupils assessment comes to the fore there is a change in the room. Teachers become more alert, get their notes ready and even straighten their backs. This is the real objective of the meeting!

The procedures are simple. The school Supervisor reads aloud individual pupils' marks in each subject-matter. Students with high or average grades receive little attention. Those whose marks are around the minimum pass level (50) are

dismissed jokingly. The whole procedure is meant for underachievers. Most teachers are not comfortable when a student is "in the red" only in his/her subject-matter. When they are unsuccessful in several of them, teachers reinforce one another and justify themselves by blaming the student for his/her failure, "He doesn't do the homework", "doesn't pay attention to the lesson", "is very talkative", "is immature" are commonly heard phrases.

The "Classroom Council" plays both a positive and a negative role. It provides information on pupils' background and disclose facts that help to understand particular behaviour patterns. It also makes possible the undertaking of joint action, aiding pupils to overcome their problems. Nevertheless it offers a prime occasion for pupils labelling to start and spread, and few voices are raised pointing to the positive characteristics of the student, as in the following episode.

(Classroom Council - 23rd April)

History teacher:	(looking at her classroom diary and referring to a 5A boy with medium to low grades in all subject-matter). He is a strong candidate to repetition!
Geography:	He never prepares his homework!
Portuguese:	If he had to fend for life he would do well while some of our very good students would be incapable. His self-concept is rather positive! He is improving in Portuguese.
	....
Supervisor:	Fábio, just "minimum wage" ... ah! a "red" (below 5.0) in Mathematics (questioningly)

- Maths teacher: He is inattentive and lazy. I've done all I could!
- Student Advisor: His mother has been talking to me. He used to be a good student in a small private school.
- History teacher: He lies a lot, says he is sick ... he really is not interested, he's too childish for upper primary school!
- Art teacher: I agree, he is a bit childish and needs a lot of stimulation but he works well if he wants. I've managed to trigger his interest when we were dealing with the colours. He built a Newton disc, to replace the one I had, using the motor of a toy car. I took him to 8C to give a lesson on colours there, and he did very well.

The school appreciation of the learning process is more than the fulfilment of a legal requirement. It is an instrument in the hands of the administrators to ensure that teachers examine their practices when learning results are below the average, as one's actions have to be justified before peers. Thus, it is a mechanism that helps to find a balance between the quality of the education (as the school understands it) and the rates of repetition which tend to be high in urban area schools.. The school wants to boast both an above average pass rate and a high profile in secondary school selection results. Therefore in assessing learning it is necessary to compromise between the goals set for the students and the percentage of pupils that are able to reach them successfully. This need, impressed upon teachers as they are required to "explain" pupils failure is a major influence for them to devise schemes, to raise marks. Such schemes,

however, are seldom based in a new presentation and discussion of the topics that have not been well learned by the pupils. The teachers' task is to provide a new opportunity. One in which learning standards are quite often lowered. The students responsibility is to get back to their books and notebooks and prepare themselves better. In the event of an increase in the average grade level, however, the lower grades are not disconsidered as teachers fear that "pupils will just wait for another opportunity and will not take tests seriously." (Maths 5A).

Following a "Classroom Council" the school's technical staff visit classrooms congratulating some of them and taking measures to stimulate others to reach better results. Pupils and their families might be called by the Student Advisor who stresses the need for harder work. Such attempts are further proofs of the institutional concern for its academic prestige formerly expressed by the call on teachers to justify underachievement.

To sum up, the school's appraisal of the learning process formally carried on through the "Classroom Council" meetings focus mostly on underachieving and underachievers. It calls teachers to justify marks below the minimum pass level, and forces them to find a balance between their learning demands and the actual capabilities of the students. Thus it ensures that the percentage of repetition will not be very high. Classroom Council results entail actions from the technical staff but the measures adopted are hardly remedial



learning processes. They prefer to call for family support sharing with them the responsibility for promoting learning, and to stimulate learning through inter classroom competition. The negative side of the Classroom Council is that it provides a prime opportunity for pupils labelling as teachers try to exempt themselves from academic failure noted in their classrooms.

**The pupils' view about teachers, subject-matter and their own learning achievements:** Pupils opinions on classroom life were elicited informally and formally through the use of different instruments. The aim was: (1) to understand their views on teachers and teaching in the classroom; (b) to establish a ranking order of subject-matter when preference, degree of relative difficulty and grades obtained were considered, and (c) to find out the constructs that emerged from their observations of teachers' actions.

Pupils think highly of the school but have different views on their teachers. The preference for a subject-matter<sup>13</sup> is influenced, to a large extent, by the teacher / teaching approach used. Beginners "preference" for subject-matter, and assessment of "easiness to learn" in each of them changed significantly through the year, but 8th graders tended to confirm the first selection made. Art (8th grade) is the only case in which the content itself, considered "very difficult" (geometrical design), influences pupils' opinion more than the teacher / teaching approach used.

Lower primary school experiences led 5th graders to state

a preference for Mathematics, Science and Portuguese, as they started upper primary school. After the initiation period they preferred Art and Portuguese, followed by Science, History and Mathematics, and their final hierarchical order was: Portuguese, Arts, History, Science, Civics, Religious Education, Mathematics, Geography, Practical Arts.

Talks to students reveals they find Arts and Portuguese lessons "interesting" and "playful", with "all students being given a chance to participate". History and Science teachers are viewed as "friendly" and "affectionate", but while History learning exercises are said to be "easy", the Science ones are "more difficult and longer". The Mathematics teacher is accused of "yelling all the time and scolding us (pupils) too often." The Geography teacher is the only one perceived as incapable to explain the content. She is said to "complicate things more when she explains it", besides she is also charged with "yelling" at them, like the Mathematics teacher. A habit they consider utterly unpleasant and a sign of disrespect for them.

Comparing the subject-matter in order of preference, and easiness to learn, as established in two occasions, three tendencies are observed: stability, upwards and downwards mobility.<sup>14</sup>

In the subjects very much liked (Portuguese and Arts), and disliked (Mathematics, Practical Arts and Geography) the perception of easiness to learn follows the order of

preference. However marks are in the middle of the scale for the "liked" subjects, and in the bottom of the hierarchy, in line with the expressed opinion about disliked-difficult subject-matter. Questioned about the assessment tests in these subject-matter pupils said,

"Portuguese tests are OK. They demand a lot of attention in reading though, and often I do silly mistakes."

(girl - 10 years old)

"She (Arts teacher) pays attention to every little detail in our drawing pads, besides she takes into account our progress, one has to improve to get a higher grade."

(boy - 11 years old)

"Maths tests are similar to the exercises she (the teacher) repeats and repeats. They are not easy, but she always gives us another chance when the class grades are low."

(girl - 10 years old)

"(Geography) is too complicated, too many names to remember."

(boy - 10 years old)

Downwards tendency in liked subject-matter marks stand for complex cognitive demands, but pupils are familiar with them. Low marks in disliked/difficult to learn subjects are a natural result of the teaching process, and in Geography a result of the mass of information to be learned by rote, as well. In Mathematics grades are higher as it is a consequence of a lowering in the standards, in a second opportunity given to pupils. In the middle of the ranking order, are History, Science and Civics. It is easier to get high grades in History, than in Science despite the similarity they enjoy in preference-easiness to learn. Civics is learned easier than liked, marks<sup>15</sup> following its ranking order. Pupils point out

that they are tested more frequently in History thus "it is easier because one has less things to learn for each test", and a few students pointed out that "Science tests are more difficult as we (they) have to interpret graphics and other things".

Thus, a soundly established preference of dislike for a subject-matter leads to a perception of this subject as easy or difficult to learn, but the level of cognitive complexity exacted from pupils influence the marks they get.

As it is clear that liking or disliking a subject-matter depends on the teacher (and consequently the teaching approach used) and has a powerful impact on the pupils' marks it is important to identify the constructs associated with liked and disliked teachers.

Informal questioning of the students throughout the observation, unveiled aspects of teachers behaviour seen as positive (leading to a friendly teachers-pupils rapport, as well as unacceptable behaviours which impaired teacher-pupil classroom relationships. For 5A pupils the physical aspect of the teachers was mixed with attitudes and contributed to the type of rapport established. They explained their liking/disliking for teachers focusing on aspects such as clothes and hairdo as well as their voice, and politeness towards them. However, the way teachers approached learning grew in importance as pupils became more familiar with the teachers. But, on the whole, for 5A students teachers personal

characteristics remained an important element in their evaluation of teachers' and its impact upon their own learning process. An episode after a Geography lesson (5A) in which pupils had complained quite irritatedly about the excessive amount of homework is evidence supporting this conclusion.

(April 13 - 8:50 interval between a Geography and a Portuguese class.)

- Researcher: So you were mad at the Geography teacher? (inquiringly)
- Helen: Yes! She is a witch! (angry)
- Rodrigo: Didn't you see, 25 questions! (very excited)
- Researcher: Is that a lot?
- Rodrigo: What do you think? (showing notebook) Over 3 pages!!
- Researcher: (in a compromising tone) But did you say she's a witch because of the amount of homework today?
- Helen: No! (interrupted abruptly by Cristina)
- Cristina: She's a witch anyway, (scornfully)
- Helena: Everyday! She's always nagging and teasing us!
- Cristina: She's ugly! Did you see her dress?
- Researcher: (smiling and touching nearby Cristina) It's not so important ... (interrupted)
- Rodrigo: But it is! She's a pain in the ass, too!  
(all of them are getting ready for the Portuguese class notebooks on the table, being a Tuesday they have to hand in their copies to the teacher as she calls the roll, researcher reaches for the nearest copybook, Rodrigo's, and examining it carries on the conversation)
- Researcher: How come you have over 4 pages in this copy? Isn't it too much? How many

pages you have (to Helena and Cristina)

Helen: Four.

Cristina: Three.

Researcher: Isn't it the same amount of work? And you have another exercise too (notebook are also opened)

Helen: But that's for D. Marcia ...

Cristina: She's a dear!

Rodrigo: You can't compare them! "D. Marcia" is beautiful, educated ...

Helen: "D. Ruth" knows nothing! She only gives us heaps of homework and yells ...

This association between teachers' personal attributes, the appraisal of the teaching process mediated and a willingness to cope with teachers demands is confirmed in the list of teachers' attributes elicited from 5A students, towards the end of the observation period, using Kelly's triad technique (Bannister, 1968). The bulk of the 35 constructs that emerged from data reduction referred to teachers' personal characteristics and the classroom atmosphere which resulted from the prevailing type of pupil-teacher interaction. A subsequent large number of constructs focused on the pedagogical procedures used in the classroom and only a very small number actually emphasized characteristics of the subject-matter taught by the teachers and the pupils general assessment.

The aspects brought to the fore as pupils look for similarities and differences between their teachers show that

pupils (1) are affected by the teachers' personality and their appearance; (b) feel a need to establish an affective tie with their teachers and, at the same time, they want to be respected by them, and (c) are capable to distinguish between different teaching approaches and appreciate teachers efforts to create stimulating learning environment. Teachers of Portuguese, History, Arts and Science, are the ones most positively perceived by the 5A pupils, contrasting with the Mathematics and Geography, who are seen under a rather negative light.

The classroom climate that enhances learning is that favouring pupils participation, when: teachers are likely to joke with the students, questioning them and stimulating them to ask questions and giving all students a chance to answer questions as "they like pupils to participate actively". They inspire assurance so pupils venture to speculate about the content, raising and answering questions as "everybody is entitled to make mistakes". This favourable participatory structure is further enhanced by the knowledge that the teachers "care for them" and are "proud of their achievements". In positive learning environment teachers "do not scold pupils unnecessarily" and "do not yell to get pupils attention", lessons are "interesting" and even "fun" as "teachers enjoy bringing all sorts of things to amuse us" and "we learn through games and play".

The teaching procedures most emphasized by the pupils contrast originality with routine and teachers' academic

competency with incompetency. But the "practical" importance of areas of knowledge is also clear to the pupils as they say, they "need these subject-matters a lot" and that certain teachers "teach useful things". And they distinguish between the level of cognitive complexity required from them in learning exercises and assessments.

To sum up, formally elicited pupils constructs related to their teachers classroom behaviour confirmed their informal observations and the researcher's own interpretation of the characteristics of the teaching-learning process and its impact upon pupils achievement. The students' behaviour is deeply affected by their personal relationship with the teachers and that, in turn, depends on specific characteristics of their temperament, personality and way of being as much as their technical competency to deal with the content. The History teacher is a case in point. Pupils are able to point out precisely that her approach to content explanation is quite narrow and limited to the textbook, even though brightened by the use of pictures and maps. Her level of cognitive demand is low and pupils' participation in the classroom is restricted. She treats the classroom kindly and politely and established a positive rapport with the students. Therefore they comply with her requests happily and get high marks in assessment tests. Pupils could distinguish between teachers who followed routine teaching procedures and those who strive to make their lessons original and interesting, capturing their interest, arousing their curiosity and leading them to reason. The unwritten prestige order of curriculum



content areas is clearly perceived by the students. The combination of disliked teachers / unimportant subject-matter leads to the lowest levels of achievement and marks, especially when rote learning is associated with a large quantity of information as is the case of Geography.

In 8A classroom, at the beginning of the academic year, a choice of the two favourite subject-matters demonstrate that History, Arts and Science enjoy the preference of the majority of the students. Subjects like Geography, Portuguese, Practical Arts and Civics are highly regarded by a smaller percentage of students and Mathematics is the most disliked subject.<sup>16</sup> In August pupils ranked subject-matter hierarchically showing their preference, perception on easiness to learn, and their marks. The new teachers (Geography and Portuguese) are not appreciated by the pupils and they expressed a dislike for these subject-matters. The hierarchy established, show History and Science as preferred subjects, followed by Arts, Practical Arts, Civics, and Mathematics. Portuguese and Geography are the least liked subject-matters, claimed to be, together with Mathematics, the most difficult to learn, and also those in which they have the lowest grades. Nonetheless average marks are higher in Mathematics than in Geography and Portuguese. Pupils (8) who strongly dislike Mathematics when asked to explain their rejection of the subject, have divided opinions: a group blame the content, considered "very complicated with symbols, signals and complex computations", and even emphasized "the teacher is ok, it's the content that is really difficult";

another group does not like the teacher and say "she is not patient enough", "she goes too fast when she explains". This dislike for the teacher's way of handling the teaching process is not shared by the pupils (5) who prefer Mathematics to all other subject matters and say "it's super easy to understand the teacher's explanations", but frequently they add that they "like to deal with numbers", as well. The prevailing opinion concerning Mathematics is that "the content is not easy" and the "teacher is very demanding". An identical opinion is voiced referring to the Arts teacher, who spends most of her time dealing with "Geometrical Design".

Their dislike for Geography and Portuguese, which grew during the two bimesters is related, respectively to the teacher and the content itself, and the teaching approach used. The evaluation of the Geography teacher's personality is negative. She is said to be "very nervous", to have a "displeasent voice", and some pupils even deplore this fact as they go on stating that "she is capable of raising our curiosity about different countries and people". In itself, Geography, is not as difficult as Mathematics, but "there's a lot to learn" and the "teacher is very demanding and fussy". They are divided between their appraisal of the teaching process and that of the teacher as an individual, saying "she teaches well but I don't like her."

Portuguese, on the other hand, is "difficult in itself" and "the way the teacher teaches is very complicated", "when he explains he complicates things even more, he mixes

everything", besides "the lesson is boring, very boring", and "the teacher let the students do what they please" so "the class raises hell while he carries on with his monotone voice." Pupils agree that the teacher is kind to them. It is in the appraisal of the Portuguese lessons that there is more consensus among the 8A pupils. Almost half of the group agrees that Portuguese is the most difficult subject to learn and if the content presents inherent difficulties, the teaching approach used makes it even more complicated, therefore lower achievement levels, and low marks are common.

History and Science are the most appreciated subject-matters. In both cases pupils express their preference commenting that the content is interesting, and in the case of History is "easy". If pupils' preference is partially due to the content itself they never fail to associate it with the teaching approach used, saying that "the teacher explains very clearly", "the lessons are quite interesting as the teacher knows how to raise pupils' curiosity". They frequently mention they "like the teacher". Thus the appraisal of a subject matter almost always depends on the judgement passed upon the teachers as a result of their attributes and competence in handling the teaching-learning process.

The group is very favourably inclined towards the Arts and Practical Arts teachers and the subjects they taught are ranked in the middle of the preference scale, together with Civics (taught by the History teacher). But whereas the latter subjects are perceived as easy to learn and easy to get

high marks mostly on the grounds that "there is not a lot to contend with when studying" and "test questions are in general straightforward", Arts is more difficult on account of both the content characteristics and the teacher demands: "she knows how to teach it and the lesson can be exciting but it is nonetheless very difficult."

The conclusion that follows from the analysis of these results is very similar to that concerning 5th graders. Marks tend to follow the degree of preference for the subject-matter expressed by the pupils, given that the demands of teachers are neither too limited nor excessive. With few exceptions the level of difficulty of subject-matter partially depend upon characteristics that are inherent to the subject matter, but also derive from the way the teacher handles instruction and their personal relationship with the class. Similarly to their younger colleagues (5th graders) senior pupils are more willing to comply with the requests of the teachers they relate with positively. But as pupils stated teachers cognitive demands differ, thus similar grades may reflect different types of achievement. This accounts for the exceptional cases when well-appreciated teachers, teaching subject-matter considered easy to learn, do not always correspond to the pupils highest marks or that marks in difficult subject-matter taught by disliked teachers may be among the highest ones the students get. Subject-matter are never liked or disliked because teachers' cognitive demands of are high or low, but rather because the teachers themselves and their approach to teaching are appreciated or rejected by

the pupils. The constructs 8th graders associated with their teachers were elicited to throw light on the characteristics leading to positive or negative classroom relationships which may / may not be conducive to learning. They were more concise and objective than 5th graders and also more inclined to base their judgements on the pedagogical practices used.

The comparison between constructs elicited from 5th and 8th graders shows that seniors are more detached from their teachers than beginners, and also that the teaching process is developed along different lines in the two grades. There are very few observations suggesting a puzzle-proposing type of creative teaching, which was so emphasized by 5th graders. The illustration of lessons with pictures and other materials appear to have been replaced by the distribution of handouts, which speaks of the priority to cover a larger extent of content in order to prepare pupils for secondary school selection. Similarly students are less concerned with notebook correction as they become more self-sufficient and teachers tend to change the procedures they use to make sure that learning tasks have been completed. The 8th pupils seem to be concerned with teachers willingness to repeat explanations, and the level of difficulty of test questions, aspects that were not mentioned by 5th graders.

The most positive feelings of 8A pupils concern the History, Science and Arts teacher. In this last case the positive relationship that exists has a special meaning as the teacher "deals with a very difficult content" which she

"manages to handle in an understandable way" but nonetheless "being very demanding". Pupils refer to these teachers as "wonderful persons" and "good professionals". Their approach to teaching is perceived as more detached from the textbook (which does not exist in the case of Arts/Geometrical Design) as teachers "like to talk about the topic" are able to "raise the pupils curiosity", and obtain an "interested participation" from the pupils. Pupils state that these teachers "repeat explanations", when asked to do so, get pupils to "summarize lessons in the blackboard" and "provide handouts" clarifying certain topics and /or proposing extra exercises. Such teaching procedures however differ when it concerns learning assessment. The History teacher tests are classified as "easy" while the other teachers' are "demanding". The three preferred subject-matters are seen as "important", which in the case of History represents a change from the 5th graders perception.

Mathematics, Geography and Practical Arts teachers share some of these positive characteristics. However they are observed in their teaching approaches, rather than in the individual characteristics. The Mathematics and the Geography teachers are said to be "nervous", to have an "instable temper" to "offend pupils without realizing it", to "nag" and "sometimes to yell at the pupils". Such teachers "should change their ways of being". It is the pupils common opinion they "give quite a lot of work" and are "very demanding". The Geography teacher is more criticized than the Mathematics teacher on the grounds that "she could be more organized in

presenting the content" and also stressing her "bad temper".

Compared with them the Practical Arts teacher is as "nice" and "calm". But pupils also emphasize her low level of demand, saying she "gives few exercises", her "tests are always easy", and she "uses homework for marking". Her lessons are characterized by "short answer questions after pupils read the text book aloud", and if "every now and then she uses different ways of explaining the content", she "should talk more about really important things".

The Portuguese teacher is "polite" but "should be more alive" and "must give more of himself". He deals with an "important subject-area", cover "a very large amount of content" through "blackboard notes", "seldom using the textbook", sometimes he "explains through examples", but "only when pupils are very quiet and attentive". He speaks "in a low monotone voice", and even if he "repeats when asked to do so" he "complicates everything" and "is very boring".<sup>17</sup>

Comparing 8A and 5A appraisal of the teaching-learning process one observes that they perceive major changes in their teachers' classroom procedures. Such differences are apparent in the emphasis and characteristics of exercise/homework checking procedures, but the most outstanding difference seems to lie in the impact on the 5th graders of a teaching approach based on challenging reasoning and the assumption that learning is an interesting activity. The 8th graders do not share this experience with their younger colleagues to its

full extent. "Puzzle-proposing" teaching is less well represented in their classroom. The 8A pupils are more able than 5th graders to distinguished between the teachers' personal characteristics and their competency in mediating the teaching process. They are less dependent upon an affective relationship with teachers to determine a preference for subject-matters and a relative degree of difficulty to learn them. But the affective tie remains as an important element to establish a learning atmosphere in the classroom. Older students place more emphasis on the teachers learning demands even if they don't subordinate their preference for any subject-matter to the amount of work/level of cognitive complexity demanded.

On the whole, pupils' appraisal of the learning process validates the typology of teaching approaches developed. Pupils perceive teachers' creativity, their efforts to make learning a pleasant experience, and to lead them to the re-creation of knowledge, thus mediating a type of relevant learning which is bound to render complex cognitive areas more easy to be handled by the pupils. Therefore, even in subject-matter, considered difficult students are not likely to get very low marks. Pupils know the difference between a teaching approach in which the textbook is overpowerful determining the extent of the learning experiences and another in which the textbook is a base for the lesson but teachers do not merely repeat the author's message. They are able to and interested in exploring the content, stimulating pupils' curiosity and leading them to reason. However these two distinctive ways of



managing teaching are not always associated with correspondent forms of learning assessment, (i.e., the more textbook free approach teacher calling for more thorough comprehension of the content as they test the students). Pupils grasp the existing differences between the "information-dispensing" approach and the other teaching approaches. The latter is seen as centred in the organization of the content in pupils' notebooks. The least successful results of the learning process come from the combination of a large amount of information transferred without an effort to ensure that pupils understood it and from demanding teachers that have not develop positive affective ties with the pupils.

To sum up, the perception of the students on their teachers the teaching process and the ranking of subject-matter suggest that teachers personality is as important as the teachers ability to deal with the content of studies in ensuring pupils achievements. Moreover there are other elements either inherent to the subject-matter (e.g. degree of cognitive complexity) or related to prestige and importance externally attached to them that influence the interest and amount of time students are prepared to dispense to each subject-matter. It is the interplay between aspects such as teachers' personal characteristics, their teaching approach, and the level of complexity of their tests, the characteristics that are inherent to each subject-matter and the external views of their value that lead pupils to reach conclusions about the relative easiness to learn a subject-matter. The characteristics of the subject-matter, although

they cannot be neglected, seem to be the least important of all. Thus, pupils ranking order of preference for individual subject-matter follow the lines of the hierarchy in the typology of teaching approaches. But their ranking order of their achievements, as represented by assessment marks reflect the importance of the subject-matter, its inherent complexity, and the level of cognitive complexity exacted by the teacher as much as the teaching approach used by the teacher and the overall learning atmosphere prevailing in the classroom. For 5th graders Portuguese, Arts, History and Science are the preferred subjects and Mathematics, Civics and Practical Arts the least liked, while for 8th graders History, Science and Arts were more liked, while Mathematics, Portuguese, Geography are, less so.

#### The teachers' assessment of the learning process

Teachers' appraisal of pupils learning is an ongoing process, carried on with the lesson, to which an assessment structure is added. Results are expressed through marks. While teaching takes place pupils' assessment focus more on behaviour aspects than on the acquisition of skills and mastery of the content Academic achievement is formally assessed through tests devised and imposed by teachers as frequently as they see fit. To the test marks are added other marks obtained, the results are pupils' bimester marks, which determine their academic success/failure. The frequency of tests and the amount of content they cover go hand in hand with the teaching approach used. Teachers whose concern lies

mostly in ensuring pupils understanding of the textbook lesson tend to test them frequently while those who perceived learning either within a narrower frame, i.e., information dispensing teachers, or a wider frame, i.e., puzzle-proposing teachers, tend to carry on less frequent testings. Alternatively, in the least prestige subject-matter, (e.g., Civics and Practical Arts) less frequent testings may even be replaced by marking through notebook exercises, notebook inspection, or other tasks, carried on by pupils. However, in Arts, another non prestigious subject, assessment procedures are conducted differently. For 5A students learning assessment is carried on through an evaluation of their development by examining pupils' design pads. For 8A students, this same procedures determines their Arts marks but pupils are also submitted to formal tests on geometrical drawing. The resulting marks integrate their Mathematics assessment results. This policy, at one time speaks of: the power of assessment, the school emphasis in preparation for secondary school selection, and the search of prestige by less recognized subject-matter. Geometrical design is actually part of the Mathematics syllabus and appears in secondary school selection, its study in Arts class confers to Art Education the recognition the teacher seeks. The transfer of assessment results to Mathematics ensures pupils undertake the learning tasks seriously as failure in Arts does not entail repetition.

Test dates are defined, well in advance to stress its importance. The climate prevailing in the classroom just

before tests is one of nervous excitement. Tests tend to be longer in medium high prestige subjects and shorter in low prestige subject-matter especially those taught through an "information-dispensing" approach. Geography in 5A grade is the exception. It is taught through an information-dispensing approach but assessing tests are long. It is common practice for information-dispensing teachers to frame test questions following exercises, and for textbook orchestrators/explorators to change the format or the questions, (e.g., direct questions, fill the blank tests and association tests) while keeping the cognitive demands on pupils at a low level (e.g., recall of information). This is the case of the History teachers whose approach to teaching differ but whose demands upon their students is very similar when testing them. A comparison between 8A and 5A pupils History tests in the middle of the second bimester (June) demonstrates this point. Both tests had, 3 parts dealing with: (1) the identification of causes and consequences of (a) the Great Navigations and Discoveries (8A, 10 items), and (b) of the failure of the hereditary Provinces (5A, 7 items), (2) fill the blanks with (a) names of countries sponsoring the Great Navigators responsible for the important discoveries (8A, 10 items), (b) characteristics of the Brazilian early colonial administrations (5A, 10 items), (3) association (a) major facts related to the Great Navigations (8A, 10 items), (b) major events related to the colonial administration under the first three General Governors of Brazil (5a, 6 items).

An interesting contrast is observed in the tests of the

two Portuguese teachers who used entirely opposite approaches, The 5A teacher uses carefully selected texts on which she bases a two-part test focusing respectively on the interpretation of the text, and comprehension/use of grammar. The 8A teacher designs a far shorter test with questions framed using the examples that integrate the lesson text he has transmitted to the pupils. The hallmark of his tests is the classification of presented cases into grammatical categories, showing comprehension of the content but not going beyond this level of cognition. The 5A teacher test is very diversified. The text-interpretation test, covers a range of cognitive complexity varying from the identification of required information in the text to its evaluation. This same diversification is found in the grammar test, which concentrates in comprehension and application questions but contain a small percentage of very easy and difficult items.

The Portuguese teachers also behave differently as they present the test and prepare the class to deal with the questions proposed. The 8A teacher, who does not mimeographs tests, dictates it and does not answer pupils no questions during the testing period. The 5A teacher brings a mimeographed test with illustrations and encouraging words such as "think before you answer", "good luck". Before starting she instructs the students to read the questions carefully and to "think hard". She finishes saying "now bow your little heads and let's get to work, remember, if you need me, I'm here to help, just call me or raise your hand."

An analysis of tests questions using Bloom's taxonomy was

carried on classifying test items in each category and observing which subject-matter ranked low, medium or high in category<sup>18</sup>. Results revealed that complex cognitive abilities such as evaluation, synthesis, analysis and application were seldom demanded from pupils. Moreover, such questions were only proposed by puzzle-proposing or textbook explorers teachers. For instance, evaluation questions only appeared in 5A Portuguese tests (low participation). Analysis questions figured in 5A Portuguese and Science (low participation), and in 8A Geography and Science tests (medium participation). Application figured with a medium participation in 5A Portuguese, 8A Mathematics and a low one in 5A Mathematics, 5A Sciences, 8A Sciences and 8A Geography but with a high participation in 8A Arts (Geometrical drawing). Comprehension was in high demand in 5A Portuguese, 5A Mathematics, 8A Portuguese, 8A Mathematics, 8A Science and 8A Geography, whereas it was medium in 5A Science, 5A History, 8A History and 8A Practical Arts and low in 5A Geography. Knowledge had a high participation in 5A History, 5A Geography, 5A Practical Arts, 8A History, 8A Practical Arts, a medium participation in 5A Mathematics, 5A Science, 8A Science and a low participation in 5A Portuguese, 8A Portuguese and 8A Mathematics<sup>19</sup>.

The analysis of tests focusing the level of cognitive demand on students, can be associated with their marks, and with teaching approaches. Puzzle-proposing teaching and textbook-exploration teaching tend to require more reasoning from pupils in assessing their learning than other teaching approaches. History and Brazilian Social Political

Organization (Civics) are exceptions. The teacher herself, in an interview attributes the low level of cognitive demand in her tests to the "overwhelming amount of work required to correct more open and analytical tests, given the sheer number of students" she deals with. The impact of a teaching approach that strives towards either the re-creation of knowledge or at least promote understanding is rather positive. It is based in explanations aiming to insert chunks of information into a larger knowledge context, goes beyond the textbook lesson attempting to make pupils' reality more meaningful. Pupils' attainments as expressed in marks are medium to high, despite a high level in test difficulties. But the importance of the affective relationship between teacher and pupils cannot be overlooked. Marks can be very low when more demanding teachers are not skilful in establishing friendly ties with the pupils, despite their use of challenging teaching strategies. However, pupils' attainments are even worse when the association lack of friendship/information dispensing approach prevails. Especially when the quantity of information covered is large or when there is a slight increase in the level of cognition exacted by the teacher. In general more challenging teaching techniques are associated with more complex cognitive demands upon pupils, with better learning results, and with a positive affective relationship in the classroom which leads pupils to cope willingly with the learning tasks required from them. Failing the affective element the whole process tends to be rejected and the achievement level is lowered.

Testing tends to be far less frequent when teachers

prefer the extreme approaches to the textbook based ones. Puzzle-proposing teachers use several means (e.g., exercises and oral questions) to determine whether learning is taking place, and incorporate wider educational variables (e.g., responsibility, order) in their assessing structure. Information-dispensing teachers, use exercises and questioning to coerce pupils to keep quiet, follow their orders, and to ensure they have in their hands an organized map of information. This map will render easy the memorization of selected information and lead to high grades. Overall the assessment structures and assessment tests seem to be both instruments to verify the overall results of the learning process determining students marks and a mechanism used by teachers to prove to their peers and the school officials (Headteacher, Supervisor and Student Advisor) that they are fulfilling their tasks satisfactorily.

To sum up, the analysis of teachers appraisal of learning shows that the level of cognitive demand by teachers, as seen through the classification of test items go hand in hand with their teaching approaches. The storage of information is widely spread and only a few teachers, those using challenging approaches, frame questions demanding highly complex cognitive skills. Nonetheless it is not, in general, the level of complexity demanded in tests that render a subject-matter easy or difficult and determine the pupils' achievements and marks but the teaching approach used and the type of affective tie prevailing between teachers and pupils. Achievement results depend on the interplay that interweave in a unique fabric



different features of classroom life: teaching approach (and enmeshed in it assessment demands), affective ties, the subject-matter prestige, and pupils' innate capacity and interest to respond to demands. Such fabric characterizes each subject-matter individually. Nonetheless teachers' actions/attitudes in the classroom figure most prominently influencing pupils' perception of subject-matters and their willingness to cope with the learning demands placed upon them.

This section shows that learning assessment occurs in three levels within the school. Formally it reflects the institutional and the teachers' evaluation of the learning process and informally it portrays pupils view of the learning process developed under the guidance of their teachers.

The institutional assessment of learning carried through the "Classroom Council" focuses on pupils' marks and is undertaken to identify/correct pupils' learning problems. In reality it provides an opportunity for labelling pupils and has a negative impact on disadvantaged students, while making it easier for more able students. The institutional assessment of the learning process may lead teachers to lower previously established learning standards, re-testing pupils without reviewing the content, as teachers themselves appear to be undergoing an evaluation by their peers and the school authorities. This is particularly the case of teachers who are not backed by a prestigious educational background, a

middle-high social economic status or a personality that enhances interpersonal relations. Pupils assessment of the teaching-learning process show that teachers' personal characteristics are a key issue in determining the tone of the affective ties prevailing in the classroom, and this in turn affects pupils' response to learning tasks, and to achievement. This is more important to 5th graders than to 8th graders, who in general are more able to distinguish between their teachers behaviour and their teaching competency but, they also respond to the spell that emanates from teachers personality. Pupils assess subject-matters learning difficulties and establish preferences for specific content areas not on the ground of its inherent complexity, or due exclusively to their innate inclination, but mostly in view of the prevailing classroom climate. Pupils distinguish between more and less important subjects and identify teachers whose classroom practice is a mere transmission of information, a reflection of the textbook(s) and who attempt to go beyond the textbook lesson. They also assess the cognitive demands exacted from them in assessment tests by different teachers. Their highest marks are a result of the combination low demand - liked teachers. Accordingly lowest marks are an outcome from high demands (cognitive complexity and coverage extension) disliked teacher(s).

Teachers appraisal of learning is a two-fold process: a continuous observation of pupils compliance to established rules, and assessment tests. Testing is more frequent when teaching procedures are more bound to the textbook, and less

so in subject-matters taught through more extreme approaches. Alternatively in subject-matter of low prestige testing may be replaced by less taxing forms of assessment.

Tests tend to concentrate on the recall of information and a low level of comprehension for the majority of the subject-matter. Only teachers using a puzzle-proposing approach and, in some cases, textbook explorers attempt to assess pupils' capacity of reasoning. Yet the option to test highly complex cognitive skills, in itself, do not lead to the lowest marks. These are related to subject-matters taught by disliked teachers using mechanical approaches and making complex cognitive demands on pupils.

The teaching approach determines the type of assessment tests and strategies used to determine pupils' marks, and beyond that it sets limits for the level of their pupils' achievement. The learning atmosphere prevailing during the lesson may stimulate certain types of learning not accounted for in the assessing structure and not represented in the students' marks. The appraisal of the learning process influences both the students' and the classroom's own evaluation of their teachers and the evaluation of teaching procedures used influence individual pupils' behaviour in a way that either hinders or enhances learning achievements.

To sum up, teachers demands are very differentiated and marks are not comparable among classrooms in the same school, or even among different teachers in the same classroom. The

assessment structure and the level of cognitive complexity required vary when the same teacher works in different content areas, according to the prestige externally attributed to the subject-matter in question. The students marks, are not directly determined by the level of complexity of the required answers but tend to reflect the type of learning climate prevailing in the classroom and the affective ties developed between the classroom and each individual teacher.

### 7.5 Summary and Conclusions

This chapter focuses on teaching procedures and learning achievements by discussing homework, teachers' discourse on their subject-matters, teachers' approach to teaching and the appraisal and assessment of learning by the school, teachers and pupils. It shows that,

(1) homework is highlighted as a school demand, as a way to cope with a long syllabus in a short period and as a mechanism to explain academic failure blaming pupils' families for lack of cooperation, and pupils for lack of effort;

(2) homework as classroom exercises are developed more as guides for pupils to cram for exams rather than to stimulate their thinking processes, fostering complex cognitive abilities;

(3) through homework correction, as well as from pupils' participation in the lesson (mostly reading the textbook) teachers present evidences that their task is being fulfilled according to the modern pedagogical principles they state standing for;

(4) teachers progressive discourse does not match their practice which tends to be formal, preferring the quantity of information covered to the quality of cognitive achievements;

(5) teachers approaches to teaching may be classified according to a typology centred around textbook use and pupils' participation in the lesson;

(6) the four approaches succeed one another in a continuum ranging from rote learning to the re-creation of knowledge. The latter being characterized by its emphasis on creativity, dynamic pupils' participation in the lesson and stimulation of divergent thinking;

(7) teachers' background strongly influences the option for an specific approach revealing the incapacity of university teacher training to overcome previous educational deficiencies;

(8) the approaches always represent a compromise between teachers' educational ideals and existing conditions, which include their own competence, the prestige of the subject-matter and pupils' attitudes towards learning;

(9) learning achievements are limited by the teaching approach used and the affective ties developed between teacher(s) and pupils;

(10) pupils distinguish the features of different approaches and the learning requirements placed upon them as they characterize the classroom conditions more likely to enhance learning;

(11) the school assesses the learning process through the "Classroom Council" which is meant to identify and overcome pupils' learning difficulties but in practice create ideal

conditions for pupils' labelling to occur and spread among teachers;

(12) the "Classroom Council" as an assessment of teachers' work leads less self-confident teachers to re-assess learning lowering their standards in order to avoid presenting a justification for lower marks before their peers.

From the analysis of observed classroom practices and its association with pupils' achievement just summarized, reviewed in the context of the successful urban school discussed in Chapter 6, emerge conclusions concerning teaching, learning and the school.

Teaching: Classroom procedures differ largely even when formal teaching qualifications are very similar. In itself the university teaching training is not sufficient to overcome previous instructional and educational differences associated mostly with the teachers' socio-economic status. The early educational experiences shape teachers' perception of knowledge that are evident in their classroom practices, masked by a pedagogically progressive discourse that is common.

Classroom teaching practices represent a compromise between teachers' ideals and their own competence, a perception of suitable process-desirable learning outcomes and the constraints arising from the school culture, time availability, existing materials, external demands and pupils' willingness to engage themselves in the learning process.

Prestige within the school, either that of the subject-matter based on its apparent importance to the pupils' future life opportunities or that of teachers deriving from the informal assessment of their competence, their ability to interrelate socially, capacity and other personal characteristics, have a powerful impact on this compromise. It determines how far a teacher is able to impose his/her views and how much it is necessary to give in, submitting to prevailing values and practices. It is within these boundaries that teachers' approaches are selected and implemented, and that differences between teachers' discourse and practice have to be interpreted.

An option for a teaching approach determine, beyond the dynamism which characterizes classroom teaching and the ability to make relatively difficult content topics/subject-matters more easily understood by pupils, the limits of cognitive complexity pupils will strive to reach. It defines the type of academic standards which will prevail in learning assessment. However, it is not the cognitive complexity exacted from pupils that influences their attainments. Achievement, as measured by teachers' tests, is mostly determined by the affective relationship between teacher(s) and pupils. It determines pupils' willingness to participate and to strive to reach the standards which characterize the teaching approach enforced in the classroom. A positive teacher-pupils rapport, according to pupils, results from mutual respect, teachers' kindness towards and real interest in them. Learning achievements are enhanced when teachers:

are capable to arouse pupils' interest to participate voluntarily, certain that they are allowed to make mistakes; are willing to repeat explanations and clarifying issues attending pupils' demands; are able to express their ideas clearly speaking in a pleasant tone of voice; and can ensure classroom order without resorting to extreme measures.

Learning: Relevant learning goes beyond academic knowledge, it encompasses values such as respect, order, obedience, responsibility and above all an attitude towards schooling and achievement. A traditional and formal type of "education" permeates classroom instruction and school life. This "educated language" focuses on pupils' behaviour as well as their gestures and speech in a way that pupils from middle class professional families are better off in the classroom. They are more able to understand and perform according to the school and its teachers' expectations, backed by their parents' support. Homework is a case in point. Lower middle class - working class parents often lack the ability and seldom have the time to help their children with their lessons. However they are expected to supervise their homework, carrying on learning initiated in the classroom. Therefore it is not surprising to find out that while children progress through upper primary school there is a decrease in the enrolment of children from lower socio-economic status, especially those who are less academically oriented. Thus, an academic eliticism rooted in social differences prevails in the school.

The school culture emphasis on order and obedience



establishes boundaries for pupils' initiatives to develop. But within the defined limits initiatives are accepted and encouraged. The stress is on order rather than passivity. Pupils are stimulated to organize events, to assume responsibility and to argue for cases concerning their rights.

Academic learning and a successful continuation of schooling are however the prevailing values in the school culture. Actually the school fosters academic learning outside classrooms using a variety of tactics that include commemorations and the Reading Club activities. Within the classroom learning consists mostly in the ability to search in a text for required information, retaining it for recalling, rather than on the capacity to understand the information, linking it to a broader knowledge context, and relating it to one's life experiences.

The school: Institutionally the school's concern with the learning process is concretely seen on the one hand through its material provisions, and infra-structure to support the development of the teaching process, and on the other hand in the stress placed on the "Classroom Council" activities.

Among the former the school's schemes to ensure pupils' equal access to textbooks figure preeminently involving the administrative staff and teachers. The measures are successful as (a) they enable teachers to select other textbooks from a larger variety instead of being subject to limit their choice to the books sent by the Secretary of State

for Education, and (b) actually all pupils have textbooks to use. But the differences in pupils' economic status and its influence remain as better off pupils tend to buy the selected books themselves and use it as they see fit, instead of becoming subject to the school's rules. The "Classroom Council" meetings held by the school have negative implications along with its positive results. It provides an excellent occasion for pupils labelling to occur and further endanger the chances of academic success for disadvantaged learners. Moreover, as teachers are expected to justify low grades, less self-assured teachers are inclined to test pupils again, when tests results are very negative, merely lowering performance standards.

Overall the participation in school life and the observation of teaching-learning practices reveal that the school favours a very formal and traditional type of education. It is highly concerned in keeping its prestige which accrues mostly from pupils' performance in secondary school selection. Therefore it stresses the importance of subject-matter that figure in this test, in detriment of other subject-matter without considering its educative potential. In doing so it: (1) favours a distance between teachers' discourse and their pedagogical practice, which already exists as a consequence of their educational background differences; (2) stresses the quantity of content covered rather than the quality of the educational experiences mediated; (3) emphasizes culturally-based differences between pupils triggering off selectivity mechanisms; (4) enlists the

participation of pupils' families in the schooling process and (5) overstressed the importance of homework in the promotion of learning as a mechanism both to justify failure and to enable the coverage of an extensive syllabus in a short period of time.

Teaching and learning within the classroom is carried on following four approaches that range from the re-creation of knowledge to rote-learning. Each approach represents a compromise between teachers' ideals, their competence, the school conditions and pupils' willingness to cope. The use of the textbook is central to the approach and, as pupils' participatory structure, it is a consequence of the concept of learning that guides teaching practices. Different approaches promote different types of cognitive learning complexity, pupils' achievements, however, depend more on the relationship they maintain with teachers than from the cognitive complexity inherent to the approach or the subject-matter.

Teaching and learning in an urban school where teachers are formally qualified follow different paths, influenced by teachers earlier experiences. The school's success evolves mostly from its ability to maintain its tradition and cope with demands set outside the school, therefore its stress on an attitude towards schooling, reading ability and the recall of a vast amount of information, which results in an academic eliticism rooted in social-economic status.

Notes Chapter 7

1. Clements, R. (1980), Cooper, C. (1981), Johnson, N. (1980), Streich, O. (1984), Gump, P. (1985).
2. The term re-creation of learning is used by Freire.
3. Teachers were presented with the written description of their teaching approach and commented it. Such commentaries were incorporated by the researcher. However they were informed about the typology as a whole only upon receiving the report of the research. But it provided only a description of categories, not the association of teachers with them.
4. This opinion was elicited by means of a game-like instrument in which subjects were rated from 1 to 9 in three cards bearing the titles: I like better, I learn easier, I have better grades.
5. A "locucaao adjetiva" is a way of qualifying a noun using 2 nouns connected by a preposition, e.g. "amor de mae" instead of "amor materno".
6. The 8A Geography teacher does not follow the content sequencing proposed in the textbook. Sequencing is rather determined by the national and international events relevant to Geography. The overall frame to make this style "acceptable" is provided in the initial unit which provides a comprehensive view of physical-political organization of America, Europe and Asia.
7. Teachers suggests that there is not enough time to prepare and conduct experiments (Science) or to correct the type of learning assessment tests truly compatible with the learning experiences provided in the classroom (History).
8. The Mathematics teacher formal qualification does not entitle her to teach beyond 6th grade and the History teacher does not "like World History", thus she only teaches Brazilian History to 5th and 6th grades.
9. The percentage of teachers using each approach is the following: Puzzle-proposal 14.2 percent, Textbook Explorating 34.2 percent, Textbook Orchestrating 29.2 percent and Information-Dispensing 21.4 percent.
10. Classroom Council is the legally coined label to the bimonthly meetings of classroom teaching staff and the school officials to discuss individual students achievements and problems, establishing common courses of action.

11. The researcher attended "Classroom Council" meetings for the two initial bimesters, respectively on April 23 and August 14.
12. Law 5.692171 requires the school to complete 180 "teaching days" and establishes minimum teaching-hours per subject-matter before a school year is considered complete.
13. The ranking order of subject-matters was determined in a game-like fashion establishing a hierarchy in the 3 columns where subjects were listed under the labels: I like best, I learn easier, I have higher marks. 5th graders initially cast votes choosing the 2 subject-matters they preferred. Later in the year they established the hierarchical order. The procedure was repeated (8th/5th graders) at the end of the observation period.

<u>I like best</u>	<u>I learn easier</u>	<u>I have better grades</u>
Portuguese ..	Arts	History
Arts .....	Portuguese	Maths
History .....	Civics	Civics
Science .....	History	Portuguese
Civics .....	Science	Arts
Mathematics .	Pract. Arts	Science
Pract. Arts .	Mathematics	Pract. Arts
Geography ...	Geography	Geography

R.E. was excluded as its learning is not assessed.

15. Civil learning tasks are frequently associated with historical events and pupils are asked to represent them through pictures and copying information about the event. Such activities are assessed and consequently high grades are easy to get.
16. The choice of subject-matter by 8A students in February shows the following results:  
History 25%, Arts 22%, Science 17%, Geography 12%, Portuguese 8%, Civics and Practical Arts 7% each and Mathematics 2%.
17. The 5A Portuguese teacher is in charge of the 8H classroom and informal talks to pupils confirm beginners' opinions on easiness to learn Portuguese, rather than the complexity stressed by 8A pupils.
18. A high participation is one that represents over 60% of the total, a medium participation represents between 10% and 40% and a low participation represents less than 10% of the total.

## 19. Categories in Bloom's Taxonomy of Knowledge

	Subject-matter	Knowledge	Comprehension	Application	Analysis	Synthesis	
5A	Portuguese	low	high	medium	low	-	low
	Maths	medium	high	low	-	-	-
	Science	medium	medium	low	low	-	-
	History	high	medium	-	-	-	-
	Geography	high	low	-	-	-	-
	Pract. Arts	high	-	-	-	-	-
	Civics	high	-	-	-	-	-
	Arts	high	-	-	-	-	-
8A	Portuguese	low	high	low	-	-	-
	Maths	low	high	medium	-	-	-
	Science	medium	high	low	low	-	low
	History	high	medium	-	-	-	-
	Geography	low	high	-	low	-	low
	Pract. Arts	high	medium	-	-	-	-
	Arts	low	high	medium	-	-	-
	Civics	high	low	-	-	-	-

## CHAPTER 8

### CONCLUSION: DO CLASSROOMS MATTER?

Chapter 8 is a conclusion to the study. It binds together the results of the survey and the case-study, and in the light of the findings from previous rural school ethnographies which integrate the "Study of Disparities", presents a reinterpretation of the meaning of pass rates, discussing the meaning of educational quality as a consequence of classroom practices.

The major conclusions that follow emerge from the qualitative and the quantitative data presented in Chapters 4 to 7. However a wider interpretation of the Espirito Santo context is drawn from additional studies undertaken by the researcher previously. These were part of the "Study of Disparities" (Gama et al, 1984 vol.4 and 6) and focused on rural schools in two Municipalities.

At the core of this thesis lies the problem of understanding "pass rates" in upper primary school in the State of Espirito Santo. Pass rates are the sole indices available to planners for evaluating the performance of the educational system. Given that learning assessment is not centralized in Brazil pass rates derive from marks in teacher set, implemented and graded tests. The aggregation of data according to the geographical location of the schools (urban-rural areas) discussed in chapter 2 reveals lower pass rates for better equipped and staffed urban schools than for rural schools. Differences in socio-economic development in urban and rural

areas in Espírito Santo are very sharp, as shown in the State's 1980 census (Fundação I.B.G.E., 1983). In addition there is a positive correlation between socio-economic and educational development (Gama et al, 1984) observed in relation to indicators of educational quality such as: (a) access to school (i.e., percentage of the 7 year-old population enrolled in 1st grade), (b) school flow (i.e., drop out and repetition rates), (c) lower primary school results (i.e., pass rates) and (d) schools' operational conditions (i.e., percentage of qualified teachers, supervisors and students advisor, availability of instructional material and school building characteristics). Therefore, upper primary school pass rates are paradoxical. On the one hand, they are an exception in the pattern of positive correlations reported in the afore mentioned study. On the other hand, they appear to indicate that better schooling conditions (e.g. more qualified teachers) lead to less educational quality (i.e., lower pass rates), and research results show that pupils' performance especially in less developed countries, is highly influenced by school factors (Rutter et al, 1979, Heyneman and Loxley, 1981, Schiefelbein and Simmons, 1981, Schiefelbein and Farrell, 1983, Fuller, 1986, Fuller and Heyneman, 1988).

These paradoxical pass rates require an interpretation, considering: (a) the suitability of pass rates for comparing performance in urban and rural schools, (b) the mapping of learning and achievement in the two types of schools, and (c) the characteristics of successful learning opportunities. In short, they called for an answer to the question: what is/are



the meaning(s) of learning? Answers to this question make it possible to offer a practical contribution to educational policy makers in Espírito Santo, and to foster the theoretical understanding of pupils' achievement, especially in the context of a prevailing decentralized learning assessment structure.

### Learning and Achievement

The management of classroom learning is a process which lies in the hands of teachers, from the generation of learning opportunities geared towards desirable learning experiences, to the assessment of pupils' learning experiences. Learning experiences, however, are individually lived by the learners and result, as clarified by Dewey (1938) from the interaction between the learner's internal conditions with the external conditions represented in the learning environment organized and managed by the teacher. Thus, whereas pupils' learning experiences are unique, mediated as they are by their innate abilities, their results, purported to be measured through academic achievement tests, are externally set.

In the absence of both central control and centralized guidelines for learning assessment, learning opportunities are selected and mediated to match teachers' perception of what constitutes relevant learning, and pupils' achievements are measured accordingly. Teachers' play a major role in influencing pupils' learning experiences and academic achievement. In a context of decentralized learning assessment, teachers' share in the 80 percent of the variance

in achievement which can be explained by school characteristics (Heyneman and Loxley, 1981) can be expected to exceed that measured, when their actions are under the control of external examinations.

This is not to say that teachers are totally free to orient the teaching-learning process to suit their ideal concept of learning. Teachers' classroom actions always represent a compromise between their own ideals and several constraints. They exist within teachers' themselves (e.g., competence and ability to establish a positive relationship with the pupils), and emerge both from the school through its culture and material conditions, and from external demands on school learning arising from the labour market and the higher levels of the school hierarchy. In the case-study school teachers' compromises on the one hand are evident in their discourse, as opened or veiled complaints, whenever their actions are hindered by either school based or external conditions (Section 7.2). On the other hand, whenever compromises are required due to teachers' own conditions (e.g., competence, workload), they become apparent in the mismatch between teachers' discourses and their classroom practices.

Nonetheless, within the boundaries set by the existing constraints, (Section 7.3), teachers determine the direction of the learning process thus shaping the resulting pupils' academic achievement. And in the context of the case-study school, the influence of their background is large. Such importance, expected as it is, given research reported in the

vast literature on teachers influence on pupils' learning (Rosenshine, 1971, Avalos and Haddad, 1979, Guthrie, 1970, 1989) is seen in chapter 5, in the analysis of the correlations of pupils' average school results and achievement scores. It shows that a rise in the level of teachers' qualifications entails more complex cognitive demands on pupils. As urban teacher demands grow school results decrease and pass rates diminish in comparison with rural school results. However, urban pupils achievement scores in standardized test are higher than rural pupils scores.

#### The meaning of pass rates in relation to learning and achievement

In chapter 2 it was questioned if in a context of decentralized learning assessment pass rates for urban and rural schools would be comparable. Pass rates, based on individual teachers' perceptions of learning, were likely to represent diverse demands on pupils, especially in view of teachers differences in qualifications.

The analysis of the survey data (chapter 5) supports this argument. Learning opportunities in urban and rural schools stress different concepts of learning and, consequently, the learning assessment carried out aims at measuring different learning outcomes. Pass rates are not comparable insofar as they do not represent similar competences in content mastery. The difference between urban and rural pupils mean average scores in the standardized reading comprehension test is statistically highly significant, even if differences in scores

are not very large. Moreover, whereas for urban pupils correlations of school results and achievement scores are mostly positive (despite its weak to moderate strength), for rural pupils' relationships between internal and external measures of learning outcomes are characterized by an absence of statistically significant correlations. The few statistically significant positive correlations found are weaker and refer only to beginners' general school results. For rural seniors the statistically significant correlations established are negative and signal the relationship of school results in individual subject-matters with achievement scores in test items classified in the category "interpretation", according to Bloom's taxonomy. Such results are viewed as indicating that: (1) differences in teachers' perception of relevant learning are more striking in the upper primary school cycle than in the lower one, and (2) that throughout upper primary school the decrease in educational quality associated with pupils' increasing ability to respond to teachers' demands reach a peak in which learning assessment marks become higher as the capacity to understand the message conveyed through a written text decreases. In other words, rote learning is perfected to an extent that marks represent simply pupils' capacity to recall the information that matches teachers' test questions without any proof of understanding the content focused.

In the case-study school such a situation was observed in relation to information-dispensing teachers. The planning of their learning opportunities consists in the preparation of a

short text on the lesson topic followed by a questionnaire. Learning activities are the transfer of the "lesson" and its attached questions to pupils, followed by the correction of their answers. Learning assessment tests repeat selected questions previously proposed to pupils. Marks are high, except in the case when content coverage is extensive, but learning attainments do not represent more than the ability to recall the information valued by teachers. The relevance of the knowledge transmitted and assessed appears to be inherent to the words used to express it. No relationship is established with pupils' past experiences, and no attempt is made to use knowledge as a bridge for experiences to be expanded.

School results represent the assessment of pupils' learning experiences, from the viewpoint of teachers. Survey data shows that school results follow the pattern of pass rates; rural pupils marks are higher than those of urban pupils, and seniors marks are higher than beginners marks. When the age of pupils is observed, the findings point out that repetition (inferred from pupils' age) does not influence rural pupils' marks except in the beginning of the cycle, whereas its impact upon urban pupils increases during upper primary school. But achievement scores are higher for urban pupils, following the trend of the correlation between socio-economic development and educational quality discussed in the "Study of Disparities" (Gama et al, 1984). And younger pupils who have not experienced repetition get higher achievement marks than older pupils.

These findings indicate that teaching-learning process follow paths of their own in urban and rural schools. Pupils' scores when test items were categorized according to Bloom's taxonomy show that the chief concern of less qualified teachers working in rural school centres around the transfer-retention of knowledge while more qualified teachers working in urban schools are incipiently oriented towards learning for understanding.

The focus on one "successful" urban school, (chapter 7) highlights that an incipient orientation of the teaching-learning process towards meaning is associated with a liberal concept of education. However, if in teachers' discourse prevails a progressivism, in line with Freire's proposed philosophy of education, in their classroom practices traditional education values still predominate. The external form of traditional instruction is adapted to include a more active pupils' participation and learning exercises takes various shapes as suggested by modern pedagogy. However, it is the hidden traditional concept of education that sets the boundaries for classroom progressive practices. Pupils participation is very much limited to textbook reading and despite its different forms, learning exercises are addressed mostly to the identification of information and to a initial level of understanding. This disguise of formal classroom instruction is dictated often by the need to reconcile one's own capacities but also to submit to demands emerging outside the classroom. Teachers are not aware that their progressivism is but a shell and the essence of the education they mediate

is traditional. Their responsibility for presenting the knowledge content to pupils is transferred to the textbook which becomes the key feature of classroom learning. As a consequence, during the lesson teachers' pedagogical discourse lacks a subject, the latter being the scientist talking through the textbook (Orlandi, 1985). Through this replacement teachers, at one time (1) reproduce the form of teaching-learning they are familiar with, (2) confer "authority" to the lesson, hence the content becomes an object to be accepted and "learned" rather than a subject to be explored and re-created, and (3) provide a means for pupils' participation without disturbing classroom order.

Only those teachers backed by a solid general education, acquired formally in primary and secondary schools as well as at home, working under suitable circumstances (i.e., dealing with a prestigious subject-matter, with a comfortable work load, and empowered by recognized competence) go beyond a formalistic teaching-learning process, and assess learning accordingly. Thus, in general, pupils' scores in the categories requiring higher cognitive skills are low, even in a successful urban school. The major emphasis of the teaching-learning process lies in repetition not in reasoning. However, in the case-study school, pupils' skill in finding required information in written texts is consistently developed. Textbook reading itself is part of most lessons, and reading for pleasure is highlighted by the school culture. This could explain the larger differences between urban and rural pupils' scores in the achievement test are in test items in the initial

categories of Bloom's taxonomy.

School instruction is dominated by a banking concept of education (Freire, 1972), and its quality is in general low. A comparison of achievement data for Espírito Santo pupils, with those of Brasilia state school (Castro et al, 1984) shows that average scores for the former are lower. A sign that overall the quality of education mediated by the State system is low.

Traditionalism and elitism are behind higher scores for pupils in the "proper age-bracket" as compared to "older pupils" in urban schools, as reported and analyzed in chapters 4 and 5. Learning outcomes assessed by the school are also influenced by conformity, defined as the will to follow rules, to be kind towards colleagues and polite with teachers, to keep school materials in good order. In the case-study school a constant assessment of such attitudes is incorporated in the assessment structure and figures in pupils' marks in all subject-matters (chapter 7).

The inference that academic elitism prevails in urban schools is drawn from the analysis of pupils' school results and achievement scores taking their age as a proxy for repetition. Pupils' are singled out as repeaters, according to their age from the beginning of upper primary school. Teachers' low expectations for their academic success certainly reinforce their own negative expectations. However, in rural area schools where life opportunities are not closely linked



to school learning the influence of previous repetition becomes no longer apparent in school results, as pupils progress through upper primary school. "Older" pupils' performance in the achievement tests is still different from that of non-repeaters, but the existing difference, at the end of the cycle is the same that existed when they started upper primary school. In urban schools whereas the difference in school results for the two groups of pupils has a modest increase during the upper primary cycle, its increase in relation to achievement scores is sharp.

The ethnography of a "successful" school produced evidence that the schools' academic prestige is built by orienting the teaching-learning process to foster the more able students. Underachievers, even among pupils in the "proper age-bracket" are identified as beginners and the process of labelling which destroys pupils' self-image, starts immediately. There are schemes devised to counter-balance pupils' different academic potentials and to give an impression of equality, softening the emphasis placed on achievers. Homework and a call on teachers to "justify" their pupils' low grades figure prominently among them. Such schemes however have negative as well as positive aspects. Homework tasks are set relying on pupils' family support, an expectation which is not realistic when it concerns low socio-economic class children. Thus, homework contributes to foster achievement of more affluent children. It also functions as a mechanism to exempt the school and teachers from pupils' academic failure, as the responsibility is turned to pupils and their families. The call on teachers to explain

pupils' low grades leads them to devise reassessment schemes that are not time consuming and raise pupils' marks. In general such schemes are based in lowering performance standards reaching a balance between pupils' actual abilities and teachers' perception of desirable outcomes. Thus, on one hand the school academic prestige is safeguarded and, on the other hand, pass rates are kept at a reasonable level, but no actual remedial learning tasks are undertaken. Such procedures, which to different extent can be expected to exist in urban schools, provide an explanation for repeaters and non-repeaters performance in school assessment and in achievement tests in urban and rural schools.

Overall the survey findings, illuminated by the urban school ethnography, point out that in urban and rural schools the teaching-learning process is oriented towards different goals. School results are the concrete measure of pupils' attainment of these goals. Urban schools are trying to mediate a more cognitively complex learning process involving reading-comprehension and incipiently based in the development of pupils' reasoning capabilities. Their lower pass rates stand for their quest towards this higher instructional goal. Urban pupils' achievement scores correlate to school results and indicate that to some extent pupils are achieving the goals set for them. Rural schools are concerned with the acquisition of information. This is achieved through rote learning a process which pupils master and leads them to score higher marks in school assessment. Nevertheless, this increase is not matched by an enhancement in comprehension. Hence, the absence of

correlation between the two measures of attainment, that of the school and the achievement tests. Age, as a proxy for repetition, shows that urban schools make a sharp distinction between repeaters and non-repeaters. They stress the latter's potential for success in life opportunities which in general calls for school learning. Thus, whereas in rural schools the differences between the scores of repeaters and non-repeaters in achievement scores do not change throughout upper primary school, and school results differences disappear, in urban schools there is a modest increase in the latter and a sharp one in the former. This is due to an academic elitism partially related to class existing differences among pupils. The basis for the urban school's prestige is an emphasis on more able pupils but it devises mechanisms that help to keep a balance between pupils' potentialities and teachers ideal learning standards. Such mechanisms ensure that repetition rates do not increase excessively, and also shift responsibility for pupils academic failure to their families.

Pass rates interpreted in the context of a comparison between an internal (school results) and an external (achievement scores) measure of pupils' attainment, show that: (1) pass rates are not suitable for comparing learning outcomes of urban and rural schools as their learning process is geared towards different goals; (2) pass rates are not adequate to represent the performance of the state's educational system; (3) urban school lower pass rates stand for a better educational quality as compared to rural schools; and (4) overall the quality of education in upper primary schools in

Espirito Santo is low, and its major attainments are in the transmission of information.

### The quality of education seen through classroom procedures

The school ethnography was undertaken in order to unveil the meaning of relevant learning in a "successful" school by linking specific teaching practices to cognitive demands placed upon pupils, thus throwing light on the question of differences in pass rates from the viewpoint of classroom procedures. From its inception the study aimed to observe both pupils and teachers' behaviours but in its overview phase the focus of the investigation narrowed centring upon (1) the use of instructional materials (mostly textbooks), (2) the pattern of pupils' participation, and (3) the complexity of cognitive demands placed on pupils during the lesson and informal assessments. The combination of choices in handling such vital aspects of teaching practices characterized specific approaches to teaching and learning in the classroom that are associated with different concepts of educational quality.

The typology of teaching approaches: The typology developed (Section 7.3) has some similarity with those developed by Beeby (1966) and Bennett (1976), however it differs significantly from those as teachers in the case-study school had identical qualifications and shared a belief in progressive pedagogical practices.

The typology presents teaching approaches in a continuum in which extreme points are represented by rote-learning (information-dispensing teachers) and the re-recreation of knowledge (puzzle-proposing teachers). The approaches in intermediate positions are characterized by a concern for understanding the textbook lesson. Textbook based approaches are basically interested in the transmission-recall of information. Their concern for educability however, leads them to develop pupils' skills in finding required information in a text, firstly to comprehend the explanations offered becoming able to paraphrase them (textbook orchestrators), and further on (textbook explorators) to reach a level of understanding which transcends the grasp of textbook explanations. In this case the lesson content is used to broaden pupils' view of the world, knowledge and themselves.

Teachers' approaches to teaching are a result of a compromise between their ideals and the conditions in which teaching occurs. These include their own competence to deal with the content and to impose their views on learning activities whenever they differ from those favoured by the school. Teachers' socio-economic background and present status and the importance conferred to their subject-matter legally and culturally directs their option towards an approach. On the one hand, their grasp of the content area they teach (and consequently the way the present - explore it in the classroom and recognition of their competence by their peers) is shaped by their earlier education. On the other hand, their economic situation and the time allotted to the subject-matter in the

school timetable determine their work load. The influence of the school culture is overwhelming. It dictates accepted behaviours, hinders the organization of desirable learning opportunities and leads teachers working in areas rated as less important to seek subject-matter prestige through an extensive coverage of the syllabus. Thus quantity outweighs quality. The school culture also shapes students' attitude toward subject-matter. In this case, however, the teacher-pupil relationship established in the classroom may overcome the school culture and ensure willing pupil participation in learning activities.

The typology derives from the use made of instructional materials, the participation structure in the classroom and the cognitive complexity exacted from pupils. Teachers' background, their socio-economic status and the prestige of the subject-matter play important roles in their selection of an approach to teaching. Puzzle-proposing teachers tend: (a) to have been exposed to a wider general education (in school and at home), (b) to be competent, self-confident and committed to their work, and (c) to shape their practice according to their discourse. Textbook users (explorers and orchestrators) may have had a solid general education but either lacked wider learning opportunities, having been given a formal instruction that their parents lacked, or are under some form of pressure. This could be external due to the continuation of school education or the amount of teaching time allocated for the subject-matter, or internal, deriving from an attempt to confer prestige to the area of studies through extensive coverage of

its content. The interplay between the prestige rank of the subject-matter and the quality of the teachers' educational experiences influence the predominance of a textbook exploration or orchestration approach. Rote-learning through an information-dispensing approach is restricted to low-prestige subjects and/or teachers that have undergone an irregular instructional process and lack a solid general education base. The case of 8A Portuguese is an overall exception and stands for a negative proof for the typology. Portuguese, a prestige subject, is taught by a highly educated teacher that came from a high socio-economic status family. However, probably due to the lowering of his economic standard, given low teachers pay, he became disillusioned with the career and lapsed into information-dispensing teaching.

There is a direct association between the teaching approaches, the syllabus and the use of the textbook. Freedom to handle the syllabus increases hand in hand with the degree of stimulation of pupils reflexivity embedded in the approach used. Textbook changes from an instrument in the hands of the students, to be used mostly at home, to help them to clarify doubts and foster the understanding of the lesson discussed in the classroom, to become a guide for the lessons in the classroom, in the hands of teachers and pupils alike, and finally it turns into a manual in the hands of the teachers, who select from it extracts with the relevant information to be transmitted to the pupils.

The typology highlights patterns of pupils' participation

in the lesson which are distinctive in quantity as well as in quality.

Within the information-dispensing approach there is very little classroom participation. Disjunction tends to prevail as students eyes gazed around the classroom and they seemed to be more engaged in daydreaming than in copying the lesson that is being dictated or written in the blackboard. Simple activities consume more time than complex ones carried on in the context of more reflexive approaches. Outwardly, the standards of order and discipline are rigidly observed and pupils communicate silently through furtive gestures and eye contact. The classroom is absolutely silent as well as passive. And whenever this silence is broken a strong reprobation follows. The few questions proposed are in general, addressed to named students. Thus ensuring teachers will get the answer they aim for and the lesson will proceed in order and swiftly.

This external order covers a latent discontent that surfaces into tumultuous outbursts whenever pupils feel the demands upon them are unreasonable, or in uproar over trivialities. Disorders are difficult to control and teachers sole recourse is to yell above the classroom noise, an attitude that eventually restores the required order but contributes to a further deterioration of the teacher-pupils relationship.

In textbook-based approaches the most frequent pattern of pupils' participation occurs through the textbook by reading,



answering direct short-answer questions, paraphrasing explanations, and sometimes attempting to identify focal issues, summarizing and inferring. A formal type of order and discipline prevails in the classroom but pupils tend to be more attentive and willing to participate volunteering to read and, less frequently, raising questions. The classroom climate is more free and relaxed, if still rather formal. Outbursts of generalized conversations and uproar, as well as complaints, and tumult occur but order tends to be restored calmly rather than through teachers' yells. There are but few exchanges between teachers and pupils that do not refer to the lesson content or learning tasks. However, teachers who take time to talk to the students, expressing a concern for them as individuals are highly regarded by the students.

Pupils' participation in textbook orchestration/exploration are more crucial as they read the text than through question answering, especially in the case of textbook orchestrators. Inferences, associations and synthesis are more likely to be made by teachers themselves as they analyze paragraphs of the lesson just read by the students. However, such reflexive activities are carried on by the students themselves, under the prodding and guidance of teachers whenever a puzzle-proposing approach is used. This is the only case when pupils participation is vital to the development of the lesson. This type of participation is carefully planned as teachers expect their pupils to re-create knowledge. They allow and stimulate volunteer participation, generating a climate in which pupils feel secure to put forth any ideas.

Pupils are sure they are not always expected to strike the right point and mistakes are accepted as an inherent part of the learning process. What seems important to teachers is to engage pupils into thinking. Puzzle-proposing lessons are far less quiet than any of the previously mentioned ones, and teachers resort to careful planning to keep control as much as to ensure that the significant point of the lesson will be successfully grasped. Teachers using this approach are very conscious that the level of noise in their lessons in general exceeds that accepted by the school. But as the quality of their work is recognized it tends to be accepted. The classroom climate that surrounds a stimulated, free and productive students' participation is one of friendship, understanding and decontraction, and any extra increase in the level of noise is calmly brought under control by the teachers. Moreover there seems always to be enough time available for teachers to talk to students, to repeat a point not clearly understood and to explore, taking further, any comments and contributions made by the students. Pupils active participation is at the core of the puzzle-proposing approach to teaching.

#### Educational quality and teaching approaches:

The educational quality of classroom learning goes hand in hand with the approach used by teachers. The approach in turn is an indicator to teachers' competence beyond their formal qualification. It points out the concept of education teachers are trying to implement, sometimes in disagreement

with their pedagogical discourse.

The amount and the quality of pupils' participation characterizing the approach indicate the quality of the education pursued. Active pupils participation is sought whenever teachers believe that learning is a shared enterprise centred in the development of pupils' thinking process. Hence knowledge has to be re-created in the classroom, not transmitted. To do so teachers need technical and pedagogical competence. The former will provide them with the tools to foster participation, the latter will give them the confidence to face open ended discussion, and a perception of the interconnections between content topics with other aspects of knowledge, of life and the world.

Only puzzle-proposing teachers seem ready to engage their pupils in an interesting pursuit of learning re-creating knowledge. They are the truly progressive teachers. The token pupils' participation brought about by textbook-based teaching is more a concession to the ideas they have been exposed to during university teaching training, but are not able to put into practice. In the information-dispensing approach pupils' participation schemes are simply a change of form in the traditionally accepted way for content transfer. Pupils continue to be passive but instead of listening their assigned role becomes writing.

The role of the school culture and the external influence on school learning is a major one. Teachers who have the

competence and demonstrate inclination to teach through a puzzle-proposing approach (textbook explorators) are frequently prevented to do so by their unspoken rules and demands, as well as by the legal determinations regulating teaching.

The large majority of teachers in the case-study school favours textbook-based approaches and learning assessments stress the recall of information and paraphrasing textbook explanations. Puzzle-proposing teachers always include in assessment tests items which require more complex cognitive abilities from their pupils. However, school marks do not result exclusively from the cognitive complexity exacted from pupils, nor from learning difficulties inherent to individual subject-matter. They depend on the affective tie developed between pupils and the teacher. Whenever empathy is established, kindness is demonstrated, pupils' self confidence is fostered a complex content is rendered easier to learn and pupils are willing to comply with whenever learning demands are exacted from them. Accordingly test marks are never below average even in the case of inherently complex content areas, or when assessment tests demanded highly complex cognition skills.

The level of complexity of tests, as well as the amount of content covered influences pupils marks in the case of teachers' using similar approaches, and after allowing for the effect of the prevailing affective relationship between pupils and teachers.

The quality of the education promoted is closely linked to the teaching approach used. It is concretely seen in the prevailing pupils' participation structure but learning assessment may not cover the wide range of learning experiences stimulated due to external constraints on teachers (e.g. their workload or a need to seek content prestige through extensive coverage). Assessment marks as well as pupils opinions about the relative easiness to learn a subject-matter is influenced above all by the affective relationship between teachers and pupils.

In relation to educational quality except in the puzzle-proposing approach the primary stress of teachers lies in promoting and assessing the ability to find required factual information in a text, and demonstrating a basic understanding of the phenomena/event/problem. Only then, and among textbook-explorers there is a concern to relate topics studied to the actual life experiences of the pupils, but this dimension of learning is seldom assessed. Puzzle-proposing teachers are also concerned with text comprehension but this constitutes only one of the aims of their lessons. Learning through discovery is implemented and knowledge is dealt with in all levels of cognition, in such a way that it is the use of knowledge, not the recall of concepts that is at the centre of learning process. Learning assessment goes hand in hand with the type of learning experiences mediated by teachers in the classroom but tests are not mere copies of learning exercises previously proposed to pupils. Information-dispensing teachers who in the typology oppose puzzle-proposing teachers promote

rote learning and tend to reproduce learning-exercises items in assessment tests. They are also more likely to forego and use alternative forms of assessing learning making it easier for pupils to get higher marks.

Very little can be said in relation to an association between teaching approaches and pupils achievements, expressed through marks, apart from the fact that more reflexive and challenging approaches promote a type of quality learning that frequently is not always formally assessed. Such approaches also tend to be related to more difficult assessment tests, and teachers using them are not likely to test students as frequently as those using less challenging approaches.

To sum up, the type of learning that appears to take place in information-dispersion and textbook-orchestrators demands low cognitive efforts from the students and is similarly represented in the tests. Attainments under the form of marks, are more related to the affective relationship between teachers and pupils, and the amount of content being tested than to the teaching approach used by the teacher. In the more challenging approaches the type of learning stressed in the classroom is not always represented in the tests. The degree of difficulty in the tests seem to vary from teacher to teacher, as well as from one test to another, but prestige subject-matter tend to demand more of the students than others. The number of students the teacher actually deals with appears to play an important role in the type of test used. Tests that require less time for correction, and which in general are less

demanding on pupils, are used preferably by those teachers dealing with large numbers of students. Overall the importance of the affective relationship between teachers and pupils determines to a large extent pupils' willingness to participate in the lesson as well as their marks, which also depend on average level of difficulty of the test rather than the amount of content covered, as is the case in lower quality approaches.

The findings of the investigation suggest that pass rates depend on classroom procedures. They are not comparable as they stand for teachers' different concepts of learning and diverse pupils' cognitive attainments.

Classrooms matter insofar as teachers' competencies differ leading them to organize learning opportunities which prevent, limit or stimulate pupils' active participation. Thus, they may guide pupils to rote learning or to the re-creation of learning, or yet, may centre the learning process around the lesson content provided by the textbook. If such differences are found in relation to classroom procedures used by teachers with very similar formal qualifications, it is possible to infer that as the gap between the most qualified and the less qualified teachers widens, so do the differences in their approach to teaching. Hence, differences in classroom procedures which may lead to very different learning experiences among pupils, and to teachers' set learning assessment geared towards extremely different goals, are at the foundation of the paradoxical pass rates which characterize urban and rural schools in Espírito Santo.

The achievement scores established suggest that if overall the quality of the educational system is low the scores of rural upper primary school pupils stand as signposts. They call the attention of policy makers to provide more support to teachers and schools to help them move away from the mechanistic rote-learning approach they appear to be mediating.

In urban schools the similarity of teachers' pedagogical discourse and the differences in their practice lead to the inference that teacher training at the university level is not capable of overcoming educational deficiencies rooted in primary and secondary schooling and in early home experiences.

Learning and achievement depend to a large extent on the school context, its culture and the external demands from school learning which may constrain teachers' decisions about the setting of learning opportunities. But in the classroom pupils' learning experiences are stimulated by the affective relationship which links pupils and teachers. Teachers' actions within the frame of the approach used guide learning attainments towards information and training, or, beyond that, to initiation or induction. Knowledge may be merely stored, its relevance arising from the capacity to recall it without contributing to foster an understanding of one's environment. Conversely, the meaning of the content may be grasped through discussion, widening one's comprehension of men and the world, standing as a foundation for action.

Such different types of learning, and a variety of



intermediate forms, result from teachers' compromise between teaching-learning ideals and conditions. These include teachers' technical pedagogical competence as well as school constraints and external demands on school learning. The school as an institution strives to find a balance between learning demands placed upon pupils, ensuring their success in life opportunities after completing primary education, and keeping a high pass rate. The "Classroom Council" may be used as a mechanism for establishing this balance. But, its backwash effect may be merely lowering learning standards without remedial learning and pupils' labelling, as teachers try either to avoid or to justify pupils' lower marks.

Homework, in the case-study school, as a learning device was used openly to reinforce learning and to involve pupils' families in the learning process. It made possible the coverage of an extensive syllabus in a short teaching period. Conversely, it was a selectivity mechanism as pupils from lower socio-economic status families, with less support, were disadvantaged. Homework was also a way for the school and teachers to make pupils and their families assume the responsibility for the students' academic failure. Pupils' willingness to cope with homework as with other learning activities depend mostly from the affective tie developed between themselves and teachers, especially in the case of subject-matter of little prestige.

The prestige implicitly accorded to subject-matter besides influencing pupils' attitudes towards them, affects teachers'

classroom procedures as they might, in the case of less prestige subject-matter:

(1) try to achieve prestige through a wide coverage of the content;

(2) restrict learning assessment due to the large number of pupils they had to deal with;

(3) have to struggle both to be able to and to implement chosen learning activities that might disturb the school order and to maintain standards. In the case of prestige subjects, however, teachers could demand high standards from pupils without making allowances for specific conditions.

To sum up, pass rates in the context of decentralized learning assessment and especially in the case of very different levels of teachers qualifications (1) do not represent comparable learning achievements for urban and rural pupils; (2) are not suitable for assessing the quality performance of urban and rural upper primary schools; (3) urban schools lower pass rates stand for more complex cognitive demands upon pupils whereas higher rural school pass rates represent learning process which emphasize exclusively the recall of selected information.

The analysis of data on school results and achievement scores show that:

(1) upper primary school is a crucial phase in the quality of education offered to urban and rural pupils in state managed schools;

(2) school assessment marks tend to be higher in subject-

matter allotted less time in the school scheduled, pointing to lower learning demands in these content areas;

(3) whereas for rural schools pupils' age differences, standing as a proxy for repetition, loses its importance during the upper primary cycle, and the rural area schooling process ensures that previous academic failure do not further impair pupils' learning achievements, the reverse case happens in urban schools, probably due to the external demands on school learning from the labour market and the secondary school cycle;

(4) age, as a proxy for repetition, has an impact on pupils' achievement especially in urban areas, and in the case of senior pupils;

(5) the quality of the education mediated through the school system is low when its achievement test scores are compared with other results from Brazil itself, and from other developing countries;

(6) results from rural schools stress the need for immediate attention to that segment of the state school system, and that more support is needed to urban schools if they are to take further their attempts to mediate more relevant forms of learning.

The ethnography of a successful urban school presents evidence that:

(1) the teaching approach used leads to different types of learning achievement;

(2) teachers' different background leads them to teaching approaches in which teaching and learning have specific

meanings while their common university teaching training becomes apparent in a shared progressive teaching discourse;

(3) the use made of the textbook is central to the development of the typology, together with the pupils' participatory structure provided;

(4) the affective tie developed between pupils and their teachers is the most important factor influencing pupils' achievement in school-based learning tests;

(5) pupils distinguish between their teachers' approaches to teaching, evaluate them and are clear about teaching characteristics that foster learning as well as those which hinder it;

(6) homework is a widely used practice to foster learning but it is also a mechanism for school selectivity;

(7) the school as an institution through its culture as well as through official procedures influences the type of learning promoted in the classroom as it strives to reach a balance between quality education and pass rates.

### Recommendations and limitations of the study

In clarifying the problem at the core of this thesis, that of the paradoxical difference in pass rates between urban and rural upper primary schools in Espírito Santo, it became evident that there is a need for systematic checks on the quality of the education provided by the state school system.

As pass rates are not an acceptable index of the performance of the system, the periodic use of achievement

tests in different content areas is suggested as a foundation for evaluating learning outcomes and undertaking measures to foster learning achievements.

The results of this study suggest that untrained rural school teachers need more support from the central system and that in urban schools there is need for discussing the role of different subject-matter in upper primary schooling.

Accordingly, university personnel in the area of teacher training should be informed about the case-study findings. Especially insofar as they refer to the relative impact of the training schemes and that of teachers background on the way teachers approach teaching and learning. Moreover teachers undergoing training should be led into extensive discussions about the importance of the affective relationship between teachers and pupils, as a factor influencing classroom learning.

The research in which this thesis is rooted and this report itself present limitations that are inherent to naturalistic enquiries, and pertain to in-depth, one-site studies. The voluminous body of valuable data generated represents but one single school and must be presented, in this case, within an academic framework.

The writing up of a school ethnography respecting the boundaries of a thesis represents a constraint and a challenge: to select and discuss aspects of classroom life that are the

most relevant to the clarification of the questions overshadowing the study, yet to convey the overall atmosphere of the school and classroom life. It is difficult to present the evidence which supports the interpretation of classroom events showing nuances, similarities and contrasts without overburdening the reader; to find the right balance drawing a picture of the school and its culture that is vivid and detailed to serve as a basis for naturalistic generalizations but that is concise and accurate, and to conciliate the ethnographic narrative style which calls for descriptions, for a larger use of adjectives and an informal language with the traditional economic objectivity of academic-scientific reports. Those are dilemmas I faced as the research report was trimmed to fit the structure of this thesis. The major limitation of this report, however, refers to data selection and reduction. The richness of the data obtained through the extensive observation of the case-study school can only be hinted through a few vignettes and many interesting aspects of school life, peripheral to the problem, have to be dealt with elsewhere.

This thesis evolved around the results of a widely spread survey representing the whole upper primary school network and an ethnography of a successful urban school. Thus, while its findings portray school results and assessment scores which are measures of both urban and rural pupils learning outcomes, the ethnography illuminates only the teaching practices prevailing in a successful urban school. Therefore, it would be enlightening to continue the investigation focusing both a

successful rural school and less successful urban and rural schools. Such studies will determine the extent to which there are similarities among teaching approaches used by teachers with distinctive qualifications as well as similarities and differences in the concepts of teaching and learning prevailing in urban and rural, successful and less successful schools.

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Annex 1 - Characteristics of the Sample by Area of the Schools,  
Municipality and Pupils

Area	Municipality	No. of existing schools	No. of schools in the Sample	No. of pupils		Total
				Beginners	Seniors	
Urban	Guarapari	05	04	58	55	113
	Cariacica	17	15	216	221	437
	Serra	20	11	163	159	322
	Vila Velha	20	11	153	162	315
	Vitória	11	09	134	114	248
	Sub total .....	76 (52.5%)	52 (52%)	754 (57%)	741 (63%)	1495 (60%)
Rural	A. Cláudio	02	01	12	12	24
	Anchieta	01	01	13	14	27
	B. Esperanca	04	04	44	31	75
	B. Guandú	01	—	—	—	—
	B.S. Francisco	04	02	29	25	54
	C. Castelo	02	02	20	10	30
	Cachoeiro	01	01	02	02	04
	Castelo	09	09	76	45	121
	Colatina	07	05	61	47	108
	D. Martins	03	—	—	—	—
	Itarana	02	01	09	08	17
	D. Rio Preto	02	01	11	08	19
	Ecoporanga	02	—	—	—	—
	Jaguare	03	01	15	15	30
	Linhares	06	04	52	54	106
	Mantenopolis	01	01	15	14	29
	Mucurici	01	01	15	15	30
	N. Venécia	06	06	84	65	149
	Pres. Kennedy	01	01	14	—	14
	Pedro Canário	02	—	—	—	—
S. Mateus	02	01	15	15	30	
Sta. Tereza	03	02	28	19	47	
S. Gabriel	04	04	49	34	83	
Sub Total .....	69 (47.6%)	48 (48%)	564 (43%)	433 (37%)	997 (40%)	
<b>TOTAL</b>		145 (100%)	100 (100%)	1318 (100%)	1174 (100%)	2492 (100%)